

A black and white photograph of several sailboats racing on a choppy sea. The sailboats have large white sails that are billowing in the wind. The boats are dark-colored, and the water is dark with white foam from the waves. The sky is overcast.

STRATEGIC^{13e} MANAGEMENT

An Integrated Approach
Theory & Cases

HILL • SCHILLING • JONES

STRATEGIC MANAGEMENT

13e

AN INTEGRATED APPROACH

THEORY & CASES

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PREFACE

Consistent with our mission to provide students with the most current and up-to-date account of the changes taking place in the world of strategy and management, there have been significant changes in the 13th edition of *Strategic Management: An Integrated Approach*.

After making major contributions to the last two editions, Melissa Schilling has fully replaced Gareth Jones as a contributor in this edition. Melissa is a Professor of Management and Organization at the Leonard Stern School of Business at New York University, where she teaches courses on strategic management, corporate strategy, and technology and innovation management. She has published extensively in top-tier academic journals and is recognized as one of the leading experts on innovation and strategy in high-technology industries.

Second, continuing the trend of the last two editions, there have been significant revisions to the text in this edition. In the 11th edition, Chapter 5, “Business-Level Strategy,” was rewritten from scratch. In addition to the standard material on Porter’s generic strategies, this chapter now includes discussion of *value innovation* and *blue ocean strategy* following the work of W. C. Kim and R. Mauborgne. Chapter 6, “Business-Level Strategy and the Industry Environment,” was also extensively rewritten and updated to clarify concepts and bring it into the 21st century. For the 12th edition, we significantly revised and updated Chapter 3, building discussion of resources and competitive advantage around Jay Barney’s popular VRIO model. We also combined Chapters 12 and 13 into a single chapter on implementing strategy through organization. We think this more streamlined approach greatly strengthened the book and enhanced readability, particularly for students.

For the 13th edition, further changes were made in content. For example, Chapter 7 contains a more in-depth discussion of direct and indirect network effects and switching costs. In Chapter 8, we discuss how the rapidly changing international trade environment as exemplified by Brexit, the renegotiation of the North American Free Trade Agreement (NAFTA), and ongoing trade disputes between the United States and China, might impact enterprise strategy. In Chapter 9, we added an extensive section on the multiple benefits of horizontal integration, and added a section on modularity and platform competition. Chapter 10 was strengthened by the addition of a section on how agency problems can lead to acquisitions that do not create value.

Third, the examples and cases contained in each chapter have been revised. Every chapter has a new Opening Case and a new Closing Case. There are also many new Strategy in Action features. In addition, we have significantly updated the examples used in the text to make them both more modern and more globally representative. In making these changes, our goal has been to make the book relevant for students reading it in the second decade of the 21st century.

Fourth, we have a substantially revised selection of cases for this edition. All cases are either new to this edition or are updates of cases that adopters have indicated they like to see in the book. As with the last edition, we made the decision to use only our own cases. Over the years, it has been increasingly difficult to find high-quality, third-party cases, while we have received consistently positive feedback about the quality of cases that we have written; so, we decided that from this point forward we would only use our own cases. We have also received feedback that many professors like to use shorter cases, instead of or in addition to the longer cases normally included in our book. Consequently, in this edition of the book we

have included 32 cases, 20 of which are the traditional long-form cases, and 12 of which are shorter cases. All of the cases are current. We have made an effort to include cases that have high name recognition with students, and that they will enjoy reading and working on. These include long-form cases on Trader Joe's, Coca Cola, Wal-Mart, Uber, SpaceX, Alibaba, Dell, Apple, IKEA, Tesla, 3M, and General Electric.

Practicing Strategic Management: An Interactive Approach

We have received a lot of positive feedback about the usefulness of the end-of-chapter exercises and assignments in the Practicing Strategic Management sections of our book. They offer a wide range of hands-on and digital learning experiences for students. We are thrilled to announce that we have moved some of these elements into the MindTap digital learning solution to provide a seamless learning experience for students and instructors. We have enhanced these features to give students engaging, multimedia learning experiences that teach them the case analysis framework and provide them multiple opportunities to step into the shoes of a manager and solve real-world strategic challenges. For instructors, MindTap offers a fully customizable, all-in-one learning suite including a digital gradebook, real-time data analytics, and full integration into your LMS. Select from assignments including:

- **Cornerstone to Capstone Diagnostic** assesses students' functional area knowledge and provides feedback and remediation so that students are up to speed and prepared for the strategic management course material.
- **Multimedia Quizzes** assess students' basic comprehension of the reading material to help you gauge their level of engagement and understanding of the content.
- **Guided Cases** engage students by presenting businesses facing strategic challenges, placing concepts in real-world context, and making for great points of discussion. As they complete these activities, students receive instruction and feedback that teaches them the case analysis methodology and helps them build critical thinking and problem-solving skills.
- **Experiential Exercises** are based on the "Practicing Strategic Management" assignments in the end-of-chapter materials in previous editions. They have been updated for the MindTap and challenge students to work in teams using the YouSeeU app in our one-of-a-kind collaborative environment to solve real-world managerial problems and begin to experience firsthand what it's like to work in management.
- **Branching Activities** present challenging problems that cannot be solved with one specific, correct answer. Students are presented with a series of decisions to be made based upon information they are given about a company, and are scored according to the quality of their decisions.
- **Case Analysis Projects** are delivered in our online collaborative environment via the YouSeeU app so that students can work together synchronously to complete their comprehensive case analysis projects, papers, and presentations. Offered in conjunction with robust cases written exclusively by Charles Hill and Melissa Schilling, these activities challenge students to think and act like tomorrow's strategic leaders. Use our default activity, written by seasoned strategic management instructors, or customize the project to suit your class.

It is not our intention to suggest that *all* exercises should be used for *every* chapter. Strategic management is taught at both undergraduate and graduate levels, and therefore we offer a variety of pedagogically designed activities with numerous challenge levels so that instructors can customize MindTap to best suit their teaching style and the objectives of the course.

We have found that our interactive approach to teaching strategic management appeals to students. It also greatly improves the quality of their learning experience. Our approach is more fully discussed in the *Instructor's Resource Manual*.

Strategic Management Cases

The 32 cases that we have selected for this edition will appeal, we are certain, to students and professors alike, both because these cases are intrinsically interesting and because of the number of strategic management issues they illuminate. The organizations discussed in the cases range from large, well-known companies, for which students can do research to update the information, to small, entrepreneurial businesses that illustrate the uncertainty and challenge of the strategic management process. In addition, the selections include many international cases, and most of the other cases contain some element of global strategy. Refer to the Contents for a complete listing of the cases.

To help students learn how to effectively analyze and write a case study, we continue to include a special section on this subject. It has a checklist and an explanation of areas to consider, suggested research tools, and tips on financial analysis. Additionally, the MindTap learning activities include Directed Cases that ask students to complete the steps and offer in-depth explanations to guide them through the process, as well as case-based Branching Activities that place students in the shoes of a manager and require them to move through strategic decisions; students are assessed on the quality of their analysis in making their choices, and the activity concludes with a discussion question for you to implement in class.

We feel that our entire selection of cases is unrivaled in breadth and depth.

Teaching and Learning Aids

Taken together, the teaching and learning features of *Strategic Management* provide a package that is unsurpassed in its coverage and that supports the integrated approach that we have taken throughout the book.

- **MindTap.** MindTap is the digital learning solution that helps instructors engage students and help them become tomorrow's strategic leaders. All activities are designed to teach students to problem-solve and think like management leaders. Through these activities and real-time course analytics, and an accessible reader, MindTap helps you turn cookie cutter into cutting edge, apathy into engagement, and memorizers into higher-level thinkers.

Customized to the specific needs of this course, activities are built to facilitate mastery of chapter content. We have addressed case analysis from cornerstone to capstone with a functional area diagnostic of prior knowledge, guided cases, branching activities, multimedia presentations of real-world companies facing strategic decisions, and a collaborative environment in which students can complete group case analysis projects together synchronously.

- **Instructor Website.** Access important teaching resources on this companion website. For your convenience, you can download electronic versions of the instructor supplements from the password-protected section of the site, including Instructor's Resource Manual, Comprehensive Case Notes, Cognero Testing, and PowerPoint® slides. To access these additional course materials and companion resources, please visit www.cengage.com.

- **The Instructor's Resource Manual.** For each chapter, we provide a clearly focused synopsis, a list of teaching objectives, a comprehensive lecture outline, teaching notes for the Ethical Dilemma feature, suggested answers to discussion questions, and comments on the end-of-chapter activities. Each Opening Case, Strategy in Action boxed feature, and Closing Case has a synopsis and a corresponding teaching note to help guide class discussion.
- **Case Teaching Notes.** These include a complete list of case discussion questions, as well as comprehensive teaching notes for each case, which give a complete analysis of case issues.
- **Cognero Test Bank.** A completely online test bank allows the instructor the ability to create comprehensive, true/false, multiple-choice, and essay questions for each chapter in the book. The mix of questions has been adjusted to provide fewer fact-based or simple memorization items and to provide more items that rely on synthesis or application.
- **PowerPoint Presentation Slides.** Each chapter comes complete with a robust PowerPoint presentation to aid with class lectures. These slides can be downloaded from the text website.

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DEDICATION

To my daughters Elizabeth, Charlotte, and Michelle

— Charles W. L. Hill

For my children, Julia and Conor

— Melissa A. Schilling



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INTRODUCTION TO STRATEGIC MANAGEMENT

- Chapter 1 Strategic Leadership: Managing the Strategy-Making Process for Competitive Advantage
- Chapter 2 External Analysis: The Identification of Opportunities and Threats



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CHAPTER

1

STRATEGIC LEADERSHIP: MANAGING THE STRATEGY-MAKING PROCESS FOR COMPETITIVE ADVANTAGE

LEARNING OBJECTIVES

- 1.1 Explain what is meant by “competitive advantage”
- 1.2 Discuss the strategic role of managers at different levels within an organization
- 1.3 Identify the primary steps in a strategic planning process
- 1.4 Discuss the common pitfalls of planning, and how those pitfalls can be avoided
- 1.5 Outline the cognitive biases that might lead to poor strategic decisions, and explain how these biases can be overcome
- 1.6 Discuss the role strategic leaders play in the strategy-making process

OPENING CASE

T-Mobile's Uncarrier Strategy

When John Legere joined T-Mobile as CEO in September 2012, the number four US wireless service provider was in trouble. The company would lose \$7.2 billion in 2012. The market was saturated, and growth was slow. Verizon and AT&T dominated the business with almost 80% of the market between them. T-Mobile had just 10%. Verizon and AT&T enjoyed cost advantages that came from significant economies of scale. Both companies had better network coverage and fewer dropped calls than T-Mobile. Moreover, unlike its larger rivals, T-Mobile did not offer the best-selling iPhone to its customers. To compound matters, AT&T had tried to acquire T-Mobile, but the deal fell apart after opposition from the



Bloomberg/Getty Images

Justice Department who thought that merger would reduce competition in the industry. Employee moral had taken a hit during the merger talks and had yet to recover.

Legere saw things differently. Although employee morale was beaten down, he thought that the overall culture was intact and had the potential to be a powerful driver of growth. The average age of field employees was just 27. They were looking for somebody to energize them, and Legere meant to deliver. He did so by providing a clear strategic direction, eliminating bureaucratic rules and procedures that stifled motivation and initiative taking, and creating a sense of excitement. Legere also realized that customers hated industry practices. They hated being locked into contracts. They hated being gouged by extra fees they couldn't understand or couldn't fully control, such as data and roaming charges. They also thought wireless phones were cheap, whereas the wireless carriers were in fact subsidizing the phone manufacturers and recouping the cost of selling cheap handsets by charging high service fees. To Legere's way of thinking, customer dissatisfaction with industry practices created an opportunity for T-Mobile. He believed that the best way to succeed in the industry was to do things differently from existing carriers – to do the complete opposite – and so was born T-Mobile's strategy of being the "Un-carrier."

First though, Legere had to fix some obvious problems. T-Mobile wasn't selling the iPhone, so he went to Apple and made a deal. T-Mobile's network coverage had been terrible, so the company began buying up all of the wireless spectrum they could and investing heavily in upgrading their network to improve both the coverage and speed of service. Next, Legere and his team started to make dramatic changes to the company's offering aimed at making the experience better for customers. T-Mobile eliminated long-term contracts and replaced them with a transparent pricing model. They made it easier to upgrade to a new smartphone, and stopped charging for global roaming. They offered to pay the early termination fees for customers who wanted to switch from other carriers to T-Mobile. The company was also the first to offer unlimited data plans. In 2017, it upped the ante by offering free Netflix streaming to customers with two or more lines. Legere backed up all of this with flashy marketing, including creative use of his twitter account to promote T-Mobile and lambast industry rivals (Legere has an impressive 5.3 million followers on Twitter).

The strategy has produced some noticeable results. The total number of subscribers at T-Mobile increased from 33 million in late 2012 to 70 million by late 2017, making the company number one in terms of customer growth. Market share expanded from 10% to 17% over the same period. Monthly churn rates, a key metric of customer satisfaction, fell from 2.7% in 2011 to 1.3% in 2017, close to the 1% achieved by industry leader Verizon. That being said, T-Mobile still faces big challenges. It continues to lack the economies of scale and coverage of its larger rivals. T-Mobile also has poor retail distribution in one-third of the United States, a deficiency it is now trying to fix by rapidly expanding its retail presence. It added more than 3,000 retail stores in 2017 alone. If it gains enough new customers, it may be able to attain scale economies, lower its costs per customer and become more profitable.

Sources: John Legere, "T-Mobile's CEO on winning market share by trash talking rivals," *Harvard Business Review*, January-February 2017. Brandt Ranj, "How the unlimited data plans from AT&T, Verizon, T-Mobile and Sprint all stack up," *Business Insider*, June 29, 2017. Ina Fried, "T-Mobile COO explains why the 'uncarrier' strategy is working," *Axios*, September 11, 2017.

1-1 OVERVIEW

Why do some companies succeed, whereas others fail? In the airline industry, how has Southwest Airlines managed to keep increasing its revenues and profits through both good times and bad, whereas rivals such as United Airlines have had to seek bankruptcy protection? What explains the persistent growth and profitability of Nucor Steel, now the largest steelmaker in the United States, during a period when many of its once-larger rivals disappeared into bankruptcy? And with reference to the Opening Case, why has T-Mobile recently been able to grow faster than its rivals?

In this book, we explain how the strategies that a company's managers pursue have a major impact on the company's performance relative to that of its competitors. A **strategy** is a set of related actions that managers take to attain a goal or goals. For most, if not all, companies, achieving superior financial performance relative to rivals is the ultimate goal. If a company's strategies result in superior performance, it is said to have a competitive advantage.

For T-Mobile, the search for competitive advantage is still a work in progress. When John Legere joined T-Mobile as CEO in 2012, his primary goal was to increase the market share of the company in order to better attain economies of scale and increase profitability (see the Opening Case). He pursued a number of actions that were consistent with this goal, which collectively are referred to at T-Mobile as the "un-carrier" strategy. So far, the strategy has been successful at increasing market share. By 2018, T-Mobile had twice as many subscribers as it did when Legere became CEO. However, the company still lags its larger rivals on common measures of financial performance such as return on invested capital (a popular measure of profitability). T-Mobile will need to continue to build on its current success if it is going to establish a sustainable competitive advantage and reap the gains in terms of superior financial performance.

This book identifies and describes the strategies that managers can pursue to achieve superior performance and provide their companies with a competitive advantage. One of its central aims is to give you a thorough understanding of the analytical techniques and skills necessary to formulate and implement strategies successfully. The first step toward achieving this objective is to describe in more detail what superior performance and competitive advantage mean, and to explain the pivotal role that managers play in leading the strategy-making process.

Strategic leadership is about how to most effectively manage a company's strategy-making process to create competitive advantage. Strategy-making is the process by which managers select and then implement a set of strategies that aim to achieve a competitive advantage. **Strategy formulation** is the task of selecting strategies. **Strategy implementation** is the task of putting strategies into action, which includes designing, delivering, and supporting products; improving the efficiency and effectiveness of operations; and designing a company's organizational structure, control systems, and culture. T-Mobile has been successful so far under Legere's leadership not just because he and his team formulated a viable strategy, but because that strategy has been well implemented.

By the end of this chapter, you will understand how strategic leaders can manage the strategy-making process by formulating and implementing strategies that enable

strategy

A set of related actions that managers take to increase their company's performance.

strategic leadership

Creating competitive advantage through effective management of the strategy-making process.

strategy formulation

Selecting strategies based on analysis of an organization's external and internal environment.

strategy implementation

Putting strategies into action.

a company to achieve a competitive advantage and superior performance. Moreover, you will learn how the strategy-making process can sometimes go wrong, and what managers can do to make this process more effective.

1-2 STRATEGIC LEADERSHIP, COMPETITIVE ADVANTAGE, AND SUPERIOR PERFORMANCE

Strategic leadership is concerned with managing the strategy-making process to increase the performance of a company, thereby increasing the value of the enterprise to its owners, its shareholders. As shown in Figure 1.1, to increase shareholder value, managers must pursue strategies that increase the *profitability* of the company and ensure that *profits grow* (for more details, see the Appendix to this chapter). To do this, a company must be able to outperform its rivals; it must have a competitive advantage.

1-2a Superior Performance

Shareholder value refers to the returns that shareholders earn from purchasing shares in a company. These returns come from two sources: (a) capital appreciation in the value of a company's shares, and (b) dividend payments. For example, during 2017, a share of Microsoft increased in price from \$62.84 to \$85.95. Each share of Microsoft also paid a dividend of \$1.56 to its owners during 2017. Thus, in 2017, shareholders in Microsoft earned a return of 39.3%, 36.8% of which came from capital appreciation in the value of the share, and 2.5% of which came in the form of a dividend payout.

Maximizing shareholder value is the ultimate goal of profit-making companies, for two reasons. First, shareholders provide a company with the risk capital that enables managers to buy the resources needed to produce and sell goods and services. **Risk capital** is capital that cannot be recovered if a company fails and goes bankrupt.

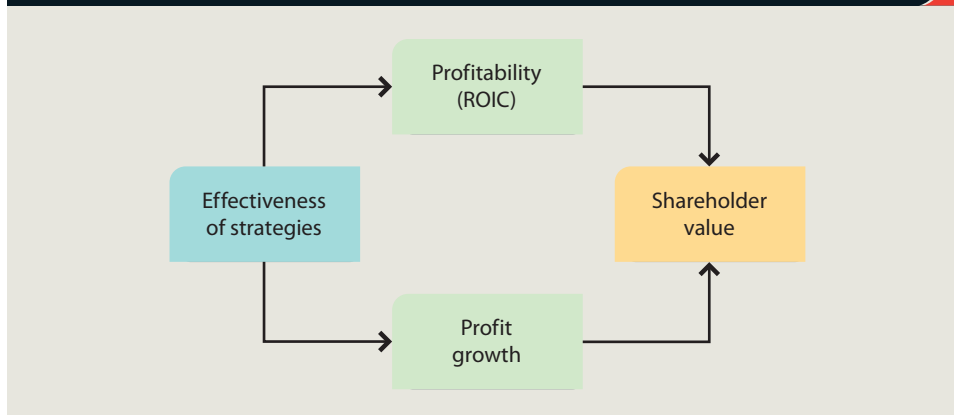
shareholder value

Returns that shareholders earn from purchasing shares in a company.

risk capital

Equity capital invested with no guarantee that stockholders will recoup their cash or earn a decent return.

Figure 1.1 Determinants of Shareholder Value



Shareholders will not provide risk capital unless they believe that managers are committed to pursuing strategies that provide a good return on their capital investment. Second, shareholders are the legal owners of a corporation, and their shares therefore represent a claim on the profits generated by a company. Thus, managers have an obligation to invest those profits in ways that maximize shareholder value.

As noted in Figure 1.1, increasing shareholder value requires strategies that boost the profitability of the enterprise, and enable it to attain greater profit growth. One way to measure the **profitability** of a company is by its return on the capital invested in the enterprise.¹ The return on invested capital (ROIC) that a company earns is defined as its net profit over the capital invested in the firm (profit/capital invested). By net profit, we mean net income after tax. By capital, we mean the sum of money invested in the company: that is, stockholders' equity plus debt owed to creditors. So defined, *profitability is the result of how efficiently and effectively managers use the capital at their disposal to produce goods and services that satisfy customer needs.* A company that uses its capital efficiently and effectively makes a positive return on invested capital. On this measure, T-Mobile still has some way to go. Although the company has been profitable since 2012, T-Mobile's **return on invested capital** (ROIC) remains mired in the low to mid-single digits. In 2017, for example, it was 6.7% compared to 14% at Verizon. In the long run, Legere will have to increase ROIC if his tenure is to be judged a complete success.

A company's **profit growth** can be measured by the increase in net profit over time. A company can grow its profits if it sells products in rapidly growing markets, gains market share from rivals, increases sales to existing customers, expands overseas, or diversifies profitably into new lines of business. For example, between 2013 and 2017, T-Mobile increased its net profits from \$35 million to \$2.2 billion, gaining market share and doubling its subscriber base thanks to its successful “un-carrier” strategy. Due to its profit growth, T-Mobile's earnings per share increased from \$0.05 to \$2.55 over this period, resulting in appreciation in the value of each share in T-Mobile.

Together, profitability and profit growth are the principal drivers of shareholder value (see the Appendix to this chapter for details). *To both boost profitability and grow profits over time, managers must formulate and implement strategies that give their company a competitive advantage over rivals.* Under the leadership of Legere, T-Mobile has been doing this. Between the start of 2013 and the end of 2017, the company's share price rose from \$18 to almost \$64, as investors came to realize that Legere's strategy was starting to work. If T-Mobile can continue to improve its market share, higher profitability will follow and shareholders will be rewarded for their decision to invest in the company.

One key challenge managers face is how best to simultaneously generate high profitability and increase profits. Companies that have high profitability but no profit growth will often be less valued by shareholders than companies that have both high profitability and rapid profit growth (see the Appendix for details). At the same time, managers need to be aware that if they grow profits but profitability declines, that too will be less highly valued by shareholders. What shareholders want to see, and what managers must try to deliver through strategic leadership, is *profitable growth*: that is, high profitability and sustainable profit growth. This is not easy, but some of the most successful enterprises of our era have achieved it—companies such as Apple, Google, and Microsoft.

It is important to remember that while maximizing shareholder value is the primary goal of for profit enterprises, as explained later in this book, managers must

profitability

The return a company makes on the capital invested in the enterprise.

return on invested capital

Return on invested capital is equal to net profit divided by capital invested in the company.

profit growth

The increase in net profit over time.

behave in a legal, ethical, and socially responsible manner while working towards this goal. Moreover, as we shall see, there is good evidence that the best way to maximize the *long-run* return to shareholders is to focus on customers and employees. Satisfying customer needs, and making sure that employees are fairly treated and work productively, typically translates into better financial performance and superior long-run returns for shareholders. Alternatively, ignoring customer needs, and treating employees unfairly, may boost short-run profits and returns to shareholders, but it will also damage the long-run viability of the enterprise and ultimately depress shareholder value. This is why many successful managers argue that if a company focuses on its customers, and creates incentives for its employees to work productively, shareholder returns will take care of themselves. Interestingly, at T-Mobile a major part of Legere's strategy has been to focus on treating customers well and empowering employees.

1-2b Competitive Advantage and a Company's Business Model

Managers do not make strategic decisions in a competitive vacuum. Their company is competing against other companies for customers. T-Mobile competes against Verizon, AT&T, and Sprint. Competition is a rough-and-tumble process in which only the most efficient, effective companies win out. It is a race without end. To maximize long-run shareholder value, managers must formulate and implement strategies that enable their company to outperform rivals—that give it a competitive advantage. A company is said to have a **competitive advantage** over its rivals when its profitability and profit growth are greater than the average of other companies competing for the same set of customers. The higher its profitability and profit growth relative to rivals, the greater its competitive advantage will be. A company has a **sustained competitive advantage** when its strategies enable it to maintain above-average profitability and profit growth for a number of years. T-Mobile isn't there yet, but it is moving in the right direction.

The key to understanding competitive advantage is appreciating how the different strategies managers pursue over time can create activities that fit together to make a company unique and able to consistently outperform them. A **business model** is managers' conception of how the set of strategies their company pursues work together as a congruent whole, enabling the company to gain a competitive advantage and achieve superior profitability and profit growth. In essence, a business model is a kind of mental model, or gestalt, of how the various strategies and capital investments a company makes fit together to generate above-average performance. A business model encompasses the totality of how a company will:

- Select its customers.
- Define and differentiate its product offerings.
- Create value for its customers.
- Acquire and keep customers.
- Produce goods or services.
- Increase productivity and lower costs.
- Deliver goods and services to the market.
- Organize activities within the company.
- Configure its resources.
- Achieve and sustain a high level of profitability.
- Grow the business over time.

competitive advantage

The achieved advantage over rivals when a company's profitability is greater than the average profitability of firms in its industry.

sustained competitive advantage

A company's strategies enable it to maintain above-average profitability for a number of years.

business model

The conception of how strategies should work together as a whole to enable the company to achieve competitive advantage.

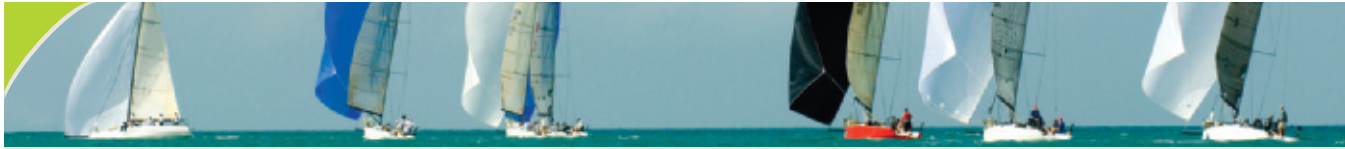
The business model at discount stores such as Wal-Mart, for example, is based on the idea that costs can be lowered by replacing a full-service retail format with a self-service format and a wider selection of products sold in a large-footprint store that contains minimal fixtures and fittings. These savings are passed on to consumers in the form of lower prices, which in turn grow revenues and help the company achieve further cost reductions from economies of scale. Over time, this business model has proved superior to the business models adopted by smaller, full-service, “mom-and-pop” stores, and by traditional, high-service department stores such as Sears. The business model—known as the self-service supermarket business model—was first developed by grocery retailers in the 1950s and later refined and improved on by general merchandisers such as Wal-Mart in the 1960s and 1970s. Subsequently, the same basic business model was applied to toys (Toys “R” Us), office supplies (Staples, Office Depot), and home-improvement supplies (Home Depot and Lowes).

1-2c Industry Differences in Performance

It is important to recognize that in addition to its business model and associated strategies, a company’s performance is also determined by the characteristics of the industry in which it competes. Different industries are characterized by different competitive conditions. In some industries, demand is growing rapidly; in others it is contracting. Some industries might be beset by excess capacity and persistent price wars; others by strong demand and rising prices. In some, technological change might be revolutionizing competition; others may be characterized by stable technology. In some industries, high profitability among incumbent companies might induce new companies to enter the industry, and these new entrants might subsequently depress prices and profits in the industry. In other industries, new entry might be difficult, and periods of high profitability might persist for a considerable time. Thus, the different competitive conditions prevailing in different industries may lead to differences in profitability and profit growth. For example, average profitability might be higher in some industries and lower in other industries because competitive conditions vary from industry to industry. Exactly how industries differ is discussed in detail in Chapter 2. For now, it is important to remember that the profitability and profit growth of a company are determined by two main factors: *its relative success in its industry and the overall performance of its industry relative to other industries.*²

1-2d Performance in Nonprofit Enterprises

A final point concerns the concept of superior performance in the nonprofit sector. By definition, nonprofit enterprises such as government agencies, universities, and charities are not in “business” to make profits. Nevertheless, they are expected to use their resources efficiently and operate effectively, and their managers set goals to measure their performance. One performance goal for a business school might be to get its programs ranked among the best in the nation. A performance goal for a charity such as the Gates Foundation might be to eradicate malaria (see Strategy in Action 1.1 for details). A performance goal for a government agency might be to improve its services while reducing its need for taxpayer funds. The managers of nonprofits need to map out strategies to attain these goals. They also need to understand that nonprofits compete with each other for scarce resources, just as businesses do. For example, charities



1.1 STRATEGY IN ACTION

The Gates Foundation—Eradicating Malaria

In 2007, the Bill & Melinda Gates Foundation, the philanthropic foundation established by Microsoft founder Bill Gates and his wife Melinda, announced an ambitious, long-term goal: to eradicate malaria worldwide, rather than just keeping it under control, as had been the prevailing policy for decades. Many thought the goal was overly ambitious. An earlier attempt to eradicate the disease in the late 1950s had failed. The call came at a challenging time. Malaria was killing more than 1 million people a year, most of them children. Deaths from malaria in sub-Saharan Africa had doubled over the prior 20 years as the malaria parasite grew resistant to existing drugs, and as the mosquitos that carry the disease grew resistant to insecticides. The Gates Foundation backed up its call to arms with a commitment to invest \$860 million to malaria programs, and another \$650 million to support the Global Fund to Fight AIDS, Tuberculosis and Malaria.

With a clear, long-term goal in place, the Gates Foundation needed to develop a set of strategies to attain this goal. The Foundation knew only too well that simply throwing money at the problem would not lead to a solution. Besides, even an organization like the Gates Foundation, which is the world's largest private charity, has limited resources and many different requests for funding. The foundation needed to make very clear choices about how it allocated its limited resources in order to have maximum effect and help win the war against malaria. To aid in this process, it hired scientists and public health experts to help evaluate requests for funding.

As it developed over the next few years, the foundation's strategy had several elements. First, it

committed funds to promising efforts to develop a vaccine for malaria. Second, realizing that many malaria carriers are asymptomatic, the foundation backed efforts to developing better diagnostic tests that could be used quickly and efficiently in poor regions so that carriers in a population could be identified and treated. Third, it funded efforts to develop new drugs to treat those with malaria. These drugs represented an effort to respond to the rise of drug resistant malaria parasites. Fourth, it sought to fund the development of more effective transmission control tools such as insecticide treated bed nets and indoor spraying of walls and other surfaces with an insecticide. Finally, realizing that it could do far more with the support and cooperation of national governments and multinational institutions, the foundation used its resources to advocate for better funding and more effective policies, and it partnered proactively with national government in affected areas to help them develop more effective policies.

How much progress has the foundation made? In 2016, malaria claimed 429,000 lives. While that figure is still way too high, it represented a 50% reduction overall from the diseases peak in the early 2000s. The Gates Foundation's malaria strategy is evolving. Bill Gates is the first to admit that some of its goals were too ambitious. Early on, he thought we would have a malaria vaccine by now. While that hasn't happened, a promising vaccine is now in development. Equally notable, some low technology and inexpensive strategies have proved to be very successful, such as giving away insecticide treated bed nets and placing mosquito traps in ventilation airways between the walls and roofs of buildings.

Sources: D.G. Blankinship, "Gates Foundation looks to fight Malaria," *Associated Press*, October 17, 2007. Bill Gates, "Mosquito Wars," *gatesnotes*, August 15, 2017. Bill & Melinda Gates Foundation, "Malaria: Strategy Overview," April 2011. N. Kirsch, "Philanthropy King: Bill Gates gives away \$4.6 billion, unveils new campaign to combat malaria," *Forbes*, August 15, 2017.

compete for scarce donations, and their managers must plan and develop strategies that lead to high performance and demonstrate a track record of meeting performance goals. A successful strategy gives potential donors a compelling message about why they should contribute additional donations. Thus, planning and thinking strategically are as important for managers in the nonprofit sector as they are for managers in profit-seeking firms.

1-3 STRATEGIC MANAGERS

Managers are the linchpin in the strategy-making process. Individual managers must take responsibility for formulating strategies to attain a competitive advantage and for putting those strategies into effect through implementation. They must lead the strategy-making process. The strategies that have resulted in improved performance at T-Mobile were not chosen by some abstract entity known as “the company”; they were chosen by the company’s CEO, John Legere, and the managers he hired. Later in the chapter, we discuss strategic leadership, which is how managers can effectively lead the strategy-making process.

In most companies, there are two primary types of managers: **general managers**, who bear responsibility for the overall performance of the company or for one of its businesses or product lines, and **functional managers**, who are responsible for supervising a particular function; that is, a task, an activity, or an operation such as accounting, marketing, research and development (R&D), information technology, or logistics. Put differently, general managers have profit-and-loss responsibility for a product, a business, or the company as a whole.

A company is a collection of functions or departments that work together to bring a particular good or service to the market. A company that operates in several different businesses often creates self-contained divisions for each business, with a general manager running each. The overriding concern of general managers is the success of the whole company or the divisions under their direction; they are responsible for deciding how to create a competitive advantage and achieve high profitability with the resources and capital at their disposal. Figure 1.2 shows the organization of a **multidivisional company** that competes in several different businesses and has created a separate, self-contained division to manage each. As you can see, there are three main levels of management: corporate, business, and functional. General managers are found at the first two of these levels, but their strategic roles differ depending on their sphere of responsibility.

1-3a Corporate-Level Managers

The corporate level of management consists of the chief executive officer (CEO), other senior executives, and corporate staff. These individuals occupy the apex of decision making within the organization. The CEO is the principal general manager. In consultation with other senior executives, the role of corporate-level managers is to oversee the development of strategies for the whole organization. This role includes defining the goals of the organization, determining what businesses it should be in, allocating resources among the different businesses, formulating and implementing strategies that span individual businesses, and providing leadership for the entire organization.

general managers

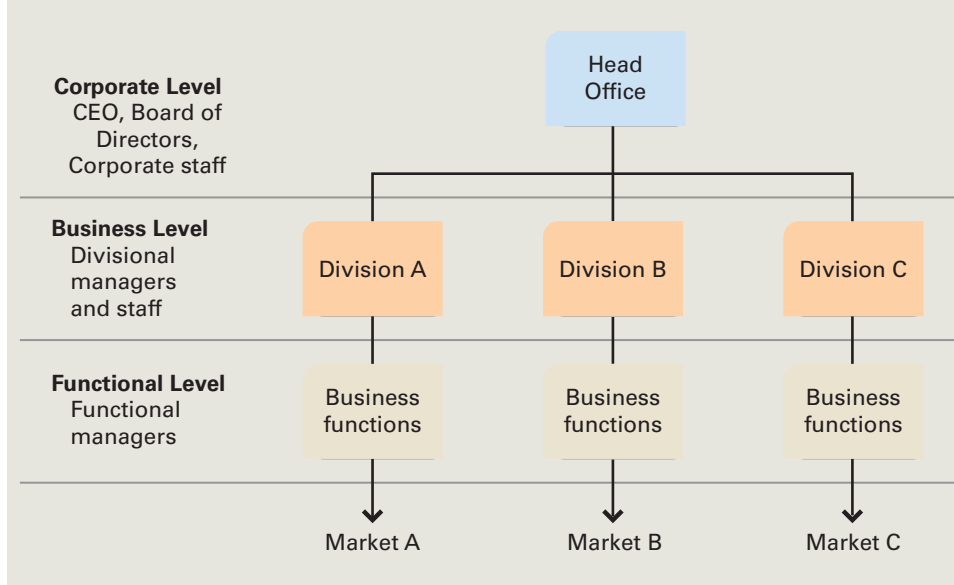
Managers who bear responsibility for the overall performance of the company or for one of its major self-contained subunits or divisions.

functional managers

Managers responsible for supervising a particular function, that is, a task, activity, or operation, such as accounting, marketing, research and development (R&D), information technology, or logistics.

multidivisional company

A company that competes in several different businesses and has created a separate, self-contained division to manage each.

Figure 1.2 Levels of Strategic Management

Consider General Electric (GE) as an example. GE is active in a wide range of businesses, including lighting equipment, motor and transportation equipment, turbine generators, construction and engineering services, industrial electronics, medical systems, aerospace, and aircraft engines. The main strategic responsibilities of its CEO, John Flannery, are setting overall strategic goals, allocating resources among the different business areas, deciding whether the firm should divest itself of any of its businesses, and determining whether it should acquire any new ones. In other words, it is up to Flannery to develop strategies that span individual businesses; his concern is with building and managing the corporate portfolio of businesses to maximize corporate profitability.

It is not the CEO's specific responsibility to develop strategies for competing in individual business areas such as medical systems. The development of such strategies is the responsibility of the general managers in these different businesses, or business-level managers. However, as CEO, it *is* Flannery's responsibility to probe the strategic thinking of business-level managers to make sure that they are pursuing robust business models and strategies that will contribute to the maximization of GE's long-run profitability; to coach and motivate those managers; to reward them for attaining or exceeding goals; and to hold them accountable for poor performance.

Corporate-level managers also provide a link between the people who oversee the strategic development of a firm and those who own it (the shareholders). Corporate-level managers, particularly the CEO, can be viewed as the agents of shareholders.³ It is their responsibility to ensure that the corporate and business strategies that the company pursues are consistent with superior profitability and profit growth. If they are not, then the CEO is likely to be called to account by the shareholders.

business unit

A self-contained division that provides a product or service for a particular market.

1-3b Business-Level Managers

A **business unit** is a self-contained division with its own functions (for example, finance, purchasing, production, and marketing departments) that provides a product or service for a particular market. The principal general manager at the business level, or the business-level manager, is the head of the division. The strategic role of these managers is to translate the general statements of direction and intent from the corporate level into concrete strategies for individual businesses. Whereas corporate-level general managers are concerned with strategies that span individual businesses, business-level general managers are concerned with strategies that are specific to a particular business. At GE, a major corporate goal is to be a market leader in every business in which the corporation competes. The general managers in each division work out for their business the strategies that are consistent with this objective.

1-3c Functional-Level Managers

Functional-level managers are responsible for the specific business functions or operations (human resources, purchasing, product development, logistics, production, customer service, and so on) found within a company or one of its divisions. Thus, a functional manager's sphere of responsibility is generally confined to one organizational activity, whereas general managers oversee the operation of an entire company or division. Although they are not responsible for the overall performance of the organization, functional managers nevertheless have a major strategic role: to develop functional strategies in their areas that help fulfill the strategic objectives set by business- and corporate-level general managers.

In GE's aerospace business, for instance, production managers are responsible for developing manufacturing strategies consistent with corporate objectives. Moreover, functional managers provide most of the information that makes it possible for business- and corporate-level general managers to formulate realistic and attainable strategies. Indeed, because they are closer to the customer than is the typical general manager, functional managers may generate important ideas that subsequently become major strategies for the company. Thus, it is important for general managers to listen closely to the ideas of their functional managers. An equally great responsibility for managers at the operational level is strategy implementation: the execution of corporate- and business-level plans.

1-4 THE STRATEGY-MAKING PROCESS

We can now turn our attention to the process by which managers formulate and implement strategies. Many writers have emphasized that strategy is the outcome of a formal planning process, and that top management plays the most important role in this process.⁴ Although this view has some basis in reality, it is not the whole story. As we shall see later in the chapter, valuable strategies often emerge from deep within the organization without prior planning. Nevertheless, a consideration of formal, rational planning is a useful starting point for our journey into the world of strategy. Accordingly, we consider what might be described as a typical, formal strategic planning model.

1-4a A Model of the Strategic Planning Process

The formal strategic planning process has the following five main steps:

1. Select the corporate mission and major corporate goals.
2. Analyze the organization's external competitive environment to identify opportunities and threats.
3. Analyze the organization's internal operating environment to identify the organization's strengths and weaknesses.
4. Select strategies that build on the organization's strengths and correct its weaknesses in order to take advantage of external opportunities and counter external threats. These strategies should be consistent with the mission and major goals of the organization. They should be congruent and constitute a viable business model.
5. Implement the strategies.

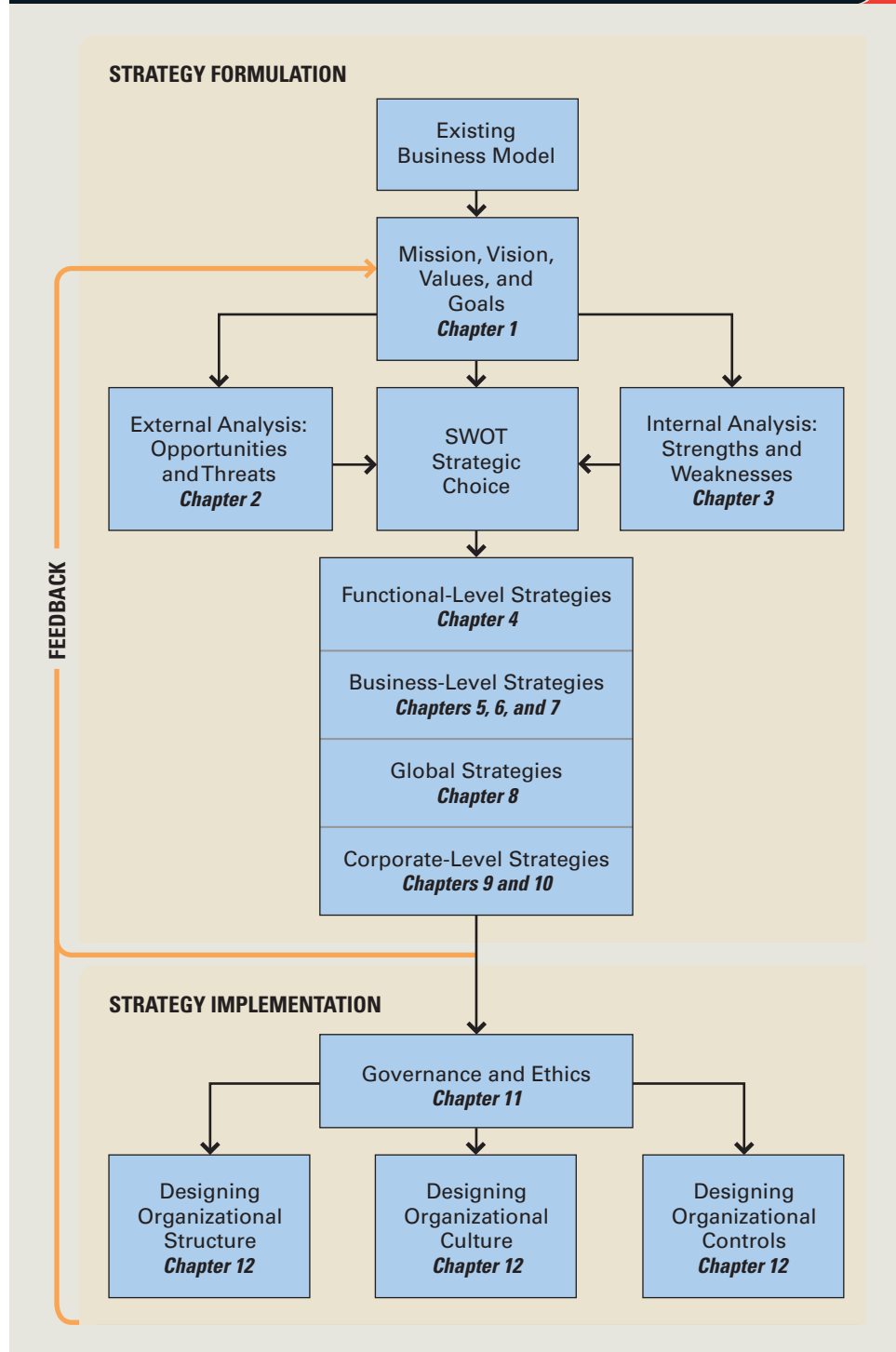
The task of analyzing the organization's external and internal environments, and then selecting appropriate strategies, constitutes strategy formulation. In contrast, as noted earlier, strategy implementation involves putting the strategies (or plan) into action. This includes taking actions consistent with the selected strategies of the company at the corporate, business, and functional levels; allocating roles and responsibilities among managers (typically through the design of organizational structure); allocating resources (including capital and money); setting short-term objectives; and designing the organization's control and reward systems. These steps are illustrated in Figure 1.3 (which can also serve as a road map for the rest of this book).

Each step in Figure 1.3 constitutes a sequential step in the strategic planning process. At step 1, each round, or cycle, of the planning process begins with a statement of the corporate mission and major corporate goals. The mission statement is followed by the foundation of strategic thinking: external analysis, internal analysis, and strategic choice. The strategy-making process ends with the design of the organizational structure and the culture and control systems necessary to implement the organization's chosen strategy. This chapter discusses how to select a corporate mission and choose major goals. Other aspects of strategic planning are reserved for later chapters, as indicated in Figure 1.3.

Some organizations go through a new cycle of the strategic planning process every year. This does not necessarily mean that managers choose a new strategy each year. In many instances, the result is simply to modify and reaffirm a strategy and structure already in place. The strategic plans generated by the planning process generally project over a period of 1 to 5 years, and the plan is updated, or rolled forward, every year. The results of the annual strategic planning process should be used as input into the budgetary process for the coming year so that strategic planning shapes resource allocation within the organization.

1-4b Mission Statement

The first component of the strategic management process is crafting the organization's mission statement, which provides the framework—or context—within which strategies are formulated. A mission statement has four main components: a statement of the organization's reason for existence—normally referred to as the mission; a statement of some desired future state, usually referred to as the vision; a statement of the key values to which the organization is committed; and a statement of major goals.

Figure 1.3 Main Components of the Strategic Planning Process

The Mission A company's **mission** describes what the organization does. For example, the mission of Google is *to organize the world's information and make it universally accessible and useful*.⁵ Google's search engine is the method that is employed to "organize the world's information and make it accessible and useful." In the view of Google's founders, Larry Page and Sergey Brin, information includes not just text on websites, but also images, video, maps, products, news, books, blogs, and much more. You can search through all of these information sources using Google's search engine.

mission

The purpose of the company, or a statement of what the company strives to do.

According to the famous management writer, Peter Drucker, an important first step in the process of formulating a mission is to come up with a definition of the organization's business. Essentially, the definition answers these questions: "What is our business? What will it be? What should it be?"⁶ The responses to these questions guide the formulation of the mission. To answer the question "What is our business?" a company should define its business in terms of three dimensions: who is being satisfied (what customer groups), what is being satisfied (what customer needs), and how customers' needs are being satisfied (by what skills, knowledge, or distinctive competencies).⁷ Figure 1.4 illustrates these dimensions.

This approach stresses the need for a *customer-oriented* rather than a *product-oriented* business definition. A product-oriented business definition focuses on the characteristics of the products sold and the markets served, not on the customer needs the products satisfy. Such an approach obscures the company's true mission because a product is only the physical or service manifestation of applying a particular skill to satisfy a particular need for a particular customer group. In practice, that need may be satisfied in many different ways, and a broad, customer-oriented business definition that identifies these ways can safeguard companies from being caught unaware by major shifts in demand.

Figure 1.4 Defining the Business



Google's mission statement is customer oriented. Google's product is search. Its production technology involves the development of complex search algorithms and vast databases that archive information. But Google does not define its self as a search engine company. Rather, it sees itself as organizing information to make it accessible and useful *to customers*.

The need to take a customer-oriented view has often been ignored. History is peppered with the ghosts of once-great corporations that did not define their businesses, or defined them incorrectly, and so ultimately declined. In the 1950s and 1960s, many office equipment companies such as Smith Corona and Underwood defined their businesses as being the production of typewriters. This product-oriented definition ignored the fact that they were really in the business of satisfying customers' needs for information processing. Unfortunately for those companies, when a new form of technology appeared that better served customer needs for information processing (computers), demand for typewriters plummeted. The last great typewriter company, Smith Corona, went bankrupt in 1996, a victim of the success of computer-based word-processing technology.

In contrast, IBM correctly foresaw what its business would be. In the 1950s, IBM was a leader in the manufacture of typewriters and mechanical tabulating equipment using punchcard technology. However, unlike many of its competitors, IBM defined its business as providing a means for *information processing and storage*, rather than only supplying mechanical tabulating equipment and typewriters.⁸ Given this definition, the company's subsequent moves into computers, software systems, office systems, and printers seem logical.

vision

The articulation of a company's desired achievements or future state.

Vision The **vision** of a company defines a desired future state; it articulates, often in bold terms, what the company would like to achieve. In its early days, Microsoft operated with a very powerful vision of *a computer on every desk and in every home*. To turn this vision into a reality, Microsoft focused on producing computer software that was cheap and useful to businesses and consumers. In turn, the availability of powerful, inexpensive software such as Windows and Office helped to drive the penetration of personal computers into homes and offices.

values

A statement of how employees should conduct themselves and their business to help achieve the company mission.

Values The **values** of a company state how managers and employees should conduct themselves, how they should do business, and what kind of organization they should build. Insofar as they help drive and shape behavior within a company, values are commonly seen as the bedrock of a company's organizational culture: the set of values, norms, and standards that control how employees work to achieve an organization's mission and goals. An organization's culture is commonly seen as an important source of its competitive advantage.⁹ (We discuss the issue of organizational culture in depth in Chapter 12.) For example, Nucor Steel is one of the most productive and profitable steel firms in the world. Its competitive advantage is based, in part, on the extremely high productivity of its workforce, which the company maintains is a direct result of its cultural values, which in turn determine how it treats its employees. These values are as follows:

- "Management is obligated to manage Nucor in such a way that employees will have the opportunity to earn according to their productivity."
- "Employees should be able to feel confident that if they do their jobs properly, they will have a job tomorrow."

- “Employees have the right to be treated fairly and must believe that they will be.”
- “Employees must have an avenue of appeal when they believe they are being treated unfairly.”¹⁰

At Nucor, values emphasizing pay for performance, job security, and fair treatment for employees help to create an atmosphere within the company that leads to high employee productivity. In turn, this has helped Nucor achieve one of the lowest cost structures in its industry, and it helps to explain the company’s profitability in a very price-competitive business.

In one study of organizational values, researchers identified a set of values associated with high-performing organizations that help companies achieve superior financial performance through their impact on employee behavior.¹¹ These values included respect for the interests of key organizational stakeholders: individuals or groups that have an interest, claim, or stake in the company, in what it does, and in how well it performs.¹² They include stockholders, bondholders, employees, customers, the communities in which the company does business, and the general public. The study found that deep respect for the interests of customers, employees, suppliers, and shareholders was associated with high performance. The study also noted that the encouragement of leadership and entrepreneurial behavior by mid- and lower-level managers, and a willingness to support change efforts within the organization, contributed to high performance. The same study identified the attributes of poorly performing companies—as might be expected, these are not articulated in company mission statements: (1) arrogance, particularly in response to ideas from outside the company; (2) lack of respect for key stakeholders; and (3) a history of resisting change efforts and “punishing” mid- and lower-level managers who showed “too much leadership.”

1-5 MAJOR GOALS

Having stated the mission, vision, and key values, strategic managers can take the next step in the formulation of a mission statement: establishing major goals. A goal is a precise, measurable, desired future state that a company attempts to realize. In this context, the purpose of goals is to specify with precision what must be done if the company is to attain its mission or vision.

Well-constructed goals have four main characteristics:¹³

- They are precise and measurable. Measurable goals give managers a yardstick or standard against which they can judge their performance.
- They address crucial issues. To maintain focus, managers should select a limited number of crucial or important goals to assess the performance of the company.
- They are challenging but realistic. They give all employees an incentive to look for ways of improving the operations of the organization. If a goal is unrealistic in the challenges it poses, employees may give up; a goal that is too easy may fail to motivate managers and other employees.¹⁴
- They specify, when appropriate, a time period in which the goals should be achieved. Time constraints tell employees that success requires a goal to be attained by a given date, not after that date. Deadlines can inject a sense of urgency into goal attainment and act as a motivator. However, not all goals require time constraints.

Well-constructed goals also provide a means by which the performance of managers can be evaluated.

As noted earlier, although most companies operate with a variety of goals, the primary goal of most corporations is to maximize shareholder returns. Doing this requires both high profitability and sustained profit growth. Thus, most companies operate with goals for profitability and profit growth. However, it is important that top managers do not make the mistake of overemphasizing current profitability to the detriment of long-term profitability and profit growth.¹⁵ The overzealous pursuit of current profitability to maximize short-term ROIC can encourage such misguided managerial actions as cutting expenditures judged to be nonessential in the short run—for instance, expenditures for research and development, marketing, and new capital investments. Although cutting current expenditures increases current profitability, the resulting underinvestment, lack of innovation, and diminished marketing can jeopardize long-run profitability and profit growth.

To guard against short-run decision making, managers need to ensure that they adopt goals whose attainment will increase the long-run performance and competitiveness of their enterprise. Long-term goals are related to such issues as product development, customer satisfaction, and efficiency. They emphasize specific objectives or targets concerning such details as employee and capital productivity, product quality, innovation, customer satisfaction, and customer service.

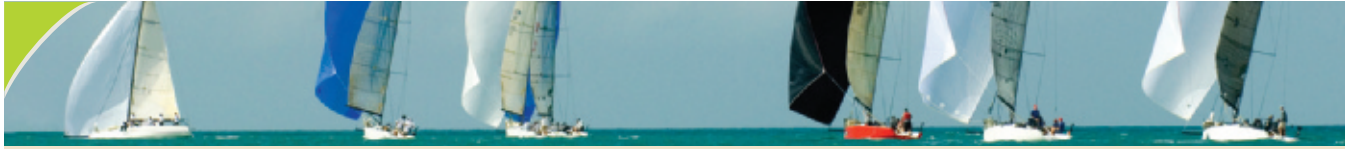
1-5a External Analysis

The second component of the strategic management process is an analysis of the organization's external operating environment. The essential purpose of the external analysis is to identify strategic opportunities and threats within the organization's operating environment that will affect how it pursues its mission. Strategy in Action 1.2 describes how an analysis of opportunities and threats in the external environment as resulted in a strategic shift at Time Inc.

Three interrelated environments should be examined when undertaking an external analysis: the industry environment in which the company operates, the country or national environment, and the wider socioeconomic or macroenvironment. Analyzing the industry environment requires an assessment of the competitive structure of the company's industry, including the competitive position of the company and its major rivals. It also requires analysis of the nature, stage, dynamics, and history of the industry. Because many markets are now global, analyzing the industry environment also means assessing the impact of globalization on competition within an industry. Such an analysis may reveal that a company should move some production facilities to another nation, that it should aggressively expand in emerging markets such as China, or that it should beware of new competition from emerging nations. Analyzing the macroenvironment consists of examining macroeconomic, social, governmental, legal, international, and technological factors that may affect the company and its industry. We look at external analysis in Chapter 2.

1-5b Internal Analysis

Internal analysis, the third component of the strategic planning process, focuses on reviewing the resources, capabilities, and competencies of a company in order to identify its strengths and weaknesses. For example, as described in Strategy in Action 1.2, an



1.2 STRATEGY IN ACTION

The Evolution of Strategy at Time Inc.

Time Inc., the icon magazine publisher established in 1922, has a venerable history. Its magazine titles include *Time*, *Fortune*, *In Style*, *Entertainment Weekly*, *Sports Illustrated*, and *People*, all long-time leaders in their respective categories. By the first decade of this century, however, Time Inc. was confronted with declining subscription rates. An external analysis revealed what was happening. The readership of Time's magazines was aging. Younger readers were getting what they wanted from the Web and consuming media on digital devices. This was both a *threat* for Time Inc., as its Web offerings were not strong, and an *opportunity*, because with the right offerings, Time Inc. could capture this audience. Time also realized that advertising dollars were migrating rapidly to the Web, and if the company was going to maintain its share, its Web offerings had to be every bit as good as its print offerings.

An internal analysis revealed why, despite multiple attempts, Time had failed to capitalize on the opportunities offered by the emergence of the Web. Although Time had tremendous *strengths*, including well-known brands and strong reporting, development of its Web offerings had been hindered by a serious *weakness*—an editorial culture that regarded Web publishing as a backwater. At *People*, for example, the online operation used to be “like a distant moon,” according to managing editor Martha Nelson. Managers at Time Inc. had also been worried that Web offerings would cannibalize print offerings and accelerate the decline in the circulation of magazines, with dire financial consequences for the company. As a result of this culture, efforts to move publications onto the Web were underfunded or were stymied entirely by a lack of management attention and commitment.

Martha Nelson showed the way forward for the company. Her *strategy* for overcoming the *weakness*

at Time Inc., and better exploiting *opportunities* on the Web, started with merging the print and online newsrooms at *People*, removing the distinction between them. Then, she relaunched the magazine's online site, made major editorial commitments to Web publishing, stated that original content should appear on the Web, and emphasized the importance of driving traffic to the site and earning advertising revenues. Over the next 2 years, page views at People.com increased fivefold.

Ann Moore, then CEO at Time Inc., formalized this strategy in 2005, mandating that all print offerings should follow the lead of People.com, integrating print and online newsrooms and investing significantly more resources in Web publishing. To drive this initiative home, Time hired several well-known bloggers to write for its online publications. The goal of Moore's strategy was to neutralize the cultural *weakness* that had hindered online efforts in the past and to redirect resources to Web publishing.

In 2007, to further its shift to web-centric publishing, Time Inc. announced another change in strategy: It would sell off 18 magazine titles that, although good performers, did not appear to have much traction on the Web. Moore stated that going forward Time Inc. would focus its energy, resources, and investments on the company's largest, most profitable brands, those that have demonstrated an ability to draw large audiences in digital form. Since then, the big push has been to develop magazine apps for tablet computers, most notably Apple's iPad and tablets that use the Android operating system. By early 2012, Time Inc. had its entire magazine catalog on every major tablet platform. As of 2018, revenues from digital editions and digital advertising were growing rapidly, while print subscriptions were in a secular decline, which underlined the wisdom of Moore's digitalization strategy.

Sources: A. Van Duyn, “Time Inc. Revamp to Include Sale of 18 Titles,” *Financial Times* (September 13, 2006): 24; M. Karnitsching, “Time Inc. Makes New Bid to Be Big Web Player,” *The Wall Street Journal* (March 29, 2006): B1; M. Flamm, “Time Tries the Web Again,” *Crain's New York Business* (January 16, 2006): 3; T. Carmody, “Time Warner Bringing Digital Magazines, HBO to More Platforms,” *Wired* (July 3, 2011); Sydney Ember, “Time Inc. reshuffles in a digital reinvention,” *New York Times*, July 13, 2016.

internal analysis at Time Inc. revealed that although the company had strong, well-known brands such as *Fortune*, *Money*, *Sports Illustrated*, and *People* (a strength), and strong reporting capabilities (another strength), it suffered from a lack of editorial commitment to online publishing (a weakness). We consider internal analysis in Chapter 3.

1-5c SWOT Analysis and the Business Model

The next component of strategic thinking requires the generation of a series of strategic alternatives, or choices of future strategies to pursue, given the company's internal strengths and weaknesses and its external opportunities and threats. The comparison of strengths, weaknesses, opportunities, and threats is normally referred to as a **SWOT analysis**.¹⁶ The central purpose is to identify the strategies to exploit external opportunities, counter threats, build on and protect company strengths, and eradicate weaknesses.

At Time Inc., managers saw the move of readership to the Web as both an *opportunity* that they must exploit and a *threat* to Time's established print magazines. Managers recognized that Time's well-known brands and strong reporting capabilities were *strengths* that would serve it well online, but that an editorial culture that marginalized online publishing was a *weakness* that had to be fixed. The *strategies* that managers at Time Inc. devised included merging the print and online newsrooms to remove distinctions between them, and investing significant financial resources in online sites.

More generally, the goal of a SWOT analysis is to create, affirm, or fine-tune a company-specific business model that will best align, fit, or match a company's resources and capabilities to the demands of the environment in which it operates. Managers compare and contrast various alternative possible strategies, and then identify the set of strategies that will create and sustain a competitive advantage. These strategies can be divided into four main categories:

- *Functional-level strategies*, directed at improving the efficiency and effectiveness of operations within a company, such as manufacturing, marketing, materials management, product development, and customer service. We review functional-level strategies in Chapter 4.
- *Business-level strategies*, which encompass the business's overall competitive theme, the way it positions itself in the marketplace to gain a competitive advantage, and the different positioning strategies that can be used in different industry settings—for example, cost leadership, differentiation, focusing on a particular niche or segment of the industry, or some combination of these. We review business-level strategies in Chapters 5, 6, and 7.
- *Global strategies*, which address how to expand operations outside the home country in order to grow and prosper in a world where competitive advantage is determined at a global level. We review global strategies in Chapter 8.
- *Corporate-level strategies*, which answer the primary questions: What business or businesses should we be in to maximize the long-run profitability and profit growth of the organization, and how should we enter and increase our presence in these businesses to gain a competitive advantage? We review corporate-level strategies in Chapters 9 and 10.

The strategies identified through a SWOT analysis should be congruent with each other. Thus, functional-level strategies should be consistent with, or support,

SWOT analysis

The comparison of strengths, weaknesses, opportunities, and threats.

the company's business-level strategies and global strategies. Moreover, as we explain later in this book, corporate-level strategies should support business-level strategies. When combined, the various strategies pursued by a company should constitute a complete, viable business model. In essence, a SWOT analysis is a methodology for choosing between competing business models, and for fine-tuning the business model that managers choose. For example, when Microsoft entered the videogame market with its Xbox offering, it had to settle on the best business model for competing in this market. Microsoft used a SWOT-type analysis to compare alternatives, and settled on a business model referred to as "razor and razor blades," in which the Xbox console is priced at cost to build sales (the "razor"), while profits are generated from royalties on the sale of games for the Xbox (the "blades").

1-5d Strategy Implementation

Once managers have chosen a set of congruent strategies to achieve a competitive advantage and increase performance, those strategies have to be implemented. Strategy implementation involves taking actions at the functional, business, and corporate levels to execute a strategic plan. Implementation can include, for example, putting quality improvement programs into place, changing the way a product is designed, positioning the product differently in the marketplace, segmenting the market and offering different versions of the product to different consumer groups, implementing price increases or decreases, expanding through mergers and acquisitions, or downsizing the company by closing down or selling off parts of the company. These and other topics are discussed in detail in Chapters 4 through 10.

Strategy implementation also entails designing the best organizational structure and the best culture and control systems to put a chosen strategy into action. In addition, senior managers need to put a governance system in place to make sure that everyone within the organization acts in a manner that is not only consistent with maximizing profitability and profit growth, but also legal and ethical. We look at the topic of governance and ethics in Chapter 11; in Chapter 12, we discuss the organizational structure, culture, and controls required to implement business-level strategies.

1-5e The Feedback Loop

The feedback loop in Figure 1.3 indicates that strategic planning is ongoing: it never ends. Once a strategy has been implemented, its execution must be monitored to determine the extent to which strategic goals and objectives are being achieved, and to what degree competitive advantage is being created and sustained. This information and knowledge is returned to the corporate level through feedback loops, and becomes the input for the next round of strategy formulation and implementation. Top managers can then decide whether to reaffirm the existing business model and the existing strategies and goals, or suggest changes for the future. For example, if a strategic goal proves too optimistic, a more conservative goal is set. Or, feedback may reveal that the business model is not working, so managers may seek ways to change it. In essence, this is what happened at Time Inc. (see Strategy in Action 1.2).

1-6 STRATEGY AS AN EMERGENT PROCESS

The planning model suggests that a company's strategies are the result of a plan, that the strategic planning process is rational and highly structured, and that top management orchestrates the process. Several scholars have criticized the formal planning model for three main reasons: (1) the unpredictability of the real world, (2) the role that lower-level managers can play in the strategic management process, and (3) the fact that many successful strategies are often the result of serendipity, not rational strategizing. These scholars have advocated an alternative view of strategy making.¹⁷

1-6a Strategy Making in an Unpredictable World

Critics of formal planning systems argue that we live in a world in which uncertainty, complexity, and ambiguity dominate, and in which small, chance events can have a large, unpredictable impact on outcomes.¹⁸ In such circumstances, they claim, even the most carefully thought-out strategic plans are prone to being rendered useless by rapid and unforeseen change. In an unpredictable world, being able to respond quickly to changing circumstances, and to alter the strategies of the organization accordingly, is paramount. The dramatic rise of Google, for example, with its business model based on revenues earned from advertising links associated with search results (the so-called “pay-per-click” business model), disrupted the business models of companies that made money from more traditional forms of online advertising. Nobody could foresee this development or plan for it, but companies had to respond to it, and rapidly. Companies with a strong online advertising presence, including Yahoo.com and Microsoft's MSN network, rapidly changed their strategies to adapt to the threat Google posed. Specifically, both companies developed their own search engines and copied Google's pay-per-click business model. According to critics of formal systems, such a flexible approach to strategy making is not possible within the framework of a traditional strategic planning process, with its implicit assumption that an organization's strategies only need to be reviewed during the annual strategic planning exercise.

1-6b Autonomous Action: Strategy Making by Lower-Level Managers

Another criticism leveled at the rational planning model of strategy is that too much importance is attached to the role of top management, particularly the CEO.¹⁹ An alternative view is that individual managers deep within an organization can—and often do—exert a profound influence over the strategic direction of the firm.²⁰ Writing with Robert Burgelman of Stanford University, Andy Grove, the former CEO of Intel, noted that many important strategic decisions at Intel were initiated not by top managers but by the autonomous actions of lower-level managers deep within Intel who, on their own initiative, formulated new strategies and worked to persuade top-level managers to alter the strategic priorities of the firm.²¹ These strategic decisions included the decision to exit an important market (the DRAM memory chip market) and to develop a certain class of microprocessors (RISC-based microprocessors) in direct contrast to the stated strategy of Intel's top managers.

Autonomous action may be particularly important in helping established companies deal with the uncertainty created by the arrival of a radical new technology that changes the dominant paradigm in an industry.²² Top managers usually rise to preeminence by successfully executing the established strategy of the firm. Therefore, they may have an emotional commitment to the status quo and are often unable to see things from a different perspective. In this sense, they can be a conservative force that promotes inertia. Lower-level managers are less likely to have the same commitment to the status quo and have more to gain from promoting new technologies and strategies. They may be the first ones to recognize new strategic opportunities and lobby for strategic change. As described in Strategy in Action 1.3, this seems to have been the case at discount stockbroker Charles Schwab, which had to adjust to the arrival of the Web in the 1990s.

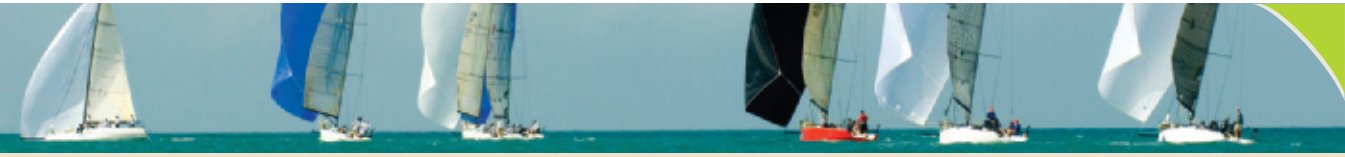
1-6c Serendipity and Strategy

Business history is replete with examples of accidental events that helped push companies in new and profitable directions. These examples suggest that many successful strategies are not the result of well-thought-out plans, but of serendipity—stumbling across good outcomes unexpectedly. One such example occurred at 3M during the 1960s. At that time, 3M was producing fluorocarbons for sale as coolant liquid in air-conditioning equipment. One day, a researcher working with fluorocarbons in a 3M lab spilled some of the liquid on her shoes. Later that day when she spilled coffee over her shoes, she watched with interest as the coffee formed into little beads of liquid and then ran off her shoes without leaving a stain. Reflecting on this phenomenon, she realized that a fluorocarbon-based liquid might turn out to be useful for protecting fabrics from liquid stains, and so the idea for Scotchgard was born. Subsequently, Scotchgard became one of 3M's most profitable products and took the company into the fabric protection business, an area within which it had never planned to participate.²³

Serendipitous discoveries and events can open all sorts of profitable avenues for a company. But some companies have missed profitable opportunities because serendipitous discoveries or events were inconsistent with their prior (planned) conception of their strategy. In one classic example of such myopia, in the 19th century, the telegraph company Western Union turned down an opportunity to purchase the rights to an invention by Alexander Graham Bell. The invention was the telephone—the technology that subsequently made the telegraph obsolete.

1-6d Intended and Emergent Strategies

Henry Mintzberg's model of strategy development provides a more encompassing view of strategy. According to this model, illustrated in Figure 1.5, a company's realized strategy is the product of whatever planned strategies are actually put into action (the company's deliberate strategies) and any unplanned, or emergent, strategies. In Mintzberg's view, many planned strategies are not implemented because of unpredicted changes in the environment (they are unrealized). Emergent strategies are the unplanned responses to unforeseen circumstances. They arise from autonomous action by individual managers deep within the organization, from serendipitous discoveries or events, or from an unplanned strategic shift by top-level managers in response to changed circumstances. They are not the product of formal, top-down planning mechanisms.



1.3 STRATEGY IN ACTION

A Strategic Shift at Charles Schwab

In the mid-1990s, Charles Schwab was the most successful discount stockbroker in the world. Over 20 years, it had gained share from full-service brokers like Merrill Lynch by offering deep discounts on the commissions charged for stock trades. Although Schwab had a nationwide network of branches, most customers executed their trades through a telephone system, TeleBroker. Others used online proprietary software, Street Smart, which had to be purchased from Schwab. It was a business model that worked well—then along came E*Trade.

Bill Porter, a physicist and inventor, started the discount brokerage firm E*TRADE in 1994 to take advantage of the opportunity created by the rapid emergence of the Web. E*TRADE launched the first dedicated website for online trading: E*TRADE had no branches, no brokers, and no telephone system for taking orders, and thus it had a very-low-cost structure. Customers traded stocks over the company's website. Due to its low-cost structure, E*TRADE was able to announce a flat \$14.95 commission on stock trades, a figure significantly below Schwab's average commission, which at the time was \$65. It was clear from the outset that E*TRADE and other online brokers such as Ameritrade, which soon followed, offered a direct threat to Schwab. Not only were their cost structures and commission rates considerably lower than Schwab's, but the ease, speed, and flexibility of trading stocks over the Web suddenly made Schwab's Street Smart trading software seem limited and its telephone system antiquated.

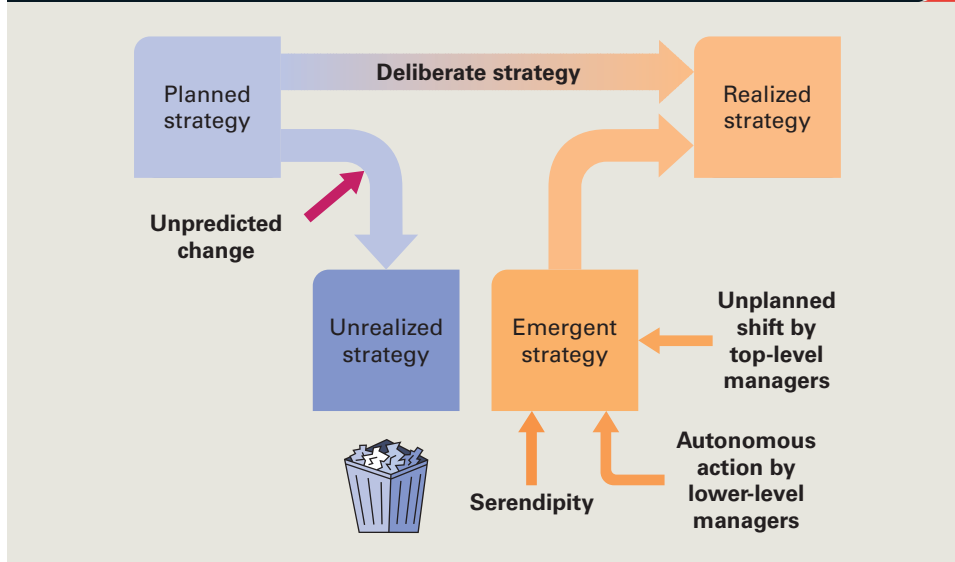
Deep within Schwab, William Pearson, a young software specialist who had worked on the development

of Street Smart, immediately saw the transformational power of the Web. Pearson believed that Schwab needed to develop its own web-based software, and quickly. Try as he might, though, Pearson could not get the attention of his supervisor. He tried a number of other executives but found little support. Eventually he approached Anne Hennegar, a former Schwab manager who now worked as a consultant to the company. Hennegar suggested that Pearson meet with Tom Seip, an executive vice president at Schwab known for his ability to think outside the box. Hennegar approached Seip on Pearson's behalf, and Seip responded positively, asking her to set up a meeting. Hennegar and Pearson arrived, expecting to meet only Seip, but to their surprise in walked Charles Schwab, his chief operating officer, David Pottruck, and the vice presidents in charge of strategic planning and electronic brokerage.

As the group watched Pearson's demo, which detailed how a web-based system would look and work, they became increasingly excited. It was clear to those in the room that a web-based system using real-time information, personalization, customization, and interactivity all advanced Schwab's commitment to empowering customers. By the end of the meeting, Pearson had received a green light to start work on the project. A year later, Schwab launched its own web-based offering, eSchwab, which enabled Schwab clients to execute stock trades for a low, flat-rate commission. eSchwab went on to become the core of the company's offering, enabling it to stave off competition from deep discount brokers like E*TRADE.

Sources: J. Kador, *Charles Schwab: How One Company Beat Wall Street and Reinvented the Brokerage Industry* (New York: John Wiley Sons, 2002); E. Schonfeld, "Schwab Puts It All Online," *Fortune* (December 7, 1998): 94–99.

Mintzberg maintains that emergent strategies are often successful and may be more appropriate than intended strategies. In a classic example of this process from business history, Richard Pascale described the entry of Honda Motor Co. into the U.S. motorcycle market.²⁴ When a number of Honda executives arrived in Los Angeles

Figure 1.5 Emergent and Deliberate Strategies

Source: Adapted from H. Mintzberg and A. McGugh, *Administrative Science Quarterly* 30:2 (June 1985).

from Japan in 1959 to establish a U.S. operation, their original aim (intended strategy) was to focus on selling 250-cc and 350-cc machines to confirmed motorcycle enthusiasts, rather than the 50-cc Honda Cub, which was a big hit in Japan. Their instincts told them that the Honda 50s were not suitable for the U.S. market, where everything was bigger and more luxurious than in Japan.

However, sales of the 250-cc and 350-cc bikes were sluggish, and the bikes were plagued by mechanical failure. It looked as if Honda's strategy was going to fail. At the same time, the Japanese executives who were using the Honda 50s to run errands around Los Angeles were attracting a lot of attention. One day, they got a call from a Sears, Roebuck and Co. buyer who wanted to sell the 50-cc bikes to a broad market of Americans who were not necessarily motorcycle enthusiasts. The Honda executives were hesitant to sell the small bikes for fear of alienating serious bikers, who might then associate Honda with "wimpy" machines. In the end, however, they were pushed into doing so by the failure of the 250-cc and 350-cc models.

Honda had stumbled onto a previously untouched market segment that would prove huge: the average American who had never owned a motorbike. Honda had also found an untried channel of distribution: general retailers, rather than specialty motorbike stores. By 1964, nearly one out of every two motorcycles sold in the United States was a Honda.

The conventional explanation for Honda's success is that the company redefined the U.S. motorcycle industry with a brilliantly conceived intended strategy. The fact was that Honda's intended strategy was a near-disaster. The strategy that emerged did so not through planning but through unplanned action in response to unforeseen circumstances. Nevertheless, credit should be given to the Japanese management for recognizing the strength of the emergent strategy and for pursuing it with vigor.

The critical point demonstrated by the Honda example is that successful strategies can often emerge within an organization without prior planning and in response to unforeseen circumstances. As Mintzberg has noted, strategies can take root wherever people have the capacity to learn and the resources to support that capacity.

In practice, the strategies of most organizations are likely a combination of the intended and the emergent. The message is that management needs to recognize the process of emergence and to intervene when appropriate, relinquishing bad emergent strategies and nurturing potentially good ones.²⁵ To make such decisions, managers must be able to judge the worth of emergent strategies. They must be able to think strategically. Although emergent strategies arise from within the organization without prior planning—that is, without completing the steps illustrated in Figure 1.3 in a sequential fashion—top management must still evaluate them. Such evaluation involves comparing each emergent strategy with the organization's goals, external environmental opportunities and threats, and internal strengths and weaknesses. The objective is to assess whether the emergent strategy fits the company's needs and capabilities. In addition, Mintzberg stresses that an organization's capability to produce emergent strategies is a function of the kind of corporate culture that the organization's structure and control systems foster. In other words, the different components of the strategic management process are just as important from the perspective of emergent strategies as they are from the perspective of intended strategies.

1-7 STRATEGIC PLANNING IN PRACTICE

Despite criticisms, research suggests that formal planning systems do help managers make better strategic decisions. A study that analyzed the results of 26 previously published studies came to the conclusion that, on average, strategic planning has a positive impact on company performance.²⁶ Another study of strategic planning in 656 firms found that formal planning methodologies and emergent strategies both form part of a good strategy-formulation process, particularly in an unstable environment.²⁷ For strategic planning to work, it is important that top-level managers plan not only within the context of the current competitive environment but also within the context of the future competitive environment. To try to forecast what that future will look like, managers can use scenario-planning techniques to project different possible futures. They can also involve operating managers in the planning process and seek to shape the future competitive environment by emphasizing strategic intent.

1-7a Scenario Planning

One reason that strategic planning may fail over longer time periods is that strategic managers, in their initial enthusiasm for planning techniques, may forget that the future is entirely unpredictable. Even the best-laid plans can fall apart if unforeseen contingencies occur, and that happens all the time. The recognition that uncertainty makes it difficult to forecast the future accurately led planners at Royal Dutch Shell to pioneer the scenario approach to planning.²⁸ **Scenario planning** involves formulating plans that are based upon “what-if” scenarios about the future. In the typical scenario-planning exercise, some scenarios are optimistic, some pessimistic. Teams of managers are asked to develop specific strategies to cope with each scenario. A set of indicators

scenario planning

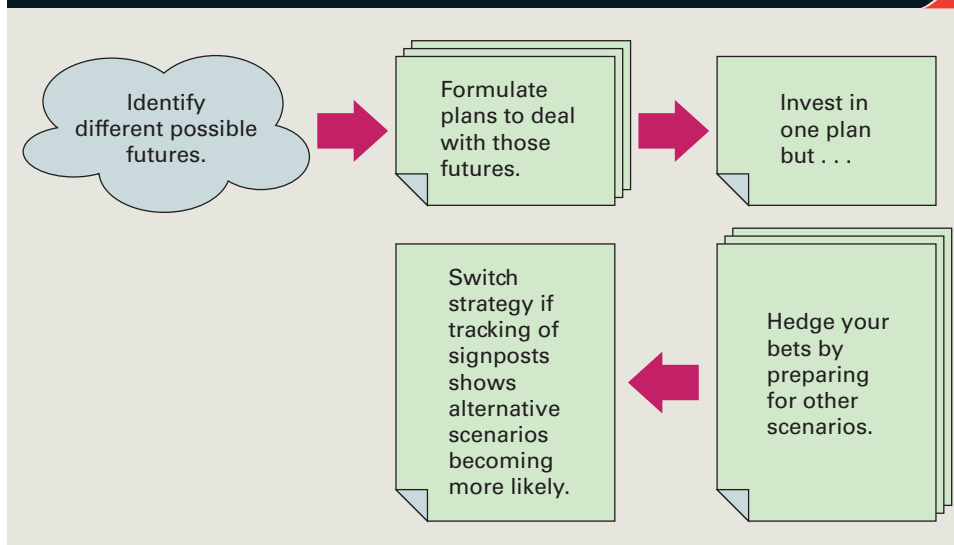
Formulating plans that are based upon “what-if” scenarios about the future.

is chosen as signposts to track trends and identify the probability that any particular scenario is coming to pass. The idea is to allow managers to understand the dynamic and complex nature of their environment, to think through problems in a strategic fashion, and to generate a range of strategic options that might be pursued under different circumstances.²⁹ The scenario approach to planning has spread rapidly among large companies. One survey found that over 50% of the *Fortune* 500 companies use some form of scenario-planning methods.³⁰

Royal Dutch Shell has, perhaps done more than most companies to pioneer the concept of scenario planning, and its experience demonstrates the power of the approach.³¹ Shell has been using scenario planning since the 1980s. Today, it uses two primary scenarios to anticipate future demand for oil and refine its strategic planning. The first scenario, called “Dynamics as Usual,” sees a gradual shift from carbon fuels (such as oil) to natural gas, and, eventually, to renewable energy. The second scenario, “The Spirit of the Coming Age,” looks at the possibility that a technological revolution will lead to a rapid shift to new energy sources.³² Shell is making investments that will ensure profitability for the company, regardless of which scenario comes to pass, and it is carefully tracking technological and market trends for signs of which scenario will become more likely over time.

The great virtue of the scenario approach to planning is that it pushes managers to think outside the box, to anticipate what they might need to do in different situations. It reminds managers that the world is complex and unpredictable, and to place a premium on flexibility rather than on inflexible plans based on assumptions about the future (which may or may not be correct). As a result of scenario planning, organizations might pursue one dominant strategy related to the scenario that is judged to be most likely, but they make investments that will pay off if other scenarios come to the fore (see Figure 1.6). Thus, the current strategy of Shell is based on the assumption that the world will gradually shift away from carbon-based fuels (its “Dynamics as Usual” scenario), but the company is hedging its bets by investing in new energy technologies and mapping out a strategy should the second scenario come to pass.

Figure 1.6 Scenario Planning



1-7b Decentralized Planning

Some companies constructing a strategic planning process erroneously treat planning exclusively as a top-management responsibility. This “ivory tower” approach can result in strategic plans formulated in a vacuum by top managers who may be disconnected from current operating realities. Consequently, top managers may formulate suboptimal strategies. For example, when demographic data indicated that houses and families were shrinking, planners at GE’s appliance group concluded that smaller appliances were the wave of the future. Because they had little contact with homebuilders and retailers, they did not realize that kitchens and bathrooms were the two rooms that were not shrinking. Nor did they appreciate that two-income families wanted large refrigerators to cut down on trips to the supermarket. GE wasted a lot of time designing small appliances for which there was limited demand.

The ivory tower concept of planning can also lead to tensions between corporate-, business-, and functional-level managers. The experience of GE’s appliance group is again illuminating. Many of the corporate managers in the planning group were recruited from consulting firms or top-flight business schools. Many of the functional managers took this pattern of recruitment to mean that the corporate managers did not believe they were smart enough to think through strategic problems. They felt shut out of the decision-making process, which they believed to be unfairly constituted. From this perceived lack of procedural justice sprang an us-versus-them mindset that quickly escalated into hostility. As a result, even when the planners were correct, operating managers would not listen to them. Furthermore, ivory tower planning ignores both the important, strategic role of autonomous action by lower-level managers and the role of serendipity.

Correcting the ivory tower approach to planning requires recognizing that successful strategic planning encompasses managers at all levels of the corporation. Much of the best planning can and should be done by business and functional managers who are closest to the facts. In other words, planning should be decentralized. Corporate-level planners should be facilitators who help business and functional managers do the planning by setting the broad strategic goals of the organization and providing the resources necessary to identify the strategies required to attain those goals.

1-8 STRATEGIC DECISION MAKING

Even the best-designed strategic-planning systems will fail to produce the desired results if managers do not effectively use the information at their disposal. Consequently, it is important that strategic managers use that information to understand why they sometimes make poor decisions. One important way to do so is to understand how common cognitive biases can result in poor decision making.³³

1-8a Cognitive Biases and Strategic Decision Making

The rationality of decision making is bound by one’s cognitive capabilities.³⁴ Humans are not supercomputers—it is difficult for us to absorb and process large amounts of information effectively. As a result, when we make decisions, we tend to fall back on

certain rules of thumb, or heuristics, that help us make sense out of a complex and uncertain world. Sometimes these rules lead to severe, systematic errors in the decision-making process.³⁵ Systematic errors are those that appear time and time again. They seem to arise from a series of **cognitive biases** in the way we process information and reach decisions. Cognitive biases cause many managers to make poor strategic decisions.

Numerous cognitive biases have been verified repeatedly in laboratory settings, so we can be reasonably sure that these biases exist and that all people are prone to them.³⁶ **Confirmation bias** refers to the fact that decision makers who have strong prior beliefs tend to make decisions on the basis of these beliefs, even when presented with evidence that their beliefs are incorrect. Moreover, they tend to seek and use information that is consistent with their prior beliefs while ignoring information that contradicts these beliefs. To place this bias in a strategic context, it suggests that a CEO who has a strong prior belief that a certain strategy makes sense might continue to pursue that strategy despite evidence that it is inappropriate or failing.

Another well-known cognitive bias, **escalating commitment**, occurs when decision makers, having already committed significant resources to a project, commit even more resources even if they receive feedback that the project is failing.³⁷ A more logical response would be to abandon the project and move on (that is, to cut one's losses and exit), rather than escalate commitment.

A third bias, **reasoning by analogy**, involves the use of simple analogies to make sense out of complex problems. The problem with this heuristic is that the analogy may not be valid. A fourth bias, **representativeness**, is rooted in the tendency to generalize from a small sample or even a single, vivid anecdote. This bias violates the statistical law of large numbers, which states that it is inappropriate to generalize from a small sample, let alone from a single case. In many respects, the dot-com boom of the late 1990s was based on reasoning by analogy and representativeness. Prospective entrepreneurs saw some early dot-com companies such as Amazon and Yahoo! achieve rapid success, at least as judged by some metrics. Reasoning by analogy from a very small sample, they assumed that any dot-com could achieve similar success. Many investors reached similar conclusions. The result was a massive wave of start-ups that attempted to capitalize on perceived Internet opportunities. The vast majority of these companies subsequently went bankrupt, proving that the analogy was wrong and that the success of the small sample of early entrants was no guarantee that all dot-coms would succeed.

A fifth cognitive bias is referred to as the **illusion of control**, or the tendency to overestimate one's ability to control events. General or top managers seem to be particularly prone to this bias: having risen to the top of an organization, they tend to be overconfident about their ability to succeed. According to Richard Roll, such overconfidence leads to what he has termed the *hubris hypothesis of takeovers*.³⁸ Roll argues that top managers are typically overconfident about their ability to create value by acquiring other companies. Hence, they make poor acquisition decisions, often paying far too much for the companies they acquire. Subsequently, servicing the debt taken on to finance such acquisitions makes it all but impossible to profit from them.

Availability error, another common bias, arises from our predisposition to estimate the probability of an outcome based on how easy the outcome is to imagine. For example, more people seem to fear a plane crash than a car accident, yet statistically one is far more likely to be killed in a car on the way to the airport than in a plane crash. People overweigh the probability of a plane crash because the outcome is easier

cognitive biases

Systematic errors in decision making that arise from the way people process information.

confirmation bias

Refers to the fact that decision makers who have strong prior beliefs tend to make decisions on the basis of these beliefs, even when presented with evidence that their beliefs are wrong.

escalating commitment

A cognitive bias that occurs when decision makers, having already committed significant resources to a project, commit even more resources after receiving feedback that the project is failing.

reasoning by analogy

Use of simple analogies to make sense out of complex problems.

representativeness

A bias rooted in the tendency to generalize from a small sample or even a single, vivid anecdote.

illusion of control

A cognitive bias rooted in the tendency to overestimate one's ability to control events.

availability error

A bias that arises from our predisposition to estimate the probability of an outcome based on how easy the outcome is to imagine.

to imagine, and because plane crashes are more vivid events than car crashes, which affect only small numbers of people at one time. As a result of availability error, managers might allocate resources to a project with an outcome that is easier to imagine, rather than to one that might have the highest return.

1-8b Techniques for Improving Decision Making

The existence of cognitive biases raises a question: How can critical information affect the decision-making mechanism so that a company's strategic decisions are realistic and based on thorough evaluation? Two techniques known to enhance strategic thinking and counteract cognitive biases are devil's advocacy and dialectic inquiry.³⁹

devil's advocacy

A technique in which one member of a decision-making team identifies all the considerations that might make a proposal unacceptable.

dialectic inquiry

The generation of a plan (a thesis) and a counterplan (an antithesis) that reflect plausible but conflicting courses of action.

Devil's advocacy requires the generation of a plan and a critical analysis of that plan. One member of the decision-making group acts as the devil's advocate, emphasizing all the reasons that might make the proposal unacceptable. In the process, decision makers become aware of the possible perils of recommended courses of action.

Dialectic inquiry is more complex because it requires the generation of a plan (a thesis) and a counterplan (an antithesis) that reflect plausible but conflicting courses of action.⁴⁰ Strategic managers listen to a debate between advocates of the plan and counterplan and then decide which plan will lead to higher performance. The purpose of the debate is to reveal problems with the definitions, recommended courses of action, and assumptions of both plans. As a result of this exercise, strategic managers are able to form a new and more encompassing conceptualization of the problem, which then becomes the final plan (a synthesis). Dialectic inquiry can promote strategic thinking.

Another technique for countering cognitive biases is the outside view, which has been championed by Nobel Prize winner Daniel Kahneman and his associates.⁴¹ The **outside view** requires planners to identify a reference class of analogous past strategic initiatives, determine whether those initiatives succeeded or failed, and evaluate the project at hand against those prior initiatives. According to Kahneman, this technique is particularly useful for countering biases such as illusion of control (hubris), reasoning by analogy, and representativeness. For example, when considering a potential acquisition, planners should look at the track record of acquisitions made by other enterprises (the reference class), determine if they succeeded or failed, and objectively evaluate the potential acquisition against that reference class. Kahneman argues that such a reality check against a large sample of prior events tends to constrain the inherent optimism of planners and produce more realistic assessments and plans.

outside view

Identification of past successful or failed strategic initiatives to determine whether those initiatives will work for project at hand.

1-9 STRATEGIC LEADERSHIP

One key strategic role of both general and functional managers is to use all their knowledge, energy, and enthusiasm to provide strategic leadership for their subordinates and develop a high-performing organization. Several authors have identified key characteristics of strong strategic leaders that lead to high performance: (1) vision, eloquence, and consistency; (2) articulation of a business model; (3) commitment; (4) being well informed; (5) willingness to delegate and empower; (6) astute use of power; and (7) emotional intelligence.⁴²

1-9a Vision, Eloquence, and Consistency

One key task of leadership is to give an organization a sense of direction. Strong leaders have a clear, compelling vision of where the organization should go, eloquently communicate this vision to others within the organization in terms that energize people, and consistently articulate their vision until it becomes part of the organization's culture.⁴³

In the political arena, John F. Kennedy, Winston Churchill, Martin Luther King, Jr., and Margaret Thatcher are regarded as visionary leaders. Think of the impact of Kennedy's summons, "Ask not what your country can do for you, ask what you can do for your country"; of King's "I have a dream" speech; of Churchill's declaration that "we will never surrender"; and of Thatcher's statement that "the problem with socialism is that you eventually run out of other peoples' money." Kennedy and Thatcher used their political office to push for governmental actions that were consistent with their visions. Churchill's speech galvanized a nation to defend itself against an aggressor. King pressured the government from outside to make changes within society.

Strong business leaders include Microsoft's Bill Gates; Jack Welch, the former CEO of General Electric; and Sam Walton, Wal-Mart's founder. For years, Bill Gates's vision of a world in which there would be a Windows-based personal computer on every desk was a driving force at Microsoft. At GE, Jack Welch was responsible for articulating the simple but powerful vision that GE should be first or second in every business in which it competed, or it should exit from that business. Similarly, Wal-Mart founder Sam Walton established and articulated the vision that has been central to Wal-Mart's success: passing on cost savings from suppliers and operating efficiencies to customers in the form of everyday low prices.

1-9b Articulation of the Business Model

Another key characteristic of good strategic leaders is their ability to identify and articulate the business model the company will use to attain its vision. A business model is the managers' conception of how the various strategies that the company pursues fit together into a congruent whole. At Dell, for example, Michael Dell identified and articulated the basic business model of the company: the direct sales business model. The various strategies that Dell has pursued over the years have refined this basic model, creating one that is very robust in terms of its efficiency and effectiveness. Although individual strategies can take root in many different places in an organization, and although their identification is not the exclusive preserve of top management, only strategic leaders have the perspective required to make sure that the various strategies fit together into a congruent whole and form a valid, compelling business model. If strategic leaders lack a clear conception of the company's business model (or what it should be), it is likely that the strategies the firm pursues will not fit together, and the result will be lack of focus and poor performance.

1-9c Commitment

Strong leaders demonstrate their commitment to their visions and business models by actions and words, and they often lead by example. Consider Nucor's former CEO, Ken Iversen. Nucor is a very efficient steelmaker with perhaps the lowest cost structure in the steel industry. It has achieved 50 years of profitable performance in an industry where most other companies have lost money due to a relentless focus on cost minimization. In his tenure as CEO, Iversen set the example: he answered his own phone, employed only

one secretary, drove an old car, flew coach class, and was proud of the fact that his base salary was the lowest of the *Fortune* 500 CEOs (Iverson made most of his money from performance-based pay bonuses). This commitment was a powerful signal to employees that Iverson was serious about doing everything possible to minimize costs. It earned him the respect of Nucor employees, and made them more willing to work hard. Although Iverson has retired, his legacy lives on in Nucor's cost-conscious organizational culture. Like all great leaders, his impact will last beyond his tenure.

1-9d Being Well Informed

Effective strategic leaders develop a network of formal and informal sources who keep them well informed about what is going on within the company. At T-Mobile, one way CEO John Legere stays well informed is by listening in on customer calls to the company's help desks.⁴⁴ Similarly, Herb Kelleher, the founder of Southwest Airlines, was able to gauge the health of his company by dropping in unannounced on aircraft maintenance facilities and helping workers perform their tasks. Kelleher would also often help airline attendants on Southwest flights, distributing refreshments and talking to customers. One frequent flyer on Southwest Airlines reported sitting next to Kelleher three times in 10 years. Each time, Kelleher asked him (and others sitting nearby) how Southwest Airlines was doing in a number of areas, in order to spot trends and inconsistencies.⁴⁵

Using informal and unconventional ways to gather information is wise because formal channels can be captured by special interests within the organization or by gatekeepers—managers who may misrepresent the true state of affairs to the leader. People like Legere and Kelleher, who constantly interact with employees at all levels, are better able to build informal information networks than leaders who closet themselves and never interact with lower-level employees.

1-9e Willingness to Delegate and Empower

High-performance leaders are skilled at delegation. They recognize that unless they learn how to delegate effectively, they can quickly become overloaded with responsibilities. They also recognize that empowering subordinates to make decisions is a good motivational tool and often results in decisions being made by those who must implement them. At the same time, astute leaders recognize that they need to maintain control over certain key decisions. Although they will delegate many important decisions to lower-level employees, they will not delegate those that they judge to be of critical importance to the future success of the organization, such as articulating the company's vision and business model.

1-9f The Astute Use of Power

In a now-classic article on leadership, Edward Wrapp noted that effective leaders tend to be very astute in their use of power.⁴⁶ He argued that strategic leaders must often play the power game with skill and attempt to build consensus for their ideas rather than use their authority to force ideas through; they must act as members of a coalition or its democratic leaders rather than as dictators. Jeffery Pfeffer articulated a similar vision of the politically astute manager who gets things done in organizations through the intelligent use of power.⁴⁷ In Pfeffer's view, power comes from control over resources that are important to the organization: budgets, capital, positions,

information, and knowledge. Politically astute managers use these resources to acquire another critical resource: critically placed allies who can help them attain their strategic objectives. Pfeffer stresses that one need not be a CEO to assemble power in an organization. Sometimes junior functional managers can build a surprisingly effective power base and use it to influence organizational outcomes.

1-9g Emotional Intelligence

Emotional intelligence, a term coined by Daniel Goleman, describes a bundle of psychological attributes that many strong, effective leaders exhibit⁴⁸:

- Self-awareness—the ability to understand one’s own moods, emotions, and drives, as well as their effect on others.
- Self-regulation—the ability to control or redirect disruptive impulses or moods; that is, to think before acting.
- Motivation—a passion for work that goes beyond money or status, and a propensity to pursue goals with energy and persistence.
- Empathy—the ability to understand the feelings and viewpoints of subordinates and to take those into account when making decisions.
- Social skills—friendliness with a purpose.

According to Goleman, leaders who exhibit a high degree of emotional intelligence tend to be more effective than those who lack these attributes. Their self-awareness and self-regulation help elicit the trust and confidence of subordinates. In Goleman’s view, people respect leaders who, because they are self-aware, recognize their own limitations and, because they are self-regulating, consider decisions carefully. Goleman also argues that self-aware, self-regulating individuals tend to be more self-confident and therefore are better able to cope with ambiguity and are more open to change. A strong motivation exhibited in a passion for work can be infectious, persuading others to join together in pursuit of a common goal or organizational mission. Finally, strong empathy and social skills help leaders earn the loyalty of subordinates. Empathetic, socially adept individuals tend to be skilled at remedying disputes between managers, are better able to find common ground and purpose among diverse constituencies, and are better able to move people in a desired direction compared to leaders who lack these skills. In short, Goleman argues that the psychological makeup of a leader matters.

KEY TERMS

strategy 4	profit growth 6	mission 15	representativeness 29
strategic leadership 4	competitive advantage 7	vision 16	illusion of control 29
strategy formulation 4	sustained competitive advantage 7	values 16	availability error 29
strategy implementation 4	business model 7	SWOT analysis 20	devil’s advocacy 30
risk capital 5	general managers 10	scenario planning 26	dialectic inquiry 30
shareholder value 5	functional managers 10	cognitive biases 29	outside view 30
profitability 6	multidivisional company 10	confirmation bias 29	
return on invested capital 6	business unit 12	escalating commitment 29	
		reasoning by analogy 29	

TAKEAWAYS FOR STRATEGIC MANAGERS

1. The major goal of companies is to maximize the returns that shareholders receive from holding shares in the company. To maximize shareholder value, managers must pursue strategies that result in high and sustained profitability and also in profit growth.
2. The profitability of a company can be measured by the return that it makes on the capital invested in the enterprise. The profit growth of a company can be measured by the growth in earnings per share. Profitability and profit growth are determined by the strategies managers adopt.
3. A company has a competitive advantage over its rivals when it is more profitable and has greater profit growth than the average for all firms in its industry. It has a sustained competitive advantage when it is able to maintain above-average performance over a number of years.
4. General managers are responsible for the overall performance of the organization, or for one of its major self-contained divisions. Their overriding strategic concern is for the health of the total organization under their direction.
5. Functional managers are responsible for a particular business function or operation. Although they lack general management responsibilities, they play a very important strategic role.
6. Formal strategic planning models stress that an organization's strategy is the outcome of a rational planning process.
7. The major components of the strategic management process are defining the mission, vision, and major goals of the organization; analyzing the external and internal environments of the organization; choosing a business model and strategies that align an organization's strengths and weaknesses with external environmental opportunities and threats; and adopting organizational structures and control systems to implement the organization's chosen strategies.
8. Strategy can emerge from deep within an organization in the absence of formal plans as lower-level managers respond to unpredicted situations.
9. Strategic planning may fail because executives do not plan for uncertainty and because ivory tower planners lose touch with operating realities.
10. In spite of systematic planning, companies may adopt poor strategies if cognitive biases are allowed to intrude into the decision-making process.
11. Devil's advocacy, dialectic inquiry, and the outside view are techniques for enhancing the effectiveness of strategic decision making.
12. Good leaders of the strategy-making process have a number of key attributes: vision, eloquence, and consistency; ability to craft a business model; commitment; being well informed; willingness to delegate and empower; political astuteness; and emotional intelligence.

DISCUSSION QUESTIONS

1. What do we mean by strategy? How does a business model differ from a strategy?
2. What do you think are the sources of sustained superior profitability?
3. What are the strengths of formal strategic planning? What are its weaknesses?
4. Can you think of an example in your own life where cognitive biases resulted in you making a poor decision? How might that mistake have been avoided?
5. Discuss the accuracy of the following statement: Formal strategic planning systems are irrelevant for firms competing in high-technology industries where the pace of change is so rapid that plans are routinely made obsolete by unforeseen events.
6. Pick the current or a past president of the United States and evaluate his performance against the leadership characteristics discussed in the text. On the basis of this comparison, do you think that the president was/is a good strategic leader? Why or why not?

CLOSING CASE

The Rise of Lululemon

In 1998, self-described snowboarder and surfer dude Chip Wilson took his first yoga class. The Vancouver native loved the exercises but hated doing them in the cotton clothing that was standard yoga wear at the time. For Wilson, who had worked in the sportswear business and had a passion for technical athletic fabrics, wearing cotton clothes to do sweaty, stretchy, power yoga exercises seemed inappropriate. Thus, the idea for Lululemon was born.

Wilson's vision was to create high-quality, stylishly designed clothing for yoga and related sports activities using the very best technical fabrics. He built a design team, but outsourced manufacturing to low-cost producers in South East Asia. Rather than selling clothing through existing retailers, Wilson elected to open his own stores. The idea was to staff the stores with employees who were themselves passionate about exercise, and who could act as ambassadors for healthy living through yoga and related sports such as running and cycling.

The first store, opened in Vancouver, Canada, in 2000, quickly became a runaway success, and other stores followed. In 2007, the company went public, using the capital raised to accelerate its expansion plans. By late 2017, Lululemon had over 380 stores, mostly in North America, and sales in excess of \$2.34 billion. Sales per square foot were estimated to be around \$1,560—more than four times that of an average specialty retailer. Lululemon's financial performance was stellar. Between 2008 and 2017, average return on invested capital—an important measure of profitability—was around 31%, far outpacing that of other well-known specialty retailers, while earnings per share grew tenfold.

How did Lululemon achieve this? It started with a focus on an unmet consumer need: the latent desire among yoga enthusiasts for high-quality, stylish, technical athletic wear. Getting the product

offering right was a central part of the company's strategy. An equally important part of the strategy was to stock a limited supply of an item. New colors and seasonal items, for example, get a 3- to 12-week lifecycle, which keeps the product offerings feeling fresh. The goal is to sell gear at full price, and to condition customers to buy it when they see it rather than wait, because if they do it may soon be "out of stock." The company only allows product returns if the clothes have not been worn and still have the price tags attached. The scarcity strategy worked. Lululemon never holds sales, and its clothing sells for a premium price.

To create the right in-store service, Lululemon hires employees who are passionate about fitness. Part of the hiring process involves taking prospective employees to a yoga or spin class. Some 70% of store managers are internal hires; most started on the sales floor and grew up in the culture. Store managers are given funds to repaint their stores, any color, twice a year. The interior design of each store is largely up to its manager. Each store is also given \$2,700 a year for employees to contribute to a charity or local event of their own choosing. One store manager in Washington, D.C., used the funds to create, with regional community leaders, a global yoga event in 2010. The result, Salutation Nation, is now an annual event in which over 70 Lululemon stores simultaneously host a free, all-level yoga practice.

Employees are trained to eavesdrop on customers, who are called "guests." Clothes-folding tables are placed on the sales floor near the fitting rooms rather than in a back room so that employees can overhear complaints. Nearby, a large chalkboard lets customers write suggestions or complaints, which are sent back to headquarters. This feedback is then incorporated into the product design process.

Despite the company's focus on providing a quality product, it has not all been clear sailing. In 2010, Wilson caused a stir when he emblazoned the company's tote bags with the phrase "Who is John Galt?" the opening line from Ayn Rand's 1957 novel, *Atlas Shrugged*. *Atlas Shrugged* has become a libertarian bible, and the underlying message that Lululemon supported Rand's brand of unregulated capitalism did not sit well with many of the stores' customers. After negative feedback, the bags were quickly pulled from stores. Wilson himself stepped down from day-to-day involvement in the company in January 2012 and resigned his chairman position in 2014.

In early 2013, Lululemon found itself dealing with another controversy when it decided to recall black yoga pants that were too sheer, and effectively "see through," when stretched due to the lack of "rear-end coverage." In addition to the negative fallout from the product itself, some customers

report being mistreated by employees who demanded that customers put the pants on and bend over to determine whether the clothing was see-through enough to warrant a refund. One consequence of this PR disaster was the resignation of then CEO Christine Day. The company is also facing increasing competition from rivals such as Gap's Athleta Urban Outfitters' Without Walls, and Nike Stores. Most observers in the media and financial community believe that the company can handle these challenges and continue on its growth trajectory.

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CASE DISCUSSION QUESTIONS

1. What opportunity did Chip Wilson see that lead to the establishment of Lululemon?
2. Why are Lululemon's sales per square foot so high?
3. How would you characterize Lululemon's business level strategy?
4. What are the main threats to Lululemon's business?
5. What are Lululemon's main strengths? What are its weaknesses?
6. What must the company do to maintain its competitive advantage?

APPENDIX TO CHAPTER 1: Enterprise Valuation, ROIC, and Growth

The ultimate goal of strategy is to maximize the value of a company to its shareholders (subject to the important constraints that this is done in a legal, ethical, and socially responsible manner). The two main drivers of enterprise valuation are return on invested capital (ROIC) and the growth rate of profits, g .⁴⁹

ROIC is defined as net operating profits less adjusted taxes (NOPLAT) over the invested capital of the enterprise (IC), where IC is the sum of the

company's equity and debt (the method for calculating adjusted taxes need not concern us here). That is:

$$\text{ROIC} = \text{NOPLAT} / \text{IC}$$

where

$$\begin{aligned} \text{NOPLAT} = & \text{revenues} - \text{cost of goods sold} \\ & - \text{operating expenses} - \text{depreciation} \\ & \text{charges} - \text{adjusted taxes} \end{aligned}$$

$$\text{IC} = \text{value of shareholders' equity} + \text{value of debt}$$

The growth rate of profits, g , can be defined as the percentage increase in net operating profits (NOPLAT) over a given time period. More precisely:

$$g = [(NOPLAT_{t+1} - NOPLAT_t) / NOPLAT_t] \times 100$$

Note that if NOPLAT is increasing over time, earnings per share will also increase so long as (a) the number of shares stays constant, or (b) the number of shares outstanding increases more slowly than NOPLAT.

The valuation of a company can be calculated using discounted cash flow analysis and applying it to future expected free cash flows (free cash flow in a period is defined as NOPLAT – net investments). It can be shown that the valuation of a company so calculated is related to the company's weighted average cost of capital (WACC), which is the cost of the equity and debt that the firm uses to finance its business, and the company's ROIC. Specifically:

- If $ROIC > WACC$, the company is earning more than its cost of capital and is creating value.
- If $ROIC = WACC$, the company is earning its cost of capital, and its valuation will be stable.
- If $ROIC < WACC$, the company is earning less than its cost of capital, and it is therefore destroying value.

A company that earns more than its cost of capital is even more valuable if it can grow its net operating profits less adjusted taxes (NOPLAT) over time. Conversely, a firm that is not earning its cost of capital destroys value if it grows its NOPLAT. This critical relationship between ROIC, g , and value is shown in Table A1.

In Table A1, the figures in the cells of the matrix represent the discounted present values of future free cash flows for a company that has a starting NOPLAT of \$100, invested capital of \$1,000, a cost of capital of 10%, and a 25-year time horizon after which $ROIC = \text{cost of capital}$.

Table A1 ROIC, Growth, and Valuation

NOPLAT Growth, g	ROIC 7.5%	ROIC 10.0%	ROIC 12.5%	ROIC 15.0%	ROIC 20%
3%	887	1000	1058	1113	1170
6%	708	1000	1117	1295	1442
9%	410	1000	1354	1591	1886

The important points revealed by this exercise are as follows:

1. A company with an already high ROIC can create more value by increasing its profit growth rate rather than pushing for an even higher ROIC. Thus, a company with an ROIC of 15% and a 3% growth rate can create more value by increasing its profit growth rate from 3% to 9% than it can by increasing ROIC to 20%.
2. A company with a low ROIC destroys value if it grows. Thus, if $ROIC = 7.5\%$, a 9% growth rate for 25 years will produce less value than a 3% growth rate. This is because unprofitable growth requires capital investments, the cost of which cannot be covered. Unprofitable growth destroys value.
3. The best of both worlds is high ROIC and high growth.

Very few companies are able to maintain an $ROIC > WACC$ and grow NOPLAT over time, but there are notable examples including Dell, Microsoft, and Wal-Mart. Because these companies have generally been able to fund their capital investment needs from internally generated cash flows, they have not had to issue more shares to raise capital. Thus, growth in NOPLAT has translated directly into higher earnings per share for these companies, making their shares more attractive to investors and leading to substantial share-price appreciation. By successfully pursuing strategies that result in a high ROIC and growing NOPLAT, these firms have maximized shareholder value.

NOTES

¹There are several different ratios for measuring profitability, such as return on invested capital, return on assets, and return on

equity. Although these different measures are highly correlated with each other, finance theorists argue that the return on invested capital

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CHAPTER 2

EXTERNAL ANALYSIS: THE IDENTIFICATION OF OPPORTUNITIES AND THREATS

LEARNING OBJECTIVES

- 2.1 Review the primary technique used to analyze competition in an industry environment: the Five Forces model
- 2.2 Explore the concept of strategic groups and illustrate the implications for industry analysis
- 2.3 Discuss how industries evolve over time, with reference to the industry life-cycle model
- 2.4 Show how trends in the macroenvironment can shape the nature of competition in an industry

OPENING CASE

Competition in the U.S. Airline Industry

Prior to 1978, the U.S. airline industry was tightly regulated in a way that made it difficult for new airlines to enter. Deregulation lowered the floodgates and allowed a swarm of new players to enter the industry, with 29 new airlines being established between 1978 and 1993. Among these new entrants was Southwest, which pioneered the low-cost business model in the industry. Other low-cost entrants included Jet Blue and Air Tran. The low-cost players offered a bare-bones service, without the expensive frills of traditional carriers (those frills included in-flight meals, ample business and first-class seating, and lounges in airports for premium travellers). The new entrants had lower labor costs due to



James Leynse/Corbis Historical/Getty Images

a flexible, nonunion workforce—a crucially important factor in an industry where labor costs account for one-third of operating costs. They flew point to point (which customers preferred), rather than routing passengers through hubs and requiring them to change planes. They further lowered costs by standardizing their fleet around one model of aircraft (the Boeing 737 in the case of Southwest).

The incumbents responded to new entrants by trying to lower their own costs, not always successfully. Prices tumbled, load factors declined (load factor refers to the average percentage of seats occupied on a flight), and high profits prior to 1978 were replaced by ongoing price wars and periods of heavy financial losses. Between 1980 and 2016, the average price for a round-trip flight in the United States tumbled from \$653 to \$367 when adjusted for inflation. As prices fell between 2001 and 2009, U.S. airlines lost \$65 billion in net income as they struggled to lower their costs and fill their planes.

The price wars were amped up by several factors. First, consumers increasingly came to see airline travel as a commodity product. The development of online price comparison sites in the 1990s, such as Expedia and Price Line, contributed to this trend. Second, Chapter 11 bankruptcy laws allowed bankrupt airlines to continue operating as they reorganized their capital structure. Among the big carriers, United, Delta, and America have all operated under bankruptcy for a time since 2001. By allowing bankrupt airlines to continue to fly, Chapter 11 regulations continued to keep unprofitable capacity in the industry, making it difficult for all airlines to get the load factors to cover their fixed costs. Third, adverse macroeconomic events such as the 2001–2002 and 2008–2009 recessions periodically exacerbated the excess capacity situation in the industry and intensified price competition.

However, after 40 years of transformation, by 2018 the industry seems to have achieved some degree of stability. Many of the smaller players have exited the industry. A wave of mergers between larger airlines has resulted in a more concentrated competitive structure. By 2017, four airlines – American, Delta, United and Southwest – captured 70% of all traffic. Although prices remain low, they are no longer falling. Moreover, under the protection of bankruptcy reorganization the legacy airlines have made improvements in lowering their cost structure. The airlines have also been helped by a decline in fuel costs since 2010 and the introduction of more fuel-efficient aircraft. As a result, the breakeven load factor has fallen to 68% today from 81% during the 2001–2010 period. Meanwhile, demand for airline travel has continued to expand. Between 1980 and 2016, the number of passengers flying in the United States increased from 400 million to 824 million. Higher demand and reduced competition have resulted in fuller aircraft. Load factors reached 84% in 2017, up from 70% in 2001. As a result, profitability has returned to the industry. Between 2010 and 2016, U.S. airlines made \$62 billion in net profit, making up for the losses of the 2001–2009 period.

Sources: Airlines for America, *Presentation: Industry Review and Outlook*, January 2018, airlines.org.

K. Huschelrath and K. Muller, "Low cost carriers and the evolution of the U.S. Airline Industry", *ZEW Discussion Paper No 11-051*, 2017.

J. Mouawad, "The challenge of starting an airline", *New York Times*, May 25, 2012.

2-1 OVERVIEW

opportunities

Elements and conditions in a company's environment that allow it to formulate and implement strategies that enable it to become more profitable.

threats

Elements in the external environment that could endanger the integrity and profitability of the company's business.

Strategy formulation begins with an analysis of the forces that shape competition within the industry in which a company is based. The goal is to understand the opportunities and threats confronting the firm, and to use this understanding to identify strategies that will enable the company to outperform its rivals. **Opportunities** arise when a company can take advantage of conditions in its industry environment to formulate and implement strategies that enable it to become more profitable. For example, as discussed in the Opening Case, deregulation created *opportunities* for new airlines pursuing new business models to enter the U.S. airline market. **Threats** arise when conditions in the external environment endanger the integrity and profitability of the company's business. As explained in the Opening Case, the entry of low-cost carriers like Southwest increased competition in the airline industry, drove fares and profits lower, and created significant *threats* for established airlines that had intrinsically high cost structures.

This chapter begins with an analysis of the external industry environment. First, it examines concepts and tools for analyzing the competitive structure of an industry and identifying industry opportunities and threats. Second, it analyzes the competitive implications that arise when groups of companies within an industry pursue similar or different kinds of competitive strategies. Third, it explores the way an industry evolves over time, and the changes present in competitive conditions. Fourth, it looks at the way in which forces in the macroenvironment affect industry structure and influence opportunities and threats. By the end of the chapter, you will understand that, in order to succeed, a company must either fit its strategy to the external environment in which it operates or be able to reshape the environment to its advantage through its chosen strategy.

2-2 DEFINING AN INDUSTRY

industry

A group of companies offering products or services that are close substitutes for each other.

An **industry** can be defined as a group of companies offering products or services that are close substitutes for each other—that is, products or services that satisfy the same basic customer needs. A company's closest competitors—its rivals—are those that serve the same basic customer needs. For example, carbonated drinks, fruit punches, and bottled water can be viewed as close substitutes for each other because they serve the same basic customer needs for refreshing, cold, nonalcoholic beverages. Thus, we can talk about the soft-drink industry, whose major players are Coca-Cola, PepsiCo, and Cadbury Schweppes. Similarly, desktop and laptop computers and tablets satisfy the same basic need that customers have for computer hardware devices on which to run personal productivity software, browse the Internet, send e-mail, play games, music and video, and store, display, or manipulate digital images. Thus, we can talk about the computer hardware device industry, whose participants include Apple, Dell, Hewlett-Packard, Lenovo, Microsoft, and Samsung.

External analysis begins by identifying the industry within which a company competes. To do this, managers must start by looking at the basic customer needs their company is serving—that is, they must take a customer-oriented view of their business

rather than a product-oriented view (see Chapter 1). The basic customer needs that are served by a market define an industry's boundaries. It is very important for managers to realize this, for if they define industry boundaries incorrectly, they may be caught off-guard by the rise of competitors that serve the same basic customer needs but with different product offerings. For example, Coca-Cola long saw itself as part of the soda industry—meaning carbonated soft drinks—whereas it actually was part of the soft-drink industry, which includes noncarbonated soft drinks. In the mid-1990s, the rise of customer demand for bottled water and fruit drinks began to cut into the demand for sodas, which caught Coca-Cola by surprise. Coca-Cola moved quickly to respond to these threats, introducing its own brand of water, Dasani, and acquiring several other beverage companies, including Minute Maid and Glaceau (the owner of the Vitamin Water brand). By defining its industry boundaries too narrowly, Coke almost missed the rapid rise of noncarbonated soft drinks within the soft-drinks market.

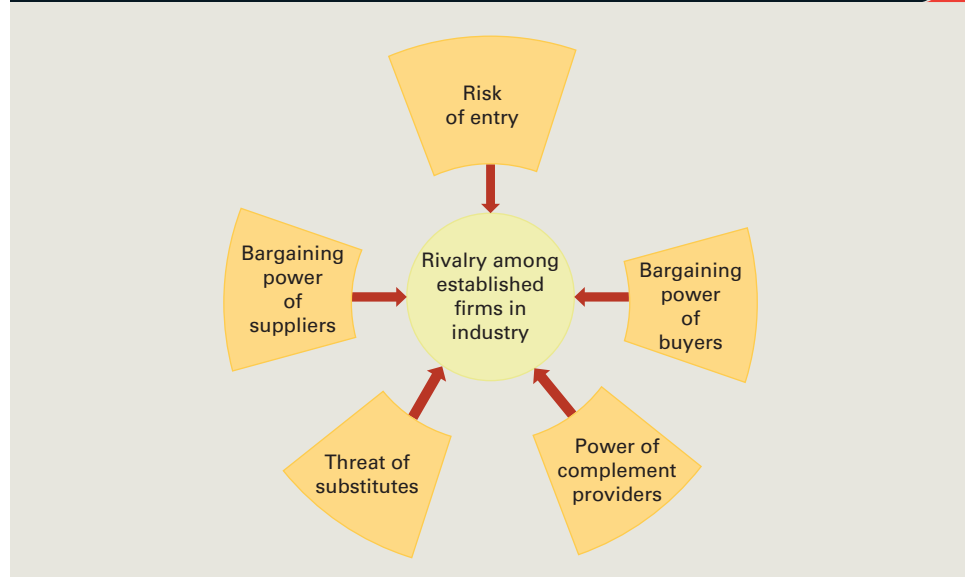
It is important to realize that industry boundaries can change over time as customer needs evolve, or as emerging new technologies enable companies in unrelated industries to satisfy established customer needs in new ways. During the 1990s, as consumers of soft drinks began to develop a taste for bottled water and noncarbonated, fruit-based drinks, Coca-Cola found itself in direct competition with the manufacturers of bottled water and fruit-based soft drinks: All were in the same industry.

For another example of how technological change can alter industry boundaries, consider the convergence that has taken place between the computer and telecommunications industries. Historically, the telecommunications equipment industry has been considered an entity distinct from the computer hardware industry. However, as telecommunications equipment moved from analog technology to digital technology, this equipment increasingly resembled computers. The result is that the boundaries between these once distinct industries has been blurred. A smartphone such as Apple's iPhone is nothing more than a small, handheld computer with a wireless connection and telephone capabilities. Thus, Samsung and HTC, which manufacture wireless phones, are now competing directly with traditional computer companies such as Apple and Dell.

2-3 PORTER'S COMPETITIVE FORCES MODEL

Once the boundaries of an industry have been identified, managers face the task of analyzing competitive forces within the industry environment in order to identify opportunities and threats. Michael E. Porter's well-known framework, the Five Forces model, helps managers with this analysis.¹ An extension of his model, shown in Figure 2.1, focuses on *six* forces that shape competition within an industry: (1) the risk of entry by potential competitors, (2) the intensity of rivalry among established companies within an industry, (3) the bargaining power of buyers, (4) the bargaining power of suppliers, (5) the closeness of substitutes to an industry's products, and (6) the power of complement providers (Porter did not recognize this sixth force).

As each of these forces grows stronger, it limits the ability of established companies to raise prices and earn greater profits. Within this framework, a strong competitive force can be regarded as a threat because it depresses profits. A weak competitive force can be viewed as an opportunity because it allows a company to earn greater

Figure 2.1 Competitive Forces

Source: Based on "How Competitive Forces Shape Strategy," by Michael E. Porter, *Harvard Business Review*, March/April 1979.

profits. The strength of the six forces may change over time as industry conditions change. Managers face the task of recognizing how changes in the six forces give rise to new opportunities and threats, and formulating appropriate strategic responses. In addition, it is possible for a company, through its choice of strategy, to alter the strength of one or more of the forces to its advantage. This is discussed in the following chapters.

2-3a Risk of Entry by Potential Competitors

potential competitors

Companies that are currently not competing in the industry but have the potential to do so.

Potential competitors are companies that are not currently competing in an industry but have the capability to do so if they choose. For example, in the last decade, cable television companies emerged as potential competitors to traditional phone companies. New digital technologies have allowed cable companies to offer telephone and Internet service over the same cables that transmit television shows.

Established companies already operating in an industry often attempt to discourage potential competitors from entering the industry because their entry makes it more difficult for the established companies to protect their share of the market and generate profits. A high risk of entry by potential competitors represents a threat to the profitability of established companies. The risk of entry by potential competitors is a function of how attractive the industry is (for example, how profitable or growing the industry is), and the height of barriers to entry (that is, those factors that make it costly for companies to enter an industry).

The greater the costs potential competitors must bear to enter an industry, the greater the barriers to entry and the weaker this competitive force. High entry barriers may keep potential competitors out of an industry even when industry profits are

high. Important barriers to entry include economies of scale, brand loyalty, absolute cost advantages, customer switching costs, and government regulation.² An important strategy is building barriers to entry (in the case of incumbent firms) or finding ways to circumvent those barriers (in the case of new entrants). We discuss this topic in more detail in subsequent chapters.

Economies of Scale **Economies of scale** arise when unit costs fall as a firm expands its output. Sources of scale economies include: (1) cost reductions gained through mass-producing a standardized output; (2) discounts on bulk purchases of raw material inputs and component parts; (3) the advantages gained by spreading fixed production costs over a large production volume; and (4) the cost savings associated with distributing, marketing, and advertising costs over a large volume of output. For example, the economies of scale enjoyed by incumbent firms in the airline industry are fairly large and include the ability to cover the fixed costs of purchasing aircraft. This constitutes a barrier to new entry into the market. More generally, if the cost advantages from economies of scale are significant, a new company that enters the industry and produces on a small scale suffers a significant cost disadvantage relative to established companies. If the new company decides to enter on a large scale in an attempt to obtain these economies of scale, it must raise the capital required to build large-scale production facilities and bear the high risks associated with such an investment. In addition, an increased supply of products will depress prices and result in vigorous retaliation by established companies, which constitutes a further risk of large-scale entry. For these reasons, the threat of entry is reduced when established companies achieve economies of scale.

economies of scale

Reductions in unit costs attributed to large output.

Brand Loyalty **Brand loyalty** exists when consumers have a preference for the products of established companies. A company can create brand loyalty by continuously advertising its brand-name products and company name, patent protection of its products, product innovation achieved through company research and development (R&D) programs, an emphasis on high-quality products, and exceptional after-sales service. Significant brand loyalty makes it difficult for new entrants to take market share away from established companies. Thus, it reduces the threat of entry by potential competitors; they may see the task of breaking down well-established customer preferences as too costly. In the smartphone business, for example, Apple generated such strong brand loyalty with its iPhone offering and related products that Microsoft found it very difficult to attract customers away from Apple and build demand for its Windows phone, introduced in late 2011. Despite its financial might, 5 years after launching the Windows phone, Microsoft's U.S. market share remained mired at under 4%, and in 2016 it exited the market.³

brand loyalty

Preference of consumers for the products of established companies.

Absolute Cost Advantages Sometimes established companies have an **absolute cost advantage** relative to potential entrants, meaning that entrants cannot expect to match the established companies' lower cost structure. Absolute cost advantages arise from three main sources: (1) superior production operations and processes due to accumulated experience, patents, or trade secrets; (2) control of particular inputs required for production, such as labor, materials, equipment, or management skills, that are limited in supply; and (3) access to cheaper funds because existing companies represent lower risks than new entrants. If established companies have an absolute cost advantage, the threat of entry as a competitive force weakens.

absolute cost advantage

A cost advantage that is enjoyed by incumbents in an industry and that new entrants cannot expect to match.

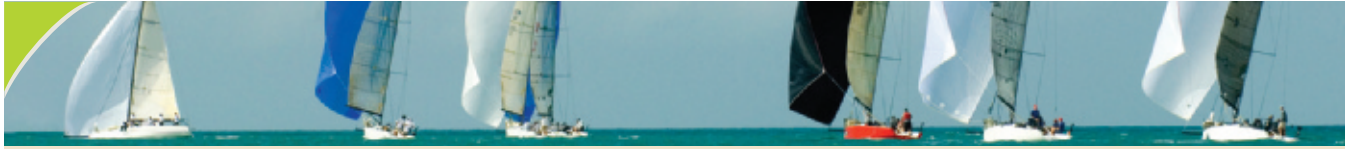
switching costs

Costs that consumers must bear to switch from the products offered by one established company to the products offered by a new entrant.

Customer Switching Costs **Switching costs** arise when a customer invests time, energy, and money switching from the products offered by one established company to the products offered by a new entrant. When switching costs are high, customers can be locked in to the product offerings of established companies, even if new entrants offer better products.⁴ A familiar example of switching costs concerns the costs associated with switching from one computer operating system to another. If a person currently uses Microsoft's Windows operating system and has a library of related software applications and document files, it is expensive for that person to switch to another computer operating system. To effect the change, this person would need to purchase a new set of software applications and convert all existing document files to the new system's format. Faced with such a commitment of money and time, most people are unwilling to make the switch unless the competing operating system offers a substantial leap forward in performance. Thus, the higher the switching costs, the higher the barrier to entry for a company attempting to promote a new computer operating system.

Government Regulations Government regulations can constitute a major entry barrier for many industries. For example, until the mid-1990s, U.S. government regulations prohibited providers of long-distance telephone service from competing for local telephone service, and vice versa. Other potential providers of telephone service, including cable television service companies such as Time Warner and Comcast (which could have used their cables to carry telephone traffic as well as TV signals), were prohibited from entering the market altogether. These regulatory barriers to entry significantly reduced the level of competition in both the local and long-distance telephone markets, enabling telephone companies to earn higher profits than they might have otherwise. All this changed in 1996, when the government significantly deregulated the industry. In the months that followed, local, long-distance, and cable TV companies all announced their intention to enter each other's markets, and a host of new players entered the market as well. The competitive forces model predicts that falling entry barriers due to government deregulation will result in significant new entry, an increase in the intensity of industry competition, and lower industry profit rates, and that is what occurred here. As described in the Opening Case, the same also happened in the U.S. airline industry following deregulation in 1978.

Summary In summary, if established companies have built brand loyalty for their products, have an absolute cost advantage over potential competitors, have significant scale economies, are the beneficiaries of high switching costs, or enjoy regulatory protection, the risk of entry by potential competitors is greatly diminished; it is a weak competitive force. Consequently, established companies can charge higher prices, and industry profits are therefore higher. Evidence from academic research suggests that the height of barriers to entry is one of the most important determinants of profit rates within an industry.⁵ Clearly, it is in the interest of established companies to pursue strategies consistent with raising entry barriers to secure these profits. Additionally, potential new entrants must find strategies that allow them to circumvent barriers to entry. For an example of a company that did this, see Strategy in Action 2.1, which looks at how the Cott Corporation circumvented barriers to entry in the soft-drink industry.



2.1 STRATEGY IN ACTION

Circumventing Entry Barriers into the Soft Drink Industry

Two companies have long dominated the carbonated soft drink industry: Coca-Cola and PepsiCo. By spending large sums of money on advertising and promotion, these two giants have created significant brand loyalty and made it very difficult for new competitors to enter the industry and take away market share. When new competitors have tried to enter, both companies have responded by cutting prices, forcing new entrants to curtail expansion plans.

However, in the early 1990s, the Cott Corporation, then a small Canadian bottling company, worked out a strategy for entering the carbonated soft drink market. Cott's strategy was deceptively simple. The company initially focused on the cola segment of the market. Cott struck a deal with Royal Crown (RC) Cola for exclusive global rights to its cola concentrate. RC Cola was a small player in the U.S. cola market. Its products were recognized as high quality, but RC Cola had never been able to effectively challenge Coke or Pepsi. Next, Cott entered an agreement with a Canadian grocery retailer, Loblaw, to provide the retailer with its own, private-label brand of cola. The Loblaw private-label brand, known as "President's Choice," was priced low, became very successful, and took shares from both Coke and Pepsi.

Emboldened by this success, Cott tried to convince other retailers to carry private-label cola. To retailers, the value proposition was simple because, unlike its major rivals, Cott spent almost nothing on advertising and promotion. This constituted a major source of cost savings, which Cott passed on to retailers in the form

of lower prices. Retailers found that they could significantly undercut the price of Coke and Pepsi colas and still make better profit margins on private-label brands than on branded colas.

Despite this compelling value proposition, few retailers were willing to sell private-label colas for fear of alienating Coca-Cola and Pepsi, whose products were a major draw for grocery store traffic. Cott's breakthrough came when it signed a deal with Wal-Mart to supply the retailing giant with a private-label cola, "Sam's Choice" (named after Wal-Mart founder Sam Walton). Wal-Mart proved to be the perfect distribution channel for Cott. The retailer was just beginning to appear in the grocery business, and consumers shopped at Wal-Mart not to buy branded merchandise, but to get low prices. As Wal-Mart's grocery business grew, so did Cott's sales. Cott soon added other flavors to its offerings, such as lemon-lime soda, which would compete with 7-Up and Sprite. Moreover, by the late 1990s, other U.S. grocers pressured by Wal-Mart had also started to introduce private-label sodas and often turned to Cott to supply their needs.

By 2017, Cott's private-label customers included Wal-Mart, Kroger, Costco, and Safeway. Cott had revenues of \$3.8 billion and accounted for 60% of all private-label sales of carbonated beverages in the United States, and 6 to 7% of overall sales of carbonated beverages in grocery stores, its core channel. Although Coca-Cola and PepsiCo remain dominant, they have lost incremental market share to Cott and other companies that have followed Cott's strategy.

Sources: A. Kaplan, "Cott Corporation," *Beverage World*, June 15, 2004, p. 32; J. Popp, "2004 Soft Drink Report," *Beverage Industry*, March 2004, pp. 13–18; L. Sparks, "From Coca-Colonization to Copy Catting: The Cott Corporation and Retailers Brand Soft Drinks in the UK and US," *Agribusiness* 13:2 (March 1997): 153–167; E. Cherney, "After Flat Sales, Cott Challenges Pepsi, Coca-Cola," *The Wall Street Journal*, January 8, 2003, pp. B1, B8; "Cott Corporation: Company Profile," *Just Drinks*, August 2006, pp. 19–22; Cott Corp. 2016 Annual Report, www.cott.com.

2-3b Rivalry Among Established Companies

The second competitive force is the intensity of rivalry among established companies within an industry. Rivalry refers to the competitive struggle between companies within an industry to gain market share. The competitive struggle can be fought using price, product design, advertising and promotional spending, direct-selling efforts, and after-sales service and support. Intense rivalry implies lower prices or more spending on non-price-competitive strategies, or both. Because intense rivalry lowers prices and raises costs, it squeezes profits out of an industry. Thus, intense rivalry among established companies constitutes a strong threat to profitability. Alternatively, if rivalry is less intense, companies may have the opportunity to raise prices or reduce spending on non-price-competitive strategies, leading to higher industry profits. Four factors have a major impact on the intensity of rivalry among established companies within an industry: (1) industry competitive structure, (2) demand conditions, (3) cost conditions, and (4) the height of exit barriers in the industry.

Industry Competitive Structure The competitive structure of an industry refers to the number and size distribution of companies within it. Strategic managers determine the competitive structure at the beginning of an industry analysis. Industry structures vary, and different structures have different implications for the intensity of rivalry. A fragmented industry consists of a large number of small or medium-sized companies, none of which is in a position to determine industry price. A consolidated industry is dominated by a small number of large companies (an oligopoly) or, in extreme cases, by just one company (a monopoly), and such companies often are in a position to determine industry prices. Examples of fragmented industries are agriculture, dry cleaning, health clubs, real estate brokerage, and sun-tanning parlors. Consolidated industries include the aerospace, soft-drink, wireless service, and small-package express delivery industries. In the small-package express delivery industry, two firms, United Parcel Service (UPS) and FedEx, account for over 85% of industry revenues in the United States.

Low-entry barriers and commodity-type products that are difficult to differentiate characterize many fragmented industries. This combination tends to result in boom-and-bust cycles as industry profits rapidly rise and fall. Low-entry barriers imply that new entrants will flood the market, hoping to profit from the boom that occurs when demand is strong and profits are high. The number of video stores, health clubs, and tanning parlors that exploded onto the market during the 1980s and 1990s exemplifies this situation.

Often, the flood of new entrants into a booming, fragmented industry creates excess capacity, and consequently companies cut prices. The difficulty of differentiating their products from those of competitors can exacerbate this tendency. The result is a price war, which depresses industry profits, forces some companies out of business, and deters potential new entrants. For example, after a decade of expansion and booming profits, many health clubs are now finding that they have to offer large discounts in order to maintain their memberships. In general, the more commodity-like an industry's product, the more vicious the price war will be. The bust phase of this cycle continues until overall industry capacity is brought into line with demand (through bankruptcies), at which point prices may stabilize again.

A fragmented industry structure, then, constitutes a threat rather than an opportunity. Economic boom times in fragmented industries are often relatively short-lived because the ease of new entry can soon result in excess capacity, which in turn leads to intense price competition and the failure of less-efficient enterprises. Because it is often difficult to differentiate products in these industries, minimizing costs is the best strategy for a company that strives to be profitable in a boom and survive any subsequent bust. Alternatively,

companies might try to adopt strategies that change the underlying structure of fragmented industries and lead to a consolidated industry structure in which the level of industry profitability is increased. (We shall consider how companies can do this in later chapters.)

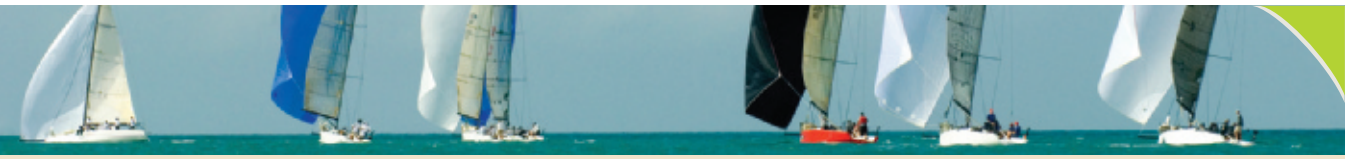
In consolidated industries, companies are interdependent because one company's competitive actions (for instance, changes in price or quality) directly affect the market share of its rivals and thus their profitability. One company making a move can force a response from its rivals, and the consequence of such competitive interdependence can be a dangerous competitive spiral. Rivalry increases as companies attempt to undercut each other's prices or offer customers more value, pushing industry profits down in the process.

Companies in consolidated industries sometimes seek to reduce this threat by matching the prices set by the dominant company in the industry.⁶ However, care must be taken, for explicit, face-to-face, price-fixing agreements are illegal. (Tacit, indirect agreements, arrived at without direct or intentional communication, are legal.) For the most part, though, companies set prices by watching, interpreting, anticipating, and responding to one another's strategies. However, tacit price-leadership agreements often break down under adverse economic conditions, as occurred in the breakfast cereal industry, profiled in Strategy in Action 2.2.

Industry Demand The level of industry demand is another determinant of the intensity of rivalry/among established companies. Growing demand from new customers or additional purchases by existing customers tend to moderate competition by providing greater scope for companies to compete for customers. Growing demand tends to reduce rivalry because all companies can sell more without taking market share away from other companies. High industry profits are often the result. This was the case in the U.S. wireless telecommunications industry until recently. Conversely, stagnant or declining demand results in increased rivalry as companies fight to maintain market share and revenues (see Strategy in Action 2.2). Demand stagnates when the market is saturated and replacement demand is not enough to offset the lack of first-time buyers. Demand declines when customers exit the marketplace, or when each customer purchases less. When demand is stagnating or declining, a company can grow only by taking market share away from its rivals. Stagnant or declining demand constitutes a threat because for it increases the extent of rivalry between established companies.

Cost Conditions The cost structure of firms in an industry is a third determinant of rivalry. In industries where fixed costs are high, profitability tends to be highly leveraged to sales volume, and the desire to grow volume can spark intense rivalry. Fixed costs are costs that must be paid before the firm makes a single sale. For example, before they can offer service, cable TV companies must lay cable in the ground; the cost of doing so is a fixed cost. Similarly, to offer express courier service, a company such as FedEx must first invest in planes, package-sorting facilities, and delivery trucks—all fixed costs that require significant capital investment. In industries where the cost of production is high, firms cannot cover their fixed costs and will not be profitable if sales volume is low. Thus, they have an incentive to cut their prices and/or increase promotional spending to drive up sales volume in order to cover fixed costs. In situations where demand is not rapidly growing and many companies are simultaneously engaged in the same pursuits, the result can be intense rivalry and lower profits. Research suggests that the weakest firms in an industry often initiate such actions precisely because they are struggling to cover their fixed costs.⁷

Exit Barriers Exit barriers are economic, strategic, and emotional factors that prevent companies from leaving an industry.⁸ If exit barriers are high, companies become



2.2 STRATEGY IN ACTION

Price Wars in the Breakfast Cereal Industry

For decades, the breakfast cereal industry was one of the most profitable in the United States. The industry has a consolidated structure dominated by Kellogg's, General Mills, and Kraft Foods with its Post brand. Strong brand loyalty, coupled with control over the allocation of supermarket shelf space, helped to limit the potential for new entry. Meanwhile, steady demand growth of about 3% per annum kept industry revenues expanding. Kellogg's, which accounted for over 40% of the market share, acted as the price leader in the industry. Every year, Kellogg's increased cereal prices, its rivals followed, and industry profits remained high.

This favorable industry structure began to change in the 1990s, when growth in demand slowed—and then stagnated—as a latte and bagel or muffin replaced cereal as the American morning fare. Then came the rise of powerful discounters such as Wal-Mart (which entered the grocery industry in 1994) that began to aggressively promote their own cereal brands and priced them significantly below the brand-name cereals. As the decade progressed, other grocery chains such as Kroger's started to follow suit, and brand loyalty in the industry began to decline as customers realized that a \$2.50 bag of wheat flakes from Wal-Mart tasted about the same as a \$3.50 box of cornflakes from Kellogg's. As sales of cheaper, store-brand cereals began to take off, supermarkets, no longer as dependent on brand names to bring traffic into their stores, began to demand lower prices from the branded cereal manufacturers.

For several years, manufacturers of brand-name cereals tried to hold out against these adverse trends, but in the mid-1990s, the dam broke. In 1996, Kraft (then owned by Philip Morris) aggressively cut prices by 20% for its Post brand in an attempt to gain market share. Kellogg's soon followed with a 19% price cut on two-thirds of its brands, and General Mills quickly did the same. The decades of tacit price collusion were officially over.

If breakfast cereal companies were hoping that price cuts would stimulate demand, they were wrong.

Instead, demand remained flat while revenues and margins followed price decreases, and operating margins at Kellogg's dropped from 18% in 1995 to 10.2% in 1996—a trend also experienced by the other brand-name cereal manufacturers.

By 2000, conditions had worsened. Private-label sales continued to make inroads, gaining over 10% of the market. Moreover, sales of breakfast cereals started to contract at 1% per annum. To cap it off, an aggressive General Mills continued to launch expensive price-and-promotion campaigns in an attempt to take away share from the market leader. Kellogg's saw its market share slip to just over 30% in 2001, behind the 31% now held by General Mills. For the first time since 1906, Kellogg's no longer led the market. Moreover, profits at all three major producers remained weak in the face of continued price discounting.

In mid-2001, General Mills finally blinked and raised prices a modest 2% in response to its own rising costs. Competitors followed, signaling—perhaps—that after a decade of costly price warfare, pricing discipline might once more emerge in the industry. Both Kellogg's and General Mills tried to move further away from price competition by focusing on brand extensions, such as Special K containing berries and new varieties of Cheerios. Efforts with Special K helped Kellogg's recapture market leadership from General Mills, and, more important, the renewed emphasis on non-price competition halted years of damaging price warfare.

After a decade of relative peace, price wars broke out in 2010 once more in this industry. The trigger, yet again, appears to have been falling demand for breakfast cereals due to substitutes such as a quick trip to the local coffee shop. In the third quarter of 2010, prices fell by 3.6% and unit volumes by 3.4%, leading to falling profit rates at Kellogg's. Both General Mills and Kellogg's introduced new products in an attempt to boost demand and raise prices.

Sources: G. Morgenson, "Denial in Battle Creek," *Forbes*, October 7, 1996, p. 44; J. Muller, "Thinking out of the Cereal Box," *Business Week*, January 15, 2001, p. 54; A. Merrill, "General Mills Increases Prices," *Star Tribune*, June 5, 2001, p. 1D; S. Reyes, "Big G, Kellogg's Attempt to Berry Each Other," *Brandweek*, October 7, 2002, p. 8; M. Andrejczak, "Kellogg's Profit Hurt by Cereal Price War," *Market Watch*, November 2, 2010.

locked into an unprofitable industry where overall demand is static or declining. The result is often excess productive capacity, leading to even more intense rivalry and price competition as companies cut prices, attempting to obtain the customer orders needed to use their idle capacity and cover their fixed costs.⁹ Common exit barriers include:

- Investments in assets such as specific machines, equipment, or operating facilities that are of little or no value in alternative uses, or cannot be later sold. If the company wishes to leave the industry, it must write off the book value of these assets.
- High fixed costs of exit such as severance pay, health benefits, or pensions that must be paid to workers who are being made laid off when a company ceases to operate.
- Emotional attachments to an industry, such as when a company's owners or employees are unwilling to exit an industry for sentimental reasons or because of pride.
- Economic dependence because a company relies on a single industry for its entire revenue and all profits.
- The need to maintain an expensive collection of assets at or above a minimum level in order to participate effectively in the industry.
- Bankruptcy regulations, particularly in the United States, where Chapter 11 bankruptcy provisions allow insolvent enterprises to continue operating and to reorganize under this protection. These regulations can keep unprofitable assets in the industry, result in persistent excess capacity, and lengthen the time required to bring industry supply in line with demand (see the Opening Case for an example).

As an example of exit barriers and effects in practice, consider the small-package express mail and parcel delivery industry. Key players in this industry such as FedEx and UPS rely entirely upon the delivery business for their revenues and profits. They must be able to guarantee their customers that they will deliver packages to all major localities in the United States, and much of their investment is specific to this purpose. To meet this guarantee, they need a nationwide network of air routes and ground routes, an asset that is required in order to participate in the industry. If excess capacity develops in this industry, as it does from time to time, FedEx cannot incrementally reduce or minimize its excess capacity by deciding not to fly to and deliver packages in Miami, for example, because that portion of its network is underused. If it did, it would no longer be able to guarantee to its customers that packages could be delivered to all major locations in the United States, and its customers would switch to another carrier. Thus, the need to maintain a nationwide network is an exit barrier that can result in persistent excess capacity in the air-express industry during periods of weak demand.

2-3c The Bargaining Power of Buyers

The third competitive force is the bargaining power of buyers. An industry's buyers may be the individual customers who consume its products (end-users) or the companies that distribute an industry's products to end-users such as retailers and wholesalers. For example, although soap powder made by Procter & Gamble (P&G) and Unilever is consumed by end-users, the principal buyers of soap powder are supermarket chains and discount stores, which resell the product to end-users. The bargaining power of buyers refers to their ability to bargain down prices charged by companies in the industry, or to raise the costs of companies in the industry by demanding better product quality and service. By lowering prices and raising costs, powerful buyers can squeeze profits out of an industry. Powerful buyers, therefore, should be viewed as a threat. Alternatively, when buyers are in a weak bargaining position, companies in an

industry can raise prices and perhaps reduce their costs by lowering product quality and service, thus increasing the level of industry profits. Buyers are most powerful in the following circumstances:

- When buyers have choice. If the industry is a monopoly, buyers obviously lack choice. If there are two or more companies in the industry, buyers clearly have choice.
- When buyers purchase in large quantities, they can use their purchasing power as leverage to bargain for price reductions.
- When the supply industry depends upon buyers for a large percentage of its total orders.
- When switching costs are low and buyers can pit the supplying companies against each other to force down prices.
- When it is economically feasible for buyers to purchase an input from several companies at once, they can pit one company in the industry against another.
- When buyers can threaten to enter the industry and independently produce the product, thus supplying their own needs, they can force down industry prices.

The automobile component supply industry, whose buyers are large manufacturers such as General Motors (GM), Ford, Honda, and Toyota, is a good example of an industry in which buyers have strong bargaining power and thus pose a strong competitive threat. Why? The suppliers of auto components are numerous and typically smaller in scale; their buyers, the auto manufacturers, are large in size and few in number. Additionally, to keep component prices down, historically both Ford and GM have used the threat of manufacturing a component themselves rather than buying it from a supplier. The automakers use their powerful position to pit suppliers against one another, forcing down the prices for component parts, and to demand better quality. If a component supplier objects, the automaker can use the threat of switching to another supplier as a bargaining tool.

2-3d The Bargaining Power of Suppliers

The fourth competitive force is the bargaining power of suppliers—the organizations that provide inputs—such as materials, services, and labor, which may be individuals, organizations such as labor unions, or companies that supply contract labor—into the industry. The bargaining power of suppliers refers to their ability to raise input prices, or to raise the costs of the industry in other ways—for example, by providing poor-quality inputs or poor service. Powerful suppliers squeeze profits out of an industry by raising the costs of companies in the industry. Thus, powerful suppliers are a threat. Conversely, if suppliers are weak, companies in the industry have the opportunity to force down input prices and demand higher-quality inputs (such as more productive labor). As with buyers, the ability of suppliers to make demands on a company depends on their power relative to that of the company. Suppliers are most powerful in these situations:

- The product that suppliers sell has few substitutes and is vital to the companies in an industry.
- The profitability of suppliers is not significantly affected by the purchases of companies in a particular industry; in other words, when the industry is not an important customer to the suppliers.

- Companies in an industry would experience significant switching costs if they moved to the product of a different supplier because a particular supplier's products are unique. In such cases, the company depends upon a particular supplier and cannot pit suppliers against each other to reduce prices.
- Suppliers can threaten to enter their customers' industry and use their inputs to produce products that would compete directly with those of companies already in the industry.
- Companies in the industry cannot threaten to enter their suppliers' industry and make their own inputs as a tactic for lowering the price of inputs.

An example of an industry in which companies are dependent upon a powerful supplier is the PC industry. Personal computer firms are heavily dependent on Intel, the world's largest supplier of microprocessors for PCs. Intel's microprocessor chips are the industry standard for personal computers. Intel's competitors, such as Advanced Micro Devices (AMD), must develop and supply chips that are compatible with Intel's standard. Although AMD has developed competing chips, Intel still supplies approximately 85% of the chips used in PCs primarily because only Intel has the manufacturing capacity required to serve a large share of the market. It is beyond the financial resources of Intel's competitors to match the scale and efficiency of its manufacturing systems. This means that although PC manufacturers can purchase some microprocessors from Intel's rivals, most notably AMD, they still must turn to Intel for the bulk of their supply. Because Intel is in a powerful bargaining position, it can charge higher prices for its microprocessors than if its competitors were stronger and more numerous (that is, if the microprocessor industry were fragmented).

2-3e Substitute Products

The final force in Porter's model is the threat of substitute products: the products of different businesses or industries that can satisfy similar customer needs. For example, companies in the coffee industry compete indirectly with those in the tea and soft-drink industries because all three serve customer needs for nonalcoholic, caffeinated drinks. The existence of close substitutes is a strong competitive threat because it limits the price that companies in one industry can charge for their product, which also limits industry profitability. If the price of coffee rises too much relative to that of tea or soft drinks, coffee drinkers may switch to those substitutes.

If an industry's products have few close substitutes (making substitutes a weak competitive force), then companies in the industry have the opportunity to raise prices and earn additional profits. There is no close substitute for microprocessors, which thus gives companies like Intel and AMD the ability to charge higher prices than if there were available substitutes.

2-3f Complementors

Andrew Grove, the former CEO of Intel, has argued that Porter's original formulation of competitive forces ignored a sixth force: the power, vigor, and competence of complementors.¹⁰ Complementors are companies that sell products that add value to (complement) the products of companies in an industry because, when used together, the combined products better satisfy customer demands. For example, the complementors to the PC industry are the companies that make software applications. The greater the

supply of high-quality software applications running on these machines, the greater the value of PCs to customers, the greater the demand for PCs, and the greater the profitability of the PC industry.

Grove's argument has a strong foundation in economic theory, which has long argued that both substitutes and complements influence demand in an industry.¹¹ Research has emphasized the importance of complementary products in determining demand and profitability in many high-technology industries, such as the computer industry, where Grove made his mark.¹² When complements are an important determinant of demand for an industry's products, industry profits critically depend upon an adequate supply of complementary products. When the number of complementors is increasing and producing attractive complementary products, demand increases and profits in the industry can broaden opportunities for creating value. Conversely, if complementors are weak and not producing attractive complementary products, they can become a threat, slowing industry growth and limiting profitability.

It is also possible for complementors to gain so much power that they are able to extract profit from the industry to which they provide complements. Complementors this strong can be a competitive threat. For example, in the videogame industry, the companies that produce the consoles—Nintendo, Microsoft (Xbox), and Sony (PS3)—have historically made the most money in the industry. They have done so by charging game-development companies (the complement providers) a royalty fee for every game sold that runs on their consoles. For example, Nintendo used to charge third-party game developers a 20% royalty fee for every game they sold that was written to run on a Nintendo console. However, two things have changed over the last decade. First, game developers have choices. They can, for example, decide to write for Microsoft Xbox first and for Sony PS3 a year later. Second, some game franchises are now so popular that consumers will purchase whichever platform runs the most recent version of the game. *Madden NFL*, produced by Electronic Arts, has an estimated 5 to 7 million dedicated fans that will purchase each new release. The game is in such demand that Electronic Arts can bargain for lower royalty rates from Microsoft and Sony in return for writing it to run on their gaming platforms. Put differently, Electronic Arts has gained bargaining power over the console producers, and it uses this to extract profit from the console industry in the form of lower royalty rates paid to console manufacturers. The console manufacturers have responded by trying to develop powerful franchises exclusive to their platforms. Nintendo has been successful here with its long-running Super Mario series, and Microsoft has had a major franchise hit with its Halo series, now in its fourth version.

2-3g Summary: Why Industry Analysis Matters

The analysis of competition in the industry environment using the competitive forces framework is a powerful tool that helps managers think strategically. It is important to recognize that one competitive force often affects others, and all forces need to be considered when performing industry analysis. For example, new entries due to low entry barriers increase competition in the industry and drive down prices and profit rates, other things being equal. If buyers are powerful, they may take advantage of the increased choice resulting from new entry to further bargain down prices, increasing the intensity of competition and making it more difficult to make a decent profit in the industry. Thus, it is important to understand how one force might impact upon another.

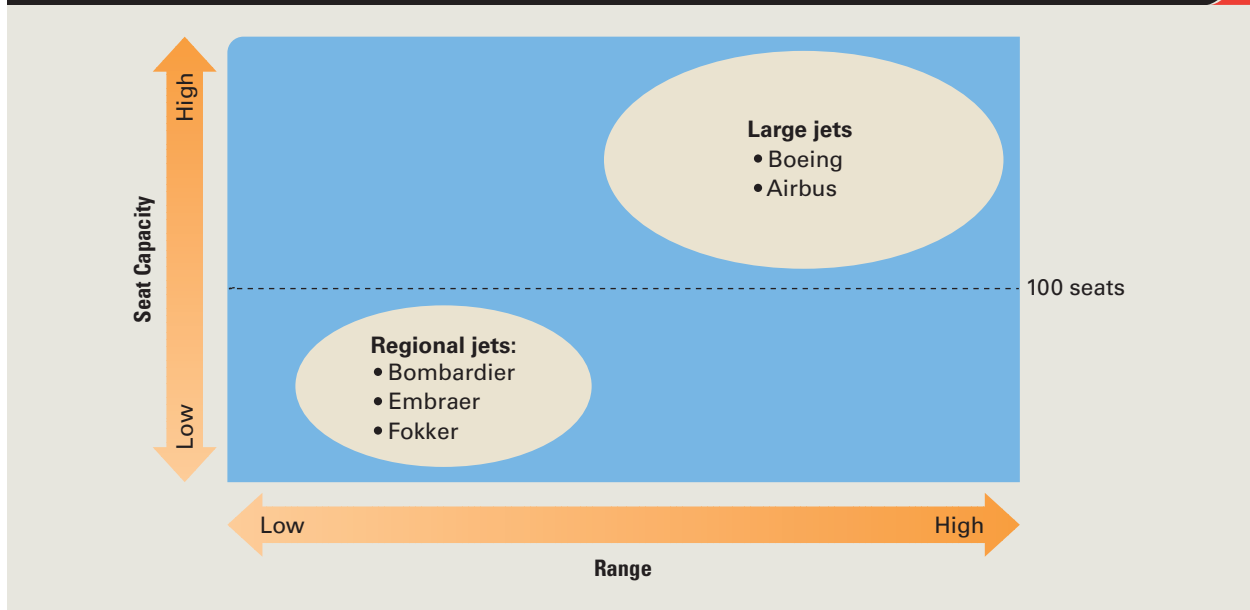
Industry analysis inevitably leads managers to think systematically about strategic choices. For example, if entry barriers are low, managers might ask themselves “How can we raise entry barriers into this industry, thereby reducing the threat of new competition?” The answer often involves trying to achieve economies of scale, build brand loyalty, create switching costs, and so on, so that new entrants are at a disadvantage and find it difficult to gain traction in the industry. Or they could ask “How can we modify the intensity of competition in our industry?” They might do this by emphasizing brand loyalty in an attempt to differentiate their products, or by creating switching costs that reduce buyer power in the industry. For example, wireless service providers have required new customers to sign a 2-year contract with early termination fees that may run into hundreds of dollars whenever they upgrade their phone equipment. This action effectively increases the costs of switching to a different wireless provider, thus making it more difficult for new entrants to gain traction in the industry. The increase in switching costs also moderates the intensity of rivalry in the industry by making it less likely that consumers will switch from one provider to another in an attempt to lower the price they pay for their service.

For another example, consider what happened when Coca-Cola looked at its industry environment in the early 2000s. It noticed a disturbing trend—per capita consumption of carbonated beverages had started to decline as people switched to noncarbonated soft drinks. In other words, substitute products were becoming a threat. This realization led to a change in the strategy at Coca-Cola. The company started to develop and offer its own noncarbonated beverages, effectively turning the threat into a strategic opportunity. Similarly, in the 2000s, demand for traditional newspapers began to decline as people increasingly started to consume news content on the Web. In other words, the threat from a substitute product was increasing. Several traditional newspapers responded by rapidly developing their own web-based content.

In all of these examples, an analysis of industry opportunities and threats led directly to a change in strategy by companies within the industry. This, of course, is the crucial point—analyzing the industry environment in order to identify opportunities and threats leads logically to a discussion of what strategies should be adopted to exploit opportunities and counter threats. We will return to this issue again in Chapters 5, 6, and 7 when we look at the different business-level strategies firms can pursue, and how they can match strategy to the conditions prevailing in their industry environment.

2-4 STRATEGIC GROUPS WITHIN INDUSTRIES

Companies in an industry often differ significantly from one another with regard to the way they strategically position their products in the market. Factors such as the distribution channels they use, the market segments they serve, the quality of their products, technological leadership, customer service, pricing policy, advertising policy, and promotions, all affect product position. As a result of these differences, within most industries it is possible to observe groups of companies in which each company follows a strategy similar to that pursued by other companies in the group, but different from the strategy pursued by companies in other groups. These different groups of companies are known as strategic groups.¹³

Figure 2.2 Strategic Groups in the Commercial Aerospace Industry

For example, the commercial aerospace industry has traditionally had two main strategic groups: the manufacturers of regional jets and the manufacturers of large commercial jets (see Figure 2.2). Bombardier and Embraer are the standouts in the regional jet industry, whereas Boeing and Airbus have long dominated the market for large commercial jets. Regional jets have less than 100 seats and limited range. Large jets have anywhere from 100 to 550 seats, and some models are able to fly across the Pacific Ocean. Large jets are sold to major airlines, and regional jets to small, regional carriers. Historically, the companies in the regional jet group have competed against each other but not against Boeing and Airbus (the converse is also true).

Normally, the basic differences between the strategies that companies in different strategic groups use can be captured by a relatively small number of factors. In the case of commercial aerospace, the differences are primarily in terms of product attributes (seat capacity and range) and customer set (large airlines versus smaller regional airlines). For another example, consider the pharmaceutical industry. Here two primary strategic groups stand out.¹⁴ One group, which includes such companies as Merck, Eli Lilly, and Pfizer, is characterized by a business model based on heavy R&D spending and a focus on developing new, proprietary, blockbuster drugs. The companies in this proprietary strategic group are pursuing a high-risk, high-return strategy because basic drug research is difficult and expensive. Bringing a new drug to market can cost up to \$800 million in R&D funding and a decade of research and clinical trials. The risks are high because the failure rate in new drug development is very high: only one out of every five drugs entering clinical trials is eventually approved by the U.S. Food and Drug Administration (FDA). However, this strategy has potential for a high return because a single successful drug can be patented, giving the innovator a monopoly on the production and sale of the drug for the life of the patent (patents are issued for 20 years). This allows proprietary companies to charge a high price for the drug, earning them millions, if not billions, of dollars over the lifetime of the patent.

The second strategic group might be characterized as the generic-drug strategic group. This group of companies, which includes Teva Pharmaceutical Industries, Sun Pharmaceutical, and Mylan Inc., focuses on the manufacture of generic drugs: low-cost copies of drugs that were developed by companies in the proprietary group, which now have expired patents. Low R&D spending, production efficiency, and an emphasis on low prices characterize the business models of companies in this strategic group. They are pursuing a low-risk, low-return strategy: low risk because these companies are not investing millions of dollars in R&D, low return because they cannot charge high prices for their products.

2-4a Implications of Strategic Groups

The concept of strategic groups has a number of implications for the identification of opportunities and threats within an industry. First, because all companies in a strategic group are pursuing a similar strategy, customers tend to view the products of such enterprises as direct substitutes for each other. Thus, a company's closest competitors are those in its strategic group, not those in other strategic groups in the industry. The most immediate threat to a company's profitability comes from rivals within its own strategic group. For example, in the retail industry there is a group of companies that might be characterized as general merchandise discounters. Included in this group are Wal-Mart, K-mart, Target, and Fred Meyer. These companies compete vigorously with each other, rather than with other retailers in different groups, such as Nordstrom or The Gap. K-Mart, for example, was driven into bankruptcy in the early 2000s, not because Nordstrom or The Gap took its business, but because Wal-Mart and Target gained share in the discounting group by virtue of their superior strategic execution of the discounting business model for general merchandise.

A second competitive implication is that different strategic groups can have different relationships to each of the competitive forces; thus, each strategic group may face a different set of opportunities and threats. Each of the following can be a relatively strong or weak competitive force depending on the competitive positioning approach adopted by each strategic group in the industry: the risk of new entry by potential competitors; the degree of rivalry among companies within a group; the bargaining power of buyers; the bargaining power of suppliers; and the competitive force of substitute and complementary products. For example, in the pharmaceutical industry, companies in the proprietary group historically have been in a very powerful position in relation to buyers because their products are patented and there are no substitutes. Also, rivalry based on price competition within this group has been low because competition in the industry depends upon which company is first to patent a new drug ("patent races"), not on drug prices. Thus, companies in this group are able to charge high prices and earn high profits. In contrast, companies in the generic group have been in a much weaker position because many companies are able to produce different versions of the same generic drug after patents expire. Thus, in this strategic group, products are close substitutes, rivalry is high, and price competition has led to lower profits than for the companies in the proprietary group.

2-4b The Role of Mobility Barriers

It follows from these two issues that some strategic groups are more desirable than others because competitive forces open up greater opportunities and present fewer threats

for those groups. Managers, after analyzing their industry, might identify a strategic group where competitive forces are weaker and higher profits can be made. Sensing an opportunity, they might contemplate changing their strategy and move to compete in that strategic group. However, taking advantage of this opportunity may be difficult because of mobility barriers between strategic groups.

Mobility barriers are within-industry factors that inhibit the movement of companies between strategic groups. They include the barriers to entry into a group and the barriers to exit from an existing group. For example, attracted by the promise of higher returns, Forest Labs might want to enter the proprietary strategic group in the pharmaceutical industry, but it might find doing so difficult because it lacks the requisite R&D skills, and building these skills would be an expensive proposition. Over time, companies in different groups develop different cost structures, skills, and competencies that allow them different pricing options and choices. A company contemplating entry into another strategic group must evaluate whether it has the ability to imitate, and outperform, its potential competitors in that strategic group. Managers must determine if it is cost-effective to overcome mobility barriers before deciding whether the move is worthwhile.

At the same time, managers should be aware that companies based in another strategic group within their industry might ultimately become their direct competitors if they can overcome mobility barriers. This now seems to be occurring in the commercial aerospace industry, where two regional jet manufacturers, Bombardier and Embraer, have started to move into the large commercial jet business with the development of narrow-bodied aircraft in the 100-to 150-seat range. This implies that Boeing and Airbus will be seeing more competition in the years ahead, and their managers need to prepare for this. Indeed, in 2017, Airbus entered into a partnership with Bombardier to coopt them, and Boeing is reportedly considering an acquisition of Embraer.

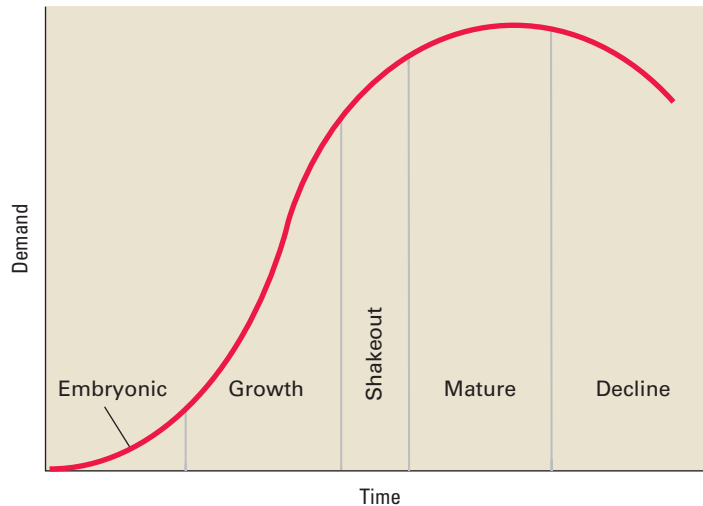
2-5 INDUSTRY LIFE-CYCLE ANALYSIS

Changes that take place in an industry over time are an important determinant of the strength of the competitive forces in the industry (and of the nature of opportunities and threats). The similarities and differences between companies in an industry often become more pronounced over time, and its strategic group structure frequently changes. The strength and nature of each competitive force also changes as an industry evolves, particularly the two forces of risk of entry by potential competitors and rivalry among existing firms.¹⁵

A useful tool for analyzing the effects of industry evolution on competitive forces is the industry life-cycle model. This model identifies five sequential stages in the evolution of an industry that lead to five distinct kinds of industry environment: embryonic, growth, shakeout, mature, and decline (see Figure 2.3). The task managers face is to anticipate how the strength of competitive forces will change as the industry environment evolves, and to formulate strategies that take advantage of opportunities as they arise and that counter emerging threats.

2-5a Embryonic Industries

An embryonic industry is one that is just beginning to develop (for example, personal computers and biotechnology in the 1970s, wireless communications in the

Figure 2.3 Stages in the Industry Life Cycle

1980s, Internet retailing in the 1990s, and nanotechnology today). Growth at this stage is slow because of factors such as buyers' unfamiliarity with the industry's product, high prices due to the inability of companies to leverage significant scale economies, and poorly developed distribution channels. Barriers to entry tend to be based on access to key technological knowhow rather than cost economies or brand loyalty. If the core knowhow required to compete in the industry is complex and difficult to grasp, barriers to entry can be quite high, and established companies will be protected from potential competitors. Rivalry in embryonic industries is based not so much on price as on educating customers, opening up distribution channels, and perfecting the design of the product. Such rivalry can be intense, and the company that is the first to solve design problems often has the opportunity to develop a significant market position. An embryonic industry may also be the creation of one company's innovative efforts, as happened with microprocessors (Intel), vacuum cleaners (Hoover), photocopiers (Xerox), small-package express delivery (FedEx), and Internet search engines (Google). In such circumstances, the developing company has a major opportunity to capitalize on the lack of rivalry and build a strong hold on the market.

2-5b Growth Industries

Once demand for an industry's products begins to increase, it develops the characteristics of a growth industry. In a growth industry, first-time demand is expanding rapidly as many new customers enter the market. Typically, an industry grows when customers become familiar with a product, prices fall because scale economies have been attained, and distribution channels develop. The U.S. wireless telephone industry remained in the growth stage for most of the 1985–2012 period. In 1990, there were only 5 million cellular subscribers in the nation. In 1997, there were 50 million. By 2014, this figure had increased to about 360 million, or roughly 1.08 accounts per person, implying that the market was now saturated and the industry mature.

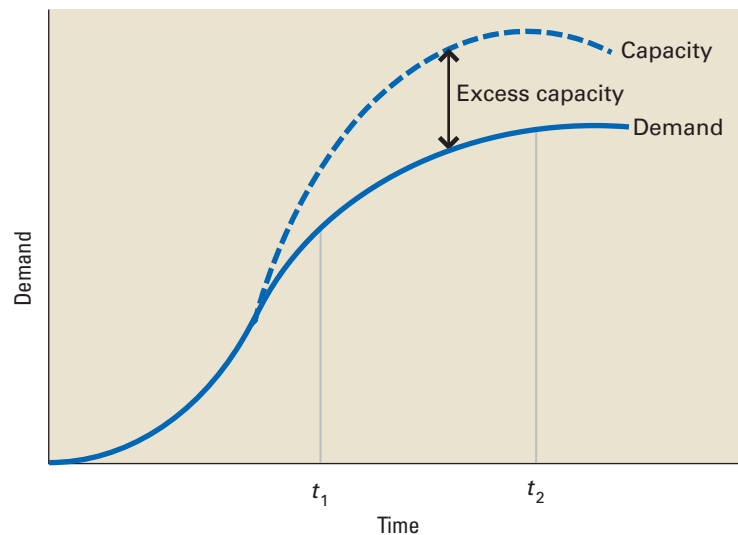
Normally, the importance of control over technological knowledge as a barrier to entry has diminished by the time an industry enters its growth stage. Because few companies have yet to achieve significant scale economies or built brand loyalty, other entry barriers tend to be relatively low early in the growth stage. Thus, the threat from potential competitors is typically highest at this point. Paradoxically, high growth usually means that new entrants can be absorbed into an industry without a marked increase in the intensity of rivalry. Thus, rivalry tends to be relatively low. Rapid growth in demand enables companies to expand their revenues and profits without taking market share away from competitors. A strategically aware company takes advantage of the relatively benign environment of the growth stage to prepare itself for the intense competition of the coming industry shakeout.

2-5c Industry Shakeout

Explosive growth cannot be maintained indefinitely. Sooner or later, the rate of growth slows and the industry enters the shakeout stage. In the shakeout stage, demand approaches saturation levels; more and more of the demand is limited to replacement because fewer potential first-time buyers remain.

As an industry enters the shakeout stage, rivalry between companies can build. Typically, companies that have become accustomed to rapid growth continue to add capacity at rates consistent with past growth. However, demand is no longer growing at historic rates, and the consequence is excess productive capacity. This condition is illustrated in Figure 2.4, where the solid curve indicates the growth in demand over time and the broken curve indicates the growth in productive capacity over time. As you can see, past time t_1 , demand growth slows as the industry matures. However, capacity continues to grow until time t_2 . The gap between the solid and broken lines signifies excess capacity. In an attempt to use this capacity, companies often cut prices. The result can be a price war that drives inefficient companies into bankruptcy and deters new entry.

Figure 2.4 Growth in Demand and Capacity



2-5d Mature Industries

The shakeout stage ends when the industry enters its mature stage: The market is totally saturated, demand is limited to replacement demand, and growth is low or zero. Typically, the growth that remains comes from population expansion, bringing new customers into the market or increasing replacement demand.

As an industry enters maturity, barriers to entry increase, and the threat of entry from potential competitors decreases. As growth slows during the shakeout, companies can no longer maintain historic growth rates merely by holding on to their market share. Competition for market share develops, driving down prices and often producing a price war, as has happened in the airline and PC industries. To survive the shakeout, companies begin to focus on minimizing costs and building brand loyalty. The airlines, for example, tried to cut operating costs by hiring nonunion labor, and to build brand loyalty by introducing frequent-flyer programs. PC computer companies have sought to build brand loyalty by providing excellent after-sales service and working to lower their cost structures. By the time an industry matures, the surviving companies are those that have secured brand loyalty and efficient, low-cost operations. Because both these factors constitute a significant barrier to entry, the threat of entry by potential competitors is often greatly diminished. High entry barriers in mature industries can give companies the opportunity to increase prices and profits, although this does not always occur.

As a result of the shakeout, most industries in the maturity stage consolidate and become oligopolies. Examples include the beer industry, breakfast cereal industry, and wireless service industry. In mature industries, companies tend to recognize their interdependence and try to avoid price wars. Stable demand gives them the opportunity to enter into tacit price-leadership agreements. The net effect is to reduce the threat of intense rivalry among established companies, thereby allowing greater profitability. Nevertheless, the stability of a mature industry is always threatened by further price wars. A general slump in economic activity can depress industry demand. As companies fight to maintain their revenues in the face of declining demand, price-leadership agreements break down, rivalry increases, and prices and profits fall. The periodic price wars that occur in the airline industry appear to follow this pattern.

2-5e Declining Industries

Eventually, most industries enter a stage of decline: growth becomes negative for a variety of reasons, including technological substitution (air travel instead of rail travel), social changes (greater health consciousness impacting tobacco sales), demographics (the declining birthrate constricting the market for products for babies and children), and international competition (low-cost, foreign competition pushing the U.S. steel industry into decline). Within a declining industry, the degree of rivalry among established companies usually increases. Depending on the speed of the decline and the height of exit barriers, competitive pressures can become as fierce as in the shakeout stage.¹⁶ The largest problem in a declining industry is that falling demand leads to the emergence of excess capacity. In trying to use this capacity, companies begin to cut prices, thus sparking a price war. The U.S. steel industry experienced these problems during the 1980s and 1990s because steel companies tried to use their excess capacity despite falling demand. The same problem occurred in the airline industry in the 1990–1992 period, in 2001–2005, and again in 2008–2009 as companies cut prices to

ensure that they would not be flying with half-empty planes (that is, they would not be operating with substantial excess capacity). Exit barriers play a part in adjusting excess capacity. The higher the exit barriers, the harder it is for companies to reduce capacity and the greater the threat of severe price competition.

2-5f Summary

A third task of industry analysis is to identify the opportunities and threats that are characteristic of different kinds of industry environments in order to develop effective strategies. Managers have to tailor their strategies to changing industry conditions. They must also learn to recognize the crucial points in an industry's development, so they can forecast when the shakeout stage of an industry might begin or when an industry might be moving into decline. This is also true at the level of strategic groups, for new, embryonic groups may emerge because of shifts in customer needs and tastes, or because some groups may grow rapidly due to changes in technology, whereas others will decline as their customers defect.

2-6 LIMITATIONS OF MODELS FOR INDUSTRY ANALYSIS

The competitive forces, strategic groups, and life-cycle models provide useful ways of thinking about and analyzing the nature of competition within an industry to identify opportunities and threats. However, each has its limitations, and managers must be aware of them.

2-6a Life-Cycle Issues

It is important to remember that the industry life-cycle model is a generalization. In practice, industry life cycles do not always follow the pattern, as illustrated in Figure 2.3. In some cases, growth is so rapid that the embryonic stage is skipped altogether. In others, industries fail to get past the embryonic stage. Industry growth can be revitalized after long periods of decline through innovation or social change. For example, the health boom brought the bicycle industry back to life after a long period of decline.

The time span of these stages can vary significantly from industry to industry. Some industries can remain mature almost indefinitely if their products are viewed as basic necessities, as is the case for the car industry. Other industries skip the mature stage and go straight into decline, as in the case of the vacuum-tube industry. Transistors replaced vacuum tubes as a major component in electronic products despite the fact that the vacuum tube industry was still in its growth stage. Still other industries may go through several shakeouts before they enter full maturity, as appears to currently be happening in the telecommunications industry.

2-6b Innovation and Change

Over any reasonable length of time, in many industries competition can be viewed as a process driven by innovation.¹⁷ Innovation is frequently the major factor in industry

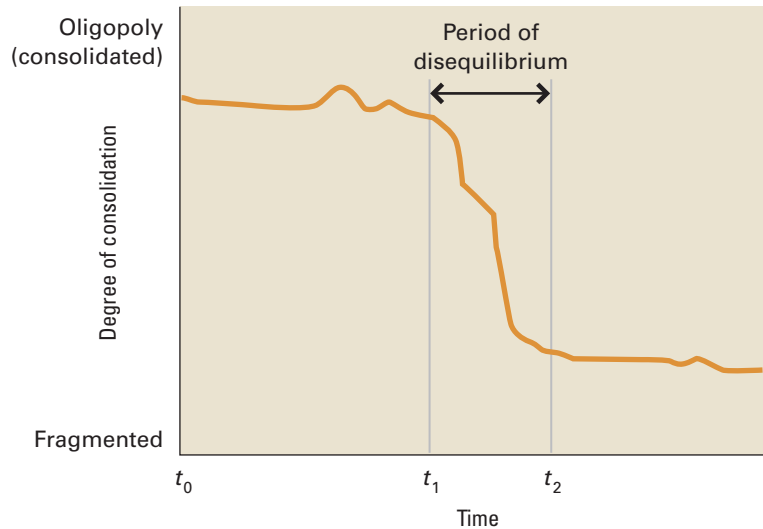
evolution and propels a company's movement through the industry life cycle. Innovation is attractive because companies that pioneer new products, processes, or strategies often earn enormous profits. Consider the explosive growth of Toys "R" Us, Dell, and Wal-Mart. In a variety of ways, all of these companies were innovators. Toys "R" Us pioneered a new way of selling toys (through large, discount warehouse-type stores); Dell pioneered an entirely new way of selling personal computers (directly via telephone, and then the Web); and Wal-Mart pioneered the low-price, discount superstore concept.

Successful innovation can transform the nature of industry competition. In recent decades, one frequent consequence of innovation has been to lower the fixed costs of production, thereby reducing barriers to entry and allowing new, smaller enterprises to compete with large, established organizations. Four decades ago, large, integrated steel companies such as U.S. Steel, LTV, and Bethlehem Steel dominated the steel industry. The industry was an oligopoly, dominated by a small number of large producers, in which tacit price collusion was practiced. Then along came a series of efficient, mini-mill producers such as Nucor and Chaparral Steel, which used a new technology: electric arc furnaces. Over the past 40 years, they have revolutionized the structure of the industry. What was once a consolidated industry is now fragmented and price competitive. U.S. Steel now has only a 12% market share, down from 55% in the mid-1960s. In contrast, the mini-mills as a group now hold over 40% of the market, up from 5% 30 years ago.¹⁸ Thus, the mini-mill innovation has reshaped the nature of competition in the steel industry.¹⁹ A competitive forces model applied to the industry in 1970 would look very different from a competitive forces model applied in 2018.

Michael Porter sees innovation as "unfreezing" and "reshaping" industry structure. He argues that, after a period of turbulence triggered by innovation, the structure of an industry once more settles into a fairly stable pattern and the competitive forces and strategic group concepts can once more be applied.²⁰ This view of the evolution of industry structure, often referred to as "punctuated equilibrium,"²¹ holds that long periods of equilibrium (refreezing), when an industry's structure is stable, are punctuated by periods of rapid change (unfreezing), when industry structure is revolutionized by innovation.

Figure 2.5 depicts punctuated equilibrium for a key dimension of industry structure: competitive structure. From time t_0 to t_1 , the competitive structure of the industry is a stable oligopoly, and few companies share the market. At time t_1 , a major new innovation is pioneered either by an existing company or a new entrant. The result is a period of turbulence between t_1 and t_2 . Afterward, the industry settles into a new state of equilibrium, but now the competitive structure is far more fragmented. Note that the opposite could have happened: the industry could have become more consolidated, although this seems to be less common. In general, innovation seems to lower barriers to entry, allow more companies into the industry, and, as a result, lead to fragmentation rather than consolidation.

During a period of rapid change when industry structure is being revolutionized by innovation, value typically migrates to business models based on new positioning strategies.²² In the stockbrokerage industry, value migrated from the full-service broker model to the online trading model. In the steel industry, electric arc technology led to a migration of value away from large, integrated enterprises and toward small mini-mills. In the bookselling industry, value has migrated first away from small, boutique "bricks-and-mortar" booksellers toward large bookstore chains like Barnes & Noble, and more

Figure 2.5 Punctuated Equilibrium and Competitive Structure

recently toward online bookstores such as Amazon.com. Because the competitive forces and strategic group models are static, they cannot adequately capture what occurs during periods of rapid change in the industry environment when value is migrating.

2-6c Company Differences

Another criticism of industry models is that they overemphasize the importance of industry structure as a determinant of company performance and underemphasize the importance of variations or differences among companies within an industry or a strategic group.²³ As we discuss in the next chapter, the profit rates of individual companies within an industry can vary enormously. Research by Richard Rumelt and his associates suggests that industry structure explains only about 10% of the variance in profit rates across companies.²⁴ This implies that individual company differences account for much of the remainder. Other studies have estimated the explained variance at closer to 20%.²⁵ Similarly, a number of studies have found only weak evidence linking strategic group membership and company profit rates, despite the fact that the strategic group model predicts a strong link.²⁶ Collectively these studies suggest that a company's individual resources and capabilities may be more important determinants of its profitability than the industry or strategic group of which the company is a member. In other words, there are strong companies in tough industries where average profitability is low (Nucor in the steel industry), and weak companies in industries where average profitability is high.

Although these findings do not invalidate the competitive forces and strategic group models, they do imply that the models are imperfect predictors of enterprise profitability. A company will not be profitable just because it is based in an attractive industry or strategic group. As we will discuss in subsequent chapters, much more is required.

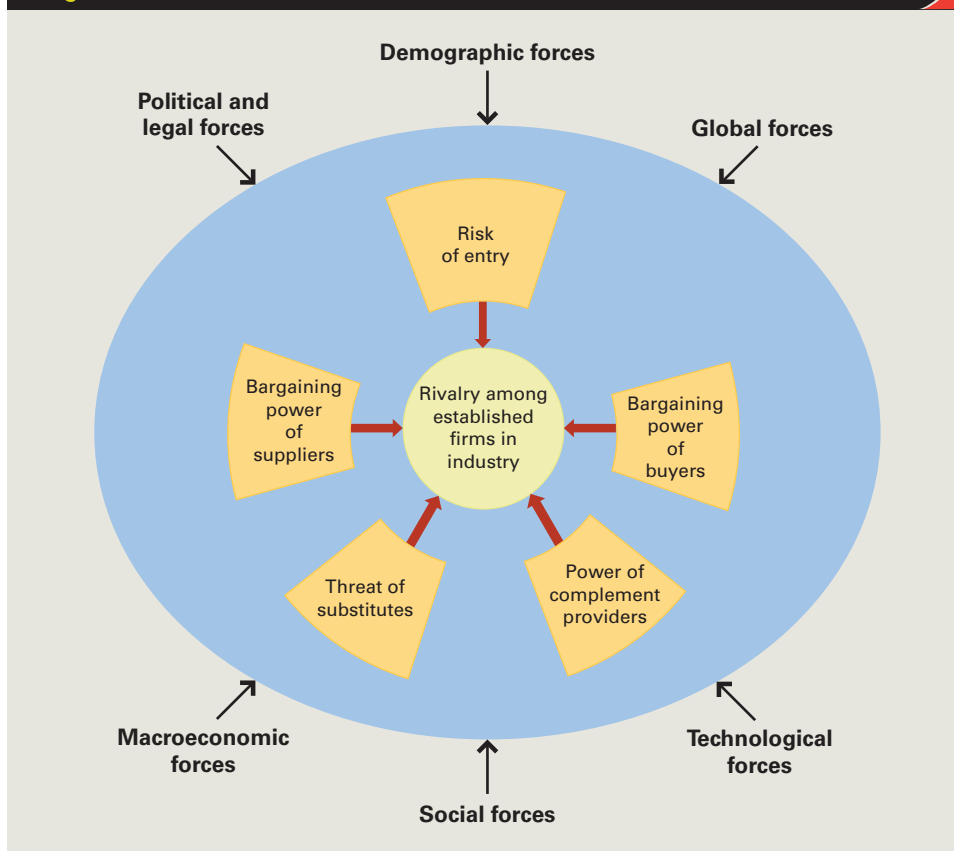
2-7 THE MACROENVIRONMENT

Just as the decisions and actions of strategic managers can often change an industry's competitive structure, so too can changing conditions or forces in the wider macroenvironment; that is, the broader economic, global, technological, demographic, social, and political context in which companies and industries are embedded (see Figure 2.6). Changes in the forces within the macroenvironment can have a direct impact on any or all of the forces in Porter's model, thereby altering the relative strength of these forces as well as the attractiveness of an industry.

2-7a Macroeconomic Forces

Macroeconomic forces affect the general health and well-being of a nation and the regional economy of an organization, which in turn affect companies' and industries' ability to earn an adequate rate of return. The four primary macroeconomic forces are the growth rate of the economy, interest rates, currency exchange rates, and inflation (or deflation) rates. Economic growth, because it leads to an expansion in customer expenditures,

Figure 2.6 The Role of the Macroenvironment



tends to ease competitive pressures within an industry. This gives companies the opportunity to expand their operations and earn higher profits. Because economic decline (a recession) leads to a reduction in customer expenditures, it increases competitive pressures. Economic decline frequently causes price wars in mature industries.

Interest rates can determine the demand for a company's products and thus are important whenever customers routinely borrow money to finance their purchase of these products. The most obvious example is the housing market, where mortgage rates directly affect demand. Interest rates also have an impact on the sale of autos, appliances, and capital equipment, to give just a few examples. For companies in such industries, rising interest rates are a threat and falling rates an opportunity. Interest rates are also important because they influence a company's cost of capital, and therefore its ability to raise funds and invest in new assets. The lower the interest rate, the lower the cost of capital for companies and the more potential investment.

Currency exchange rates define the comparative value of different national currencies. Movement in currency exchange rates has a direct impact on the competitiveness of a company's products in the global marketplace. For example, when the value of the dollar is low compared to the value of other currencies, products made in the United States are relatively inexpensive, and products made overseas are relatively expensive. A low or declining dollar reduces the threat from foreign competitors while creating opportunities for increased sales overseas. The fall in the value of the dollar against several major currencies during 2004–2008 helped to make the U.S. steel industry more competitive, whereas its rise during 2012–2014 made the industry less competitive.

Price inflation can destabilize the economy, producing slower economic growth, higher interest rates, and volatile currency movements. If inflation continues to increase, investment planning becomes hazardous. The key characteristic of inflation is that it makes the future less predictable. In an inflationary environment, it may be impossible to predict with any accuracy the real value of returns that can be earned from a project 5 years down the road. Such uncertainty makes companies less willing to invest, which in turn depresses economic activity and ultimately pushes the economy into a recession. Thus, high inflation is a threat to companies.

Price deflation also has a destabilizing effect on economic activity. If prices fall, the real price of fixed payments rises. This is damaging for companies and individuals with a high level of debt who must make regular, fixed payments on that debt. In a deflationary environment, the increase in the real value of debt consumes more household and corporate cash flows, leaving less for other purchases and depressing the overall level of economic activity. Although significant deflation has not been seen since the 1930s, in the 1990s it took hold in Japan; in 2008–2009, concerns grew that it might re-emerge in the United States as the country plunged into a deep recession (and although that did not occur, inflation remained muted).

2-7b Global Forces

The last half-century has seen enormous changes in the world's economic system. We review these changes in some detail in Chapter 8, where we discuss global strategy. For now, the important points to note are that barriers to international trade and investment have tumbled, and more and more countries have enjoyed sustained

economic growth. Economic growth in Brazil, China, and India has created new, large markets for companies' goods and services and is giving companies an opportunity to grow their profits faster by entering these markets. Falling barriers to international trade and investment have made it much easier to enter foreign nations. For example, 30 years ago, it was almost impossible for a Western company to set up operations in China. Today, Western and Japanese companies are investing approximately \$100 billion annually in China. By the same token, falling barriers to international trade and investment have made it easier for foreign enterprises to enter the domestic markets of many companies (by lowering barriers to entry), thereby increasing the intensity of competition and lowering profitability. Because of these changes, many formerly isolated domestic markets have now become part of a much larger, more competitive global marketplace, creating both threats and opportunities for companies. Interestingly, although barriers to cross border trade and investment have been falling for 60 years, the decision by the United Kingdom to leave the European Union (Brexit), and the protectionist instincts of the current president of the United States, Donald Trump, may indicate that for now at least, the tide may be turning.

2-7c Technological Forces

Over the last few decades, the pace of technological change has accelerated.²⁷ This has unleashed a process that has been called a “perennial gale of creative destruction.”²⁸ Technological change can render established products obsolete overnight and simultaneously create a host of new product possibilities. Thus, technological change is both creative and destructive—both an opportunity and a threat.

Most important, the impacts of technological change can affect the height of barriers to entry and therefore radically reshape industry structure. For example, the Internet lowered barriers to entry into the news industry. Providers of financial news must now compete for advertising dollars and customer attention with new, Internet-based media organizations that developed during the 1990s and 2000s, such as TheStreet.com, The Motley Fool, Yahoo Finance and Google News. Advertisers now have more choices due to the resulting increase in rivalry, enabling them to bargain down the prices that they must pay to media companies.

2-7d Demographic Forces

Demographic forces result from changes in the characteristics of a population such as age, gender, ethnic origin, race, sexual orientation, and social class. Like the other forces in the general environment, demographic forces present managers with opportunities and threats and can have major implications for organizations. Change in the age distribution of a population is an example of a demographic force that affects managers and organizations. Currently, most industrialized nations are experiencing the aging of their populations as a consequence of falling birth and death rates and the aging of the Baby-Boom generation. As the population ages, opportunities for organizations that cater to older people are increasing; the home-health-care and recreation industries, for example, are seeing an upswing in demand for their services. As the Baby-Boom generation from the late 1950s to the early 1960s has aged, it has created a host of opportunities and threats. During

the 1980s, many Baby Boomers were getting married and creating an upsurge in demand for the customer appliances normally purchased by couples marrying for the first time. Companies such as Whirlpool Corporation and General Electric (GE) capitalized on the resulting upsurge in demand for washing machines, dishwashers, dryers, and the like. In the 1990s, many of these same Baby Boomers began to save for retirement, creating an inflow of money into mutual funds and creating a surge in the mutual fund industry. Today, many Baby Boomers are retiring, creating a surge in retirement communities.

2-7e Social Forces

Social forces refer to the way in which changing social mores and values affect an industry. Like other macroenvironmental forces, social change creates opportunities and threats. One major social movement of recent decades has been the trend toward greater health consciousness. Its impact has been immense, and many companies that recognized the opportunities early on have reaped significant gains. Philip Morris, for example, capitalized on the growing health consciousness trend when it acquired Miller Brewing Company, and then redefined competition in the beer industry with its introduction of low-calorie beer (Miller Lite). Similarly, PepsiCo was able to gain market share from its rival, Coca-Cola, by being the first to introduce diet colas and fruit-based soft drinks. At the same time, the health trend has created a threat for many industries. The tobacco industry, for example, is in decline as a direct result of greater customer awareness of the health implications of smoking.

2-7f Political and Legal Forces

Political and legal forces are outcomes of changes in laws and regulations, and they significantly affect managers and companies. Political processes shape a society's laws, which constrain the operations of organizations and managers and thus create both opportunities and threats.²⁹ For example, throughout much of the industrialized world there has been a strong trend toward deregulation of industries previously controlled by the state, and privatization of organizations once owned by the state. In the United States, deregulation in 1979 allowed 29 new airline companies to enter the industry between 1979 and 1993. The increase in passenger-carrying capacity after deregulation led to excess capacity on many routes, intense competition, and fare wars. To respond to this more competitive environment, airlines needed to look for ways to reduce operating costs. The development of hub-and-spoke systems, the rise of non-union airlines, and the introduction of no-frills, discount service are all responses to increased competition in the airlines' task environment. Despite these innovations, the airline industry still experiences intense fare wars, which have lowered profits and caused numerous airline company bankruptcies. The global telecommunications service industry is now experiencing the same kind of turmoil following the deregulation of that industry in the United States and elsewhere.

KEY TERMS

opportunities 42	potential	brand loyalty 45	switching costs 46
threats 42	competitors 44	absolute cost	
industry 42	economies of scale 45	advantage 45	

TAKEAWAYS FOR STRATEGIC MANAGERS

1. An industry is a group of companies offering products or services that are close substitutes for each other. Close substitutes are products or services that satisfy the same basic customer needs.
2. The main technique used to analyze competition in the industry environment is the competitive forces model. The forces are: (1) the risk of new entry by potential competitors, (2) the extent of rivalry among established firms, (3) the bargaining power of buyers, (4) the bargaining power of suppliers, (5) the threat of substitute products, and (6) the power of complement providers. The stronger each force is, the more competitive the industry and the lower the rate of return that can be earned.
3. The risk of entry by potential competitors is a function of the height of barriers to entry. The higher the barriers to entry are, the lower the risk of entry and the greater the potential profits in the industry.
4. The extent of rivalry among established companies is a function of an industry's competitive structure, demand conditions, cost conditions, and barriers to exit. Strong demand conditions moderate the competition among established companies and create opportunities for expansion. When demand is weak, intensive competition can develop, particularly in consolidated industries with high exit barriers.
5. Buyers are most powerful when a company depends on them for business, but they are not dependent on the company. In such circumstances, buyers are a threat.
6. Suppliers are most powerful when a company depends on them for business but they are not dependent on the company. In such circumstances, suppliers are a threat.
7. Substitute products are the products of companies serving customer needs similar to the needs served by the industry being analyzed. When substitute products are very similar to one another, companies can charge a lower price without losing customers to the substitutes.
8. The power, vigor, and competence of complementors represent a sixth competitive force. Powerful, vigorous complementors may have a strong positive impact on demand in an industry.
9. Most industries are composed of strategic groups of companies pursuing the same or a similar strategy. Companies in different strategic groups pursue different strategies.
10. The members of a company's strategic group constitute its immediate competitors. Because different strategic groups are characterized by different opportunities and threats, a company may improve its performance by switching strategic groups. The feasibility of doing so is a function of the height of mobility barriers.
11. Industries go through a well-defined life cycle: from an embryonic stage through growth, shake-out, and maturity, and eventually decline. Each stage has different implications for the competitive structure of the industry, and each gives rise to its own opportunities and threats.
12. The competitive forces, strategic group, and industry life-cycles models all have limitations. The competitive forces and strategic group

models present a static picture of competition that deemphasizes the role of innovation. Yet innovation can revolutionize industry structure and completely shift the strength of different competitive forces. The competitive forces and strategic group models have been criticized for deemphasizing the importance of individual company differences. A company will not be profitable just because it is part of an attractive industry or strategic group; much more is required. The industry

life-cycle model is a generalization that is not always followed, particularly when innovation revolutionizes an industry.

13. The macroenvironment affects the intensity of rivalry within an industry. Included in the macroenvironment are the macroeconomic environment, the global environment, the technological environment, the demographic and social environment, and the political and legal environment.

DISCUSSION QUESTIONS

1. Under what environmental conditions are price wars most likely to occur in an industry? What are the implications of price wars for a company? How should a company try to deal with the threat of a price war?
2. Discuss the competitive forces model with reference to what you know about the U.S. market for wireless telecommunications services (see the Opening Case). What does the model tell you about the level of competition in this industry?
3. Identify a growth industry, a mature industry, and a declining industry. For each industry, identify the following: (a) the number and size distribution of companies, (b) the nature of barriers to entry, (c) the height of barriers to entry, and (d) the extent of product differentiation. What do these factors tell you about the nature of competition in each industry? What are the implications for the company in terms of opportunities and threats?
4. Assess the impact of macroenvironmental factors on the likely level of enrollment at your university over the next decade. What are the implications of these factors for the job security and salary level of your professors?

CLOSING CASE

Competition in the U.S. Market for Wireless Telecommunications

Over the last two decades, the wireless telecommunications industry in the United States has been characterized by strong growth as demand for mobile phones—and, since 2007, smartphones—drove industry revenues forward. In 2000, there were 109 million wireless subscribers in the United States. By 2017, the number had risen to almost 420 million, representing a penetration rate of over 100% (some people had multiple phones). Moreover, smartphone penetration had risen from 37% of the population in 2010 to over 80% by 2017.

As this market has grown, the competitive structure of the industry has become increasingly consolidated. Today, four companies dominate the industry: Verizon with 35% of the market, AT&T with 33%, Sprint with 13%, and T-Mobile with 17%. Much of the consolidation has been achieved through mergers and acquisitions. In 2004, AT&T bought Cingular for \$41 billion; in 2005, Sprint and Nextel closed a \$36-billion merger; and in 2009, Verizon bought Alltel for \$28.1 billion. Since then regulatory authorities have stymied further merger attempts

between large players. In 2011, AT&T tried to purchase T-Mobile, but was blocked by regulators. A 2014 merger proposal between T-Mobile and Sprint was also scuttled by objections from regulators.

The merger wave was driven by a realization among wireless companies that only the largest firms can reap the scale economies necessary to be profitable in this capital-intensive industry. Building out network infrastructure such as cell towers, and constantly upgrading that infrastructure to deliver fast, reliable voice and data service, has consumed over \$400 billion in capital spending since 1985; \$200 billion of that has been spent since 2010. By 2017, capital expenditures in the industry were running at \$35 billion a year. Wireless companies have also spent over \$60 billion so far to acquire from the government the right to use the wireless spectrum. The government periodically auctions off the spectrum, and competition among wireless providers typically drives up the price. Companies in the industry have also had to spend heavily on marketing to establish their brands, and on building out a nationwide network of retail stores to provide point-of-sale service to their customers.

Until recently, competition in the industry primarily focused on non-price factors such as service coverage and reliability, handset equipment, service packages, and brand. Verizon, for example, emphasized its superior coverage and the high speed of its network; AT&T gained share when it signed a deal in 2007 to be the exclusive supplier of Apple's iPhone for one year; and T-Mobile branded itself as the hip network for young people looking for value. To reduce customer churn and limit price competition, service providers required customers to enter into 2-year contracts with early termination fees in exchange for

new equipment (the cost of which was heavily subsidized), or to purchase updated service plans.

However, with the market now saturated, and regulators blocking further merger attempts, competition is increasingly based on price. The shift began in early 2013, when T-Mobile broke ranks with the industry and began discarding 2-year contracts and early-termination fees, and eliminating subsidies of several hundred dollars for new phones, instead offering customers the option to pay for new devices in monthly installments. When merger talks broke down between Sprint and T-Mobile in mid-2014, Sprint quickly shifted its strategy and went after market share by offering customers who switch from rivals lower prices and more data. T-Mobile responded with a similar offering of its own, and the price war started to accelerate in the industry. In December 2014, T-Mobile upped the stakes with further price cuts that would save a family of four 50% in their monthly payments compared to a similar plan from Verizon (Verizon continues to subsidize the cost of handsets; T-Mobile does not). Both AT&T and Sprint rolled out their own offers to keep pace with T-Mobile. In a sign that the price war is starting to hurt the industry, in December both AT&T and Verizon warned investors that their profits might take a hit going forward due to declining average revenues per customer and high capital expenditures.

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CASE DISCUSSION QUESTIONS

1. What are the barriers to entry into the market for wireless telecommunications?
2. What are the implications of these entry barriers for new entry?
3. What stage of development is the industry now at?
4. Why is there now a price war in the industry?
5. What, if anything, can the main players do to limit price competition?

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THE NATURE OF COMPETITIVE ADVANTAGE

Chapter 3 Internal Analysis: Resources and Competitive Advantage

Chapter 4 Competitive Advantage Through Functional-Level Strategies



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CHAPTER

3

INTERNAL ANALYSIS: RESOURCES AND COMPETITIVE ADVANTAGE

LEARNING OBJECTIVES

- 3.1 Discuss the source of competitive advantage
- 3.2 Utilize the VRIO model to assess the quality of resources
- 3.3 Understand the link between competitive advantage and profitability
- 3.4 Explain the concept of the value chain
- 3.5 Identify and explore the role of efficiency, quality, innovation, and customer responsiveness in building and maintaining a competitive advantage

OPENING CASE

Competitive Advantage at Nordstrom

Nordstrom is one of American's most successful fashion retailers. John Nordstrom, a Swedish immigrant, established the company in 1901 with a single shoe store in Seattle. From the start, Nordstrom's approach to business was to provide exceptional customer service, selection, quality, and value. This approach remains Nordstrom's hallmark today.

The modern Nordstrom is a fashion specialty chain with 365 stores in 40 states. Nordstrom generated almost \$15 billion in sales in 2017 and makes consistently higher-than-average returns on invested capital. Its return on invested capital (ROIC) has consistently been in the mid-teens and was 13.5% in 2017—strong performance for a retailer. The company



AP Images/Elaine Thompson

has outperformed its rivals in the department store business, growing revenues at 3% per annum between 2013 and 2017, compared to 1% comparable sales growth at Macy's and a 1% annual decline at Kohl's.

Nordstrom is a niche company. It focuses on a relatively affluent customer base that is looking for affordable luxury. The stores, located in upscale areas, have expensive fittings and fixtures that convey an impression of luxury. The stores invite browsing. Touches such as live music played on a grand piano help create an appealing atmosphere. The merchandise is fashionable and of high quality. What truly differentiates Nordstrom from many of its rivals, however, is its legendary excellence in customer service.

Nordstrom's salespeople are typically well groomed and dressed, polite and helpful, and known for their attention to detail. They are selected for their ability to interact with customers in a positive way. During the interview process for new employees, one of the most important questions asked of candidates is their definition of good customer service. Thank-you cards, home deliveries, personal appointments, and access to personal shoppers are the norm at Nordstrom. There is a no-questions-asked returns policy, with no receipt required. Nordstrom's philosophy is that the customer is always right. The company's salespeople are well compensated, with good benefits and commissions on sales that range from 6.75% to 10% depending on the department. Top salespeople at Nordstrom have the ability to earn over \$100,000 a year, mostly in commissions.

The customer service ethos is central to the culture and organization of Nordstrom. The organization chart is an inverted pyramid, with salespeople on the top and executive management at the bottom. According to copresident Blake Nordstrom, this is because "I work for them. My job is to make them as successful as possible." Management constantly shares anecdotes emphasizing the primacy of customer service at Nordstrom in order to reinforce the culture. One story relates that when a customer in Fairbanks, Alaska, wanted to return two tires (which Nordstrom does not sell), bought some time ago from another store once on the same site, a sales clerk looked up their price and gave him his money back!

Despite its emphasis on quality and luxury, Nordstrom has not neglected operating efficiency. Sales per square foot are around \$400 despite the large, open-plan nature of the stores, and inventory turns exceed 5 times per year, up from 3.5 times a decade ago. These are good figures for a high-end department store (by comparison inventory turns at Macy's and Kohl's are around 3 times per year). Management constantly seeks ways to improve efficiency and customer service. For example, recently it has put mobile checkout devices into the hands of 5,000 salespeople, eliminating the need for customers to wait in a checkout line. E-Commerce sales have also been growing at a rapid clip, and now stand at 30% of the total, up from 14% in 2012, as Nordstrom leverages its brand to boost online sales. The physical stores play an important role in online sales, acting as a display site for items that can be ordered online, a pickup location for customers, and perhaps most importantly, a location where customers can return merchandise purchased online.

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3-1 OVERVIEW

Why, within a particular industry or market, do some companies outperform others? What is the basis of their sustained competitive advantage? The Opening Case provides some clues. For decades, Nordstrom has outperformed its rivals in the U.S. department store business, primarily because of its excellence in customer service. Nordstrom is *responsive to the needs of its customers*, and is *efficient* in the way it manages its operations, even though it offers a premium retail experience, generating relatively high sales per square foot and good inventory turnover numbers. As you will see in this chapter, responding to customer needs by offering them more *value* and doing so efficiently, are common themes seen in many enterprises that have established a sustainable competitive advantage over their rivals.

This chapter focuses on internal analysis, which is concerned with identifying the strengths and weaknesses of a company. At Nordstrom, for example, its customer service culture is clearly a major strength. Internal analysis, coupled with an analysis of the company's external environment, gives managers the information they need to choose the strategy that will enable their company to attain a sustained competitive advantage.

As explained in this chapter, internal analysis is a three-step process. First, managers must understand the role of rare, valuable, and hard-to-imitate resources in the establishment of competitive advantage. Second, they must appreciate how such resources lead to superior efficiency, innovation, quality, and customer responsiveness. Third, they must be able to analyze the sources of their company's competitive advantage to identify what drives the profitability of their enterprise, and just as importantly, where opportunities for improvement might lie. In other words, they must be able to identify how the strengths of the enterprise boost its profitability and how its weaknesses result in lower profitability.

After reading this chapter, you will understand the nature of competitive advantage and why managers need to perform internal analysis (just as they must conduct industry analysis) in order to achieve superior performance and profitability.

3-2 COMPETITIVE ADVANTAGE

A company has a *competitive advantage* over its rivals when its profitability is greater than the average profitability of all companies in its industry. It has a *sustained competitive advantage* when it is able to maintain above-average profitability over a number of years (as Nordstrom has done in the department store business). The primary objective of strategy is to achieve a sustained competitive advantage, which in turn results in superior profitability and profit growth. What are the sources of competitive advantage, and what is the link between strategy, competitive advantage, and profitability?

distinctive competencies

Firm-specific strengths that allow a company to differentiate its products and/or achieve substantially lower costs to achieve a competitive advantage.

3-2a Distinctive Competencies

It has long been argued that competitive advantage is based upon the possession of distinctive competencies. **Distinctive competencies** are firm-specific strengths that

allow a company to differentiate its products from those offered by rivals and/or achieve substantially lower costs than its rivals. Apple, for example, has a distinctive competence in design. Customers want to own the beautiful devices that Apple markets. Similarly, it can be argued that Toyota, which historically has been the standout performer in the automobile industry, has distinctive competencies in the development and operation of manufacturing processes. Toyota pioneered an entire range of manufacturing techniques such as just-in-time inventory systems, self-managing teams, and reduced setup times for complex equipment. These competencies, collectively known as the “Toyota lean production system,” helped the company attain superior efficiency and product quality as the basis of its competitive advantage in the global automobile industry.¹

3-2b Resources

Distinctive competencies also can be rooted in one or more of a company’s resources.² **Resources** refer to the factors of production that a company uses to transform inputs into outputs that it can sell in the marketplace. Resources include basic factors of production such as labor, land, management, physical plant, and equipment.

However, any enterprise is more than just a combination of the basic factors of production. Another important factor of production is **process knowledge** about how to develop, produce, and sell a company’s output. Process knowledge can be thought of as the organizational equivalent of human skills. Process knowledge resides in the rules, routines, and procedures of an organization; that is, in the style or manner in which managers make decisions and utilize the company’s internal processes to achieve organizational objectives.³ Process knowledge is accumulated by the organization over time and through experience. Organizations, like people, learn by doing, often through trial and error. Process knowledge is often **socially complex**, which means that it diffused among many different individuals, teams, departments, and functions within the company, no one of which possesses all of the knowledge required to develop, produce, and sell its products. Process knowledge also often has an important **tacit** component, meaning that some of it is not documented or codified, but instead is learned by doing and is transmitted to new employees through the culture of the organization.⁴

The organizational architecture of a company is another very important factor of production. By **organizational architecture** we mean the combination of the organizational structure of a company, its control systems, its incentive systems, its organizational culture, and the human capital strategy of the enterprise, particularly with regard to its hiring and employee development and retention strategies. We will explore the concept of organizational architecture in depth in Chapter 12. For now, it is important to understand that companies with well-designed organizational architecture generally outperform those with poorly designed organizational architecture. Getting the organizational structure, control systems, incentives, culture, and human capital strategy of a company right is extremely important. Differences in the efficacy of organizational architecture are a major reason for performance differentials across companies.

The codified **intellectual property** that a company has created over time represents another important factor of production. Intellectual property takes many forms, such as engineering blueprints, the molecular structure of a new drug, proprietary software code, and brand logos. Companies establish ownership rights over their intellectual

resources

Assets of a company.

process knowledge

Knowledge of the internal rules, routines, and procedures of an organization that managers can leverage to achieve organizational objectives.

socially complex

Something that is characterized by, or is the outcome of, the interaction of multiple individuals.

tacit

A characteristic of knowledge or skills such that they cannot be documented or codified but may be understood through experience or intuition.

organizational architecture

The combination of the organizational structure of a company, its control systems, its incentive systems, its organizational culture, and its human-capital strategy.

intellectual property

Knowledge, research, and information that is owned by an individual or organization.

property through patents, copyright, and trademarks. For example, Apple has built a powerful brand based on its reputation for high-quality, elegantly designed computing devices. The Apple logo displayed on its hardware products symbolizes that brand. That logo is Apple's intellectual property. It assures the consumer that this is a genuine Apple product. It is protected from imitation by trademark law.

In sum, a company's resources include not just *basic* factors of production such as land, labor, managers, property, and equipment. They also include more *advanced* factors of production such as process knowledge, organizational architecture, and intellectual property. For example, Coca-Cola has been very successful over a prolonged period in the carbonated beverage business. Coke's factors of production include not just labor, land, management, plants, and equipment, but also the *process knowledge* about how to develop, produce, and sell carbonated beverages. Coke is, in fact, a very strong marketing company—it really knows how to sell its product. Furthermore, Coke has an *organizational architecture* that enables it to manage its functional process well. Coke also has valuable *intellectual property* such as the recipes for its leading beverages (which Coke keeps secret) and its brand, which is protected from imitation by trademark law.

Similarly, Apple is more than just a combination of land, labor, management, plants, and equipment. Apple has world-class *process knowledge* when it comes to developing, producing, and selling its products. Most notably, Apple probably has the best industrial-design group in the computer business. This design group is ultimately responsible for the format, features, look, and feel of Apple's innovative products, including the iPod, iPhone, iPad, and its striking line of desktop and laptop computers. Apple also has a strong *organizational architecture* that enables it to manage the enterprise productively. In particular, the industrial-design group has a very powerful position within Apple's organizational structure. It initiates and coordinates the core product development processes. This includes ensuring that hardware engineering, software engineering, and manufacturing all work to achieve the product specifications mapped out by the design group. Apple is probably unique among computing-device companies in terms of the power and influence granted to its design group. Furthermore, Apple has created extremely valuable *intellectual property*, including the patents underlying its products and the trademark that protects the logo symbolizing the Apple brand.

Thus, as in the Coke and Apple examples, the resources (or factors of production) of any enterprise include not just **basic factors of production** but also **advanced factors of production**. The important point to understand is that advanced factors of production are not endowments; they are human creations. Skilled managers can and do create these advanced factors of production, often out of little more than thin air, vision, and drive. Apple founder and longtime CEO Steve Jobs, in combination with his handpicked head of industrial design, Jonny Ive, created the process knowledge that underlies Apple's world-class skills in industrial design, and he built an organizational structure that gave the design group a powerful central role.

To summarize: An expanded list of resources includes labor, land, management, plants, equipment, process knowledge, organizational architecture, and intellectual property. As shown in Figure 3.1, a company is in effect a bundle of resources (factors of production) that transforms inputs (e.g., raw materials) into outputs (goods or services). The efficiency and effectiveness with which a company performs this transformation process depends critically upon the *quality* of its resources, and most significantly, upon the quality of its advanced factors of production—process knowledge,

basic factors of production

Resources such as land, labor, management, plants, and equipment.

advanced factors of production

Resources such as process knowledge, organizational architecture, and intellectual property that contribute to a company's competitive advantage.

Figure 3.1 The Firm as a Bundle of Resources

organizational architecture, and intellectual property. This insight gives rise to other, very important questions. What determines the quality of a company's resources? How do we know if its resources constitute and strength or a weaknesses?

3-2c Resource Quality: The VRIO Framework

Jay Barney and Bill Hesterly have developed a framework that represents a useful way for managers to think about the quality of resources.⁵ They refer to this framework as the **VRIO framework**, where *V* stands for value, *R* for rarity, *I* for inimitability, and *O* for organization. They encourage managers to ask themselves the following questions when performing an internal analysis:

First, are the company's resources *valuable* in the sense that they enable the enterprise to exploit opportunities and counter threats in the external environment? For example, Apple's product-design skills constitute a valuable resource that has helped the company exploit opportunities to develop new product categories in the computer-device industry with its touch screen iPhone and iPad offerings. At the same time, those skills have also enabled Apple to keep rivals at bay, thereby countering threats. More generally, resources can be judged as valuable if they (a) enable a company to create strong demand for its products, and/or (b) lower the costs of producing those products.

Second, are those resources *rare*? If they are not rare and rivals also have access to them, by definition they cannot be a source of competitive advantage. For a company to gain a competitive advantage, it must have some resource that is superior to that possessed by its rivals. It cannot be a commodity; it must be uncommon. Thus, the process knowledge that underlies Apple's design skills is rare; no other enterprise in its industry has a similar, high-quality skill set.

VRIO framework

A framework managers use to determine the quality of a company's resources, where *V* is value, *R* is rarity, *I* is inimitability, and *O* is for organization.

Third, are the valuable and rare resources of the company *inimitable*? Put differently, are they easy or hard to copy? If they are easy to copy, rivals will quickly do so, and the company's competitive advantage will erode. However, if those resources are hard to copy—if they are inimitable—the company's competitive advantage is more likely to be sustainable. Apple's design skills appear to be difficult to imitate.

Fourth, is the company *organized* and managed in a way that enables it to exploit its rare, valuable, and inimitable resources and capture the value they produce? In other words, does the firm have the broader *organizational architecture* required to make the most out of its unique strengths? Apple has been successful not just because of its design skills, but because those skills reside within an organization that is well managed and has the capability to take superbly designed products, produce them efficiently, and market and distribute them to customers. Without the correct organization and management systems, even firms with valuable, rare, inimitable resource will be at a competitive disadvantage. As noted above, we return to the question of organizing in Chapter 12.

3-2d Resources and Sustained Competitive Advantage

This discussion leads logically to another very important question: Which valuable resources are most likely to result in a long-term, *sustainable* competitive advantage? The quick answer is process knowledge, organizational architecture, and intellectual property. As we shall argue below, these resources or advanced factors of production are more likely to be rare and are in general more difficult for rivals to imitate.

Rare Resource Consider the issue of rareness or scarcity with regard to basic factors of production. In general, land, labor, management, plants, and equipment are purchased on the open market. Of course, these resources are not homogenous; some employees are more productive than others; some land has more value; some managers have better skills. Over time, however, this becomes evident and the more productive resources will command a higher price for their services. You simply have to pay more for the best land, employees, managers, and equipment. Indeed, in a free market the price of such resources will be bid up to reflect their economic value, and the sellers of those resources, as opposed to the firm, will capture much of that value.

Now consider process knowledge and organizational architecture. These are likely to be heterogeneous. No two companies are exactly the same. Each has its own history, which impacts the way activities are organized and processes managed within the enterprise. The way in which product development is managed at Apple, for example, differs from the way it is managed at Microsoft or Samsung. Marketing at Coca-Cola might differ in subtle but important ways from marketing at Pepsi Cola. The human resource function at Nucor Steel might be organized in such a way that it raises employee productivity above the level achieved by U.S. Steel. Each organization has its own culture, its own way of doing certain things. As a result of strategic vision, systematic process-improvement efforts, trial and error, or just blind luck, some companies will develop process knowledge and organizational architecture that is of higher quality than that of their rivals. By definition, such resources will be rare, since they are a *path-dependent* consequence of the history of the company. Moreover, the firm “owns” its process knowledge and organizational architecture. It does not buy these from a provider, so it is in a position to capture the full economic value of these resources.

Intellectual property that is protected by patents, copyright, or trademarks is also by definition rare. You can only patent something that no-one else has patented. A copyright protects the *unique* creation of an individual, or a company, and prevents anyone from copying it. The software code underlying Microsoft Windows, for example, is copyrighted, so no one else can use the same code without express permission from Microsoft. Similarly, a trademark protects the *unique* symbols, names, or logos of a company, preventing them from being copied and in effect making them rare. Rivals cannot use the Apple logo; it is Apple's unique property—thus it is rare.

Barriers to Imitation Now let's consider the issue of inimitability. If a company develops a rare, valuable resource that enables it to create more demand, charge a higher price, and/or lower its costs, how easy will it be for rivals to copy that resource? Put differently, what are the **barriers to imitation**?⁶

Consider first intellectual property. The ability of rivals to copy a firm's intellectual property depends foremost upon the efficacy of the intellectual property regime in a nation state. In advanced nations such as the United States or the member states of the European Union, for example, where there is a well-established body of intellectual property law, direct imitation is outlawed and violators are likely to be sued for damages. This legal protection prevents most enterprises from engaging in direct copying of intellectual property. However, in developing nations with no well-established body of intellectual property law, copying may be widespread given the absence of legal sanctions. This used to be the case in China, for example, but it is becoming less common as the Chinese legal system adopts international norms with regard to patents, copyrights, and trademarks.

Even though direct copying is outlawed, it is certainly possible for companies to invent their way around their rivals' intellectual property through reverse engineering, producing a functionally similar piece of technology that works in a slightly different way to produce the same result. This seems to be a particular problem with regard to patented knowledge. Patents accord the inventor 20 years of legal protection from direct imitation, but research suggests that rivals invent their way around 60% of patent innovations within 4 years.⁷ On the other hand, trademarks are initially protected from imitation for 10 years but can be renewed every 10 years. Moreover, it is almost impossible for a rival to copy a company's trademark protected logo and brand name without violating the law. This is important, for logos and brand names are powerful symbols. As such trademarks can insulate a company's brand from direct attack by rivals, which builds something of an economic moat around companies with strong brands.

A company's rare and valuable process knowledge can be very hard for rivals to copy; the barriers to imitation are high. There are two main reasons for this. First, process knowledge is often (1) partly tacit, (2) hidden from view within the firm, and (3) socially complex. As such, it is difficult for outsiders to identify with precision the nature of a company's rare and valuable process knowledge. We refer to this problem as **causal ambiguity**.⁸ Moreover, the socially complex nature of such knowledge means that hiring individual employees away from a successful firm to gain access to its process knowledge may be futile, because each individual only has direct experience with part of the overall knowledge base.

Second, even if a rival were able to identify with precision the form of a company's valuable and rare process knowledge, it still has to implement that knowledge within its own organization. This not easy to do; it requires changing the way the imitating

barriers to imitation

Factors or characteristics that make it difficult for another individual or company to replicate something.

causal ambiguity

When the way that one thing, A, leads to an outcome (or "causes"), B, is not clearly understood.

company currently operates. Such change can be stymied by organizational inertia. We discuss organizational inertia in more detail in Chapter 12, but for now note that organizational structure, routines, and culture are notoriously hard to change. The reasons include opposition from organizational members whose power and influence will be reduced as a result of the change, and the difficulties associated with changing the culture of an organization, particularly old habits, old ways of doing things, and old ways of perceiving the world. Typically, process change takes a sustained effort over several years, during which time the company that is the target of imitation efforts may have accumulated new knowledge and moved on.

An inability to imitate valuable process knowledge seems to have been a problem in the U.S. automobile industry, where attempts by Ford and GM to imitate Toyota's lean production systems were held back for years, if not decades, by their own internal inertia. These included objections from unions to proposals to change work practices, the legacy of decades of investment in factories configured to mass production rather than lean production, and an organizational culture that resisted change that altered the balance of power and influence within the company.

Organizational architecture that is rare and valuable can also be very hard for rivals to imitate, for many of the same reasons that process knowledge is hard to imitate. Specifically, even if the would-be imitator can identify with precision the features of a successful company's value creating organizational architecture, adopting that architecture might require wholesale organizational change, which is both risky and difficult to do given internal inertia.

Implications In sum, we have demonstrated how *advanced* factors of production such as intellectual property, process knowledge, and organizational architecture are more likely to be rare, and will be harder to imitate due to high barriers to imitation, than more basic factors of production. Put differently, advanced factors of production are more likely to constitute the unique strengths of an organization. A number of implications flow from this insight.

First, it is clearly important for managers to vigorously protect their intellectual property from imitation both by establishing their intellectual property rights (e.g., by filing for patent, copyright or trademark protection), and by asserting those rights, legally challenging rivals who try to violate them. This said, it is sometimes best not to patent valuable technology but instead keep it as a trade secret, because that can make imitation more difficult. Coca-Cola, for example, has never patented the recipe underlying its core Coke brand, because filing a patent would reveal valuable information about the recipe.

Second, given that process knowledge is often an important source of sustainable competitive advantage, managers would be well advised to devote considerable attention to optimizing their processes. They might, for example, invest time and effort in process improvement methodologies such as Six Sigma (which we shall discuss in Chapter 4). Similarly, given the importance of organizational architecture, it is crucial for managers to assure that their company's organization is optimal. Thinking critically and proactively about organizational design becomes a very important task (as we discuss in Chapter 12).

Third, it is important to protect knowledge about superior processes and practices from leaking out. For example, Intel, a very efficient manufacturer of microprocessors, has developed valuable technology to improve its manufacturing processes but has chosen not to patent it. Instead, it treats the underlying knowledge as a trade secret.

Intel's reasoning is that if the technology were patented, the patent filing would make available crucial information about the technology, making imitation by rivals more likely.

Fourth, if a company has developed rare and valuable process knowledge in core functional activities of the firm, it would be unwise for the firm to outsource those activities to a third-party producer in pursuit of a perceived short-term cost saving or other transitory benefit. Some observers believed that Boeing made this mistake when it decided to outsource production for horizontal stabilizers for its 737 aircraft to Chinese subcontractors. Horizontal stabilizers are the horizontal winglets on the tail section of an aircraft. Historically, Boeing designed and built these and as a consequence it accumulated rare and valuable design and manufacturing process knowledge. In the late 1990s, Boeing outsourced production of horizontal stabilizers in exchange for the tacit promise for more orders from Chinese airlines. Although this benefitted Boeing in the short run, it gave Chinese manufacturers the chance to develop their own process knowledge, while Boeing stopped accumulating important process knowledge. Today, Chinese aircraft manufacturers are building a competitor to Boeing's 737 aircraft, and Boeing may well have helped them do that through outsource decisions that diminished the company's long-run competitive advantage.

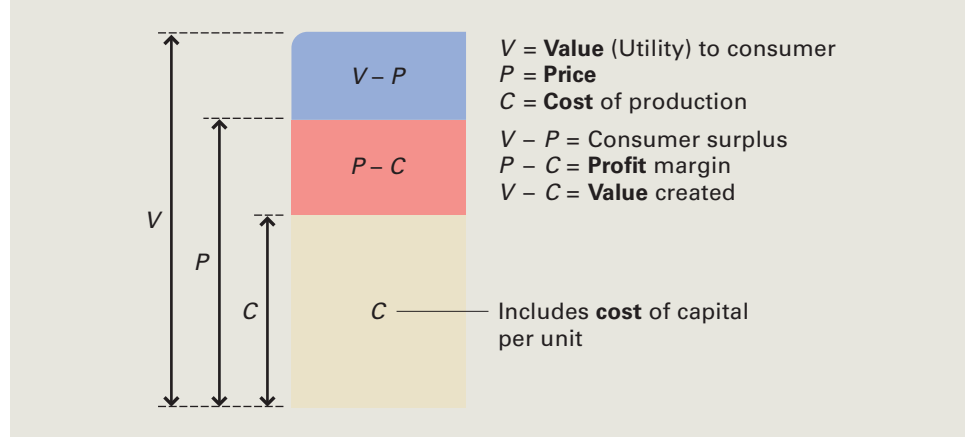
3-3 VALUE CREATION AND PROFITABILITY

We have discussed how competitive advantage based upon valuable, rare, inimitable resources that reside within a well-organized, well-managed firm constitute unique strengths that lead to a sustained competitive advantage. In this section, we take a deeper look at how such resources (strengths) translate into superior profitability.

At the most basic level, a company's profitability depends on three factors: (1) the value customers place on the company's products, (2) the price that a company charges for its products, and (3) the costs of creating those products. The value customers place on a product reflects the *utility* they derive from it, or the happiness or satisfaction gained from consuming or owning it. Value must be distinguished from price. Value is something that customers receive from a product. It is a function of the attributes of the product such as its performance, design, quality, and point-of-sale and after-sale service. For example, most customers would place a much higher value on a top-end Lexus from Toyota than on a low-end, basic economy car from Kia, precisely because they perceive Lexus to have better performance and superior design, quality, and service. A company that strengthens the value of its products in the eyes of customers enhances its brand and has more pricing options: It can raise prices to reflect that value or keep prices lower to induce more customers to purchase its products, thereby expanding unit sales volume.

Regardless of the pricing option a company chooses, that price is typically less than the value placed upon the good or service by the customer. This is because the customer captures some of that value in the form of what economists call a *consumer surplus*.

This occurs because it is normally impossible to segment the market to such a degree that the company can charge each customer a price that reflects that individual's unique assessment of the value of a product—what economists refer to as a customer's *reservation price*. In addition, because the company is competing against rivals for

Figure 3.2 Value Creation per Unit

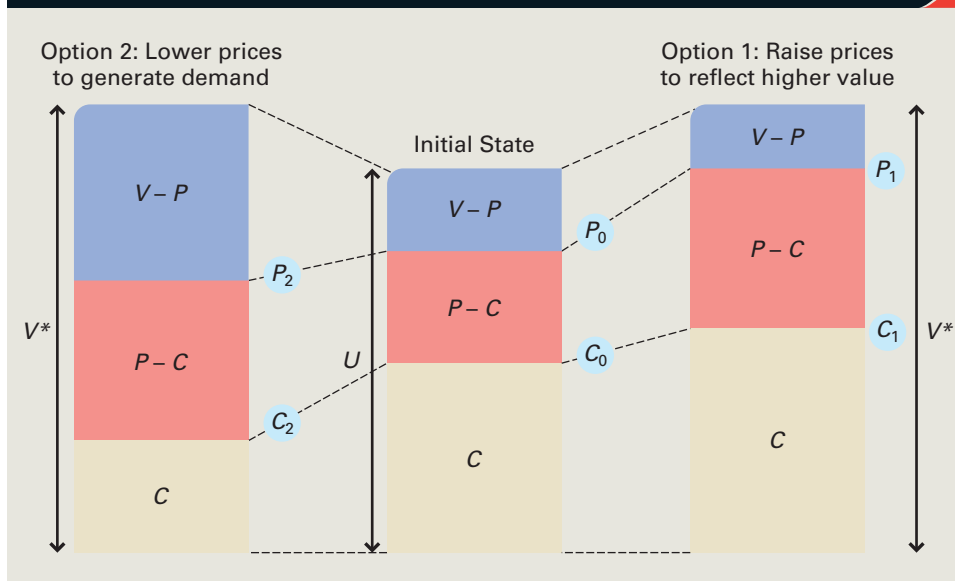
customers, it has to charge a lower price than it could were it a monopoly. For these reasons, the point-of-sale price tends to be less than the value placed on the product by many customers. Nevertheless, remember this basic principle: The more value that consumers derive from a company's goods or services, the more pricing options that company has.

These concepts are illustrated in Figure 3.2. V is the *average* value per unit of a product to a customer; P is the average price per unit that the company decides to charge for that product; and C is the average unit cost of producing that product (including actual production costs and the cost of capital investments in production systems). The company's average profit per unit is equal to $P - C$, and the consumer surplus is equal to $V - P$. In other words, $V - P$ is a measure of the value the consumer captures, and $P - C$ is a measure of the value the company captures. The company makes a profit so long as P is more than C , and its profitability will be greater the lower C is relative to P . Bear in mind that the difference between V and P is in part determined by the intensity of competitive pressure in the marketplace; the lower the competitive pressure's intensity, the higher the price that can be charged relative to V , but the difference between V and P is also determined by the company's pricing choice.⁹

As we shall see, a company may choose to keep prices low relative to volume because lower prices enable the company to sell more products, attain scale economies, and boost its profit margin by lowering C relative to P .

Also, note that the *value created by a company* is measured by the difference between the value or utility a consumer gets from the product (V) and the costs of production (C), that is, $V - C$. A company creates value by converting inputs that cost C into a good or service from which customers derive a value of V . A company can create more value for its customers by lowering C or making the product more attractive through superior design, performance, quality, service, and other factors. When customers assign a greater value to the product (V increases), they are willing to pay a higher price (P increases). This discussion suggests that a company has a competitive advantage and high profitability when it creates more value for its customers than rivals.¹⁰

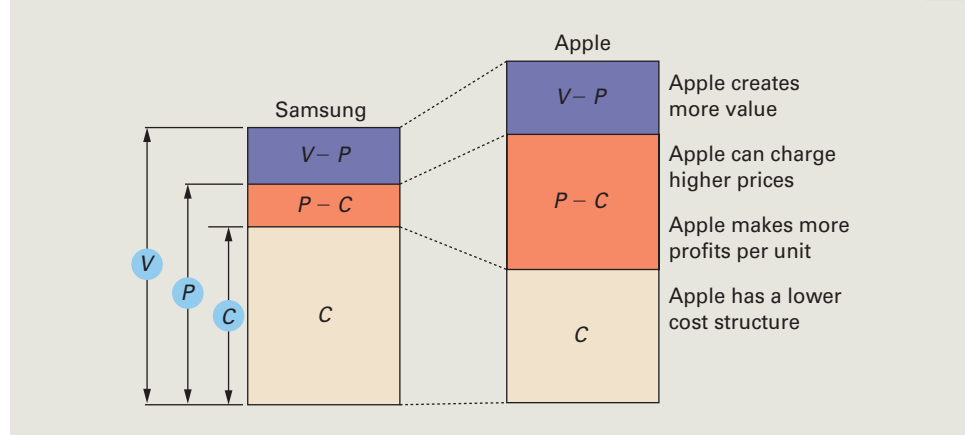
The company's pricing options are captured in Figure 3.3. Suppose a company's current pricing option is the one pictured in the middle column of Figure 3.3. Imagine

Figure 3.3 Value Creation and Pricing Options

that the company decides to pursue strategies to increase the utility of its product offering from V to V^* in order to boost its profitability. Increasing value initially raises production costs because the company must spend money in order to increase product performance, quality, service, and other factors. Now there are two different pricing options that the company can pursue. Option 1 is to raise prices to reflect the higher value: the company raises prices more than its costs increase, and profit per unit ($P - C$) increases. Option 2 involves a very different set of choices: The company lowers prices in order to expand unit volume. Generally, customers recognize that they are getting a great bargain because the price is now much lower than the value (the consumer surplus has increased), so they rush out to buy more (demand has increased). As unit volume expands due to increased demand, the company is able to realize scale economies and reduce its average unit costs. Although creating the extra value initially costs more, and although margins are initially compressed by aggressive pricing, ultimately profit margins widen because the average per-unit cost of production falls as volume increases and scale economies are attained.

Managers must understand the dynamic relationships among value, pricing, demand, and costs in order to make decisions that will maximize competitive advantage and profitability. Option 2 in Figure 3.3, for example, may not be a viable strategy if demand did not increase rapidly with lower prices, or if few economies of scale will result by increasing volume. Managers must understand how value creation and pricing decisions affect demand, as well as how unit costs change with increases in volume. In other words, they must clearly comprehend the demand for their company's product and its cost structure at different levels of output if they are to make decisions that maximize profitability.

The most beneficial position for a company occurs when it can utilize its valuable, rare, inimitable resources and capabilities to deliver a product offering that consumers value more highly than that of rivals (that is, they derive more utility from it), and

Figure 3.4 Comparing Apple and Samsung Smartphones

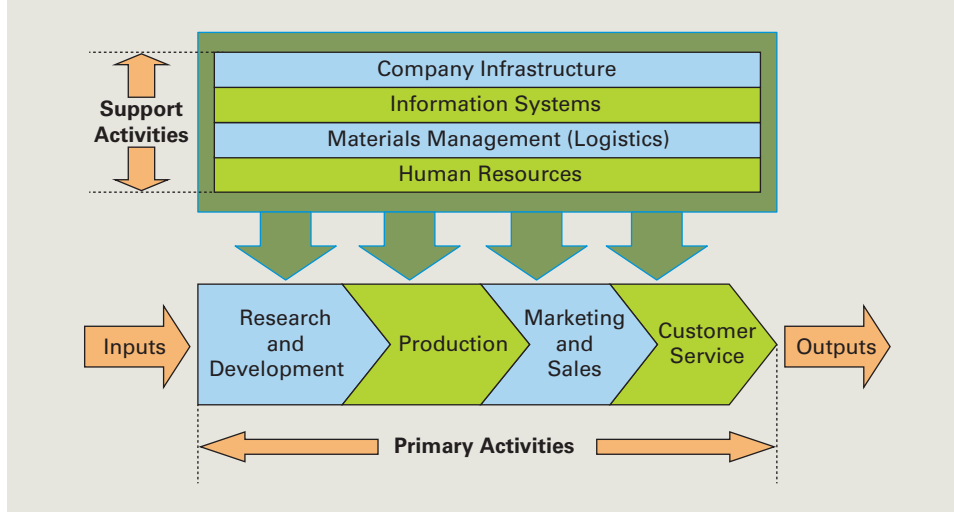
which can be produced at a lower cost than that of rivals. This is an outcome that many companies strive to achieve. Consider again the example of Apple and its successful iPhone offering. Apple creates value for consumers with the elegance of its design for the iPhone, its intuitive, easy-to-use interface, its onboard applications such as iTunes and iCloud, and the fact that Apple has encouraged a healthy ecosystem of developers to write third-party applications that run on the phone. Apple has been so successful at differentiating its product along these dimensions that it is able to charge a premium price for its iPhone relative to offerings from Samsung, HTC, and the like. At the same time, it sells so many iPhones that the company has been able to achieve enormous economies of scale in production and the purchasing of components, which has driven down the average unit cost of the iPhone. Thus, even though the iPhone makes use of expensive materials such as brushed aluminum casing and a gorilla-glass screen, Apple has been able to charge a higher price *and* has lower costs than its rivals. Hence, although Samsung sold more units than Apple in 2016, Apple was able to capture 91% of all profit in the global smartphone industry for that year. Samsung captured the remaining 9%, with no other smartphone supplier making money.

3-4 THE VALUE CHAIN

All functions of a company—production, marketing, product development, service, information systems, materials management, and human resources—have a role in lowering the cost structure and increasing the perceived value of products through differentiation. To explore this idea, consider the concept of the value chain illustrated in Figure 3.5.¹¹ The term **value chain** refers to the idea that a company is a chain of functional activities that transforms inputs into outputs. The transformation process involves both primary activities and support activities. Value is added to the product at each stage in the chain. Valuable, rare, inimitable resources can be found within one or more of a company's value-chain activities.

value chain

The concept that a company consists of a chain of activities that transforms inputs into outputs.

Figure 3.5 Primary and Support Value-Chain Activities

3-4a Primary Activities

Primary activities include the design, creation, and delivery of the product, the product's marketing, and its support and after-sales service. In the value chain illustrated in Figure 3.5, the primary activities are broken down into four functions: research and development, production, marketing and sales, and customer service.

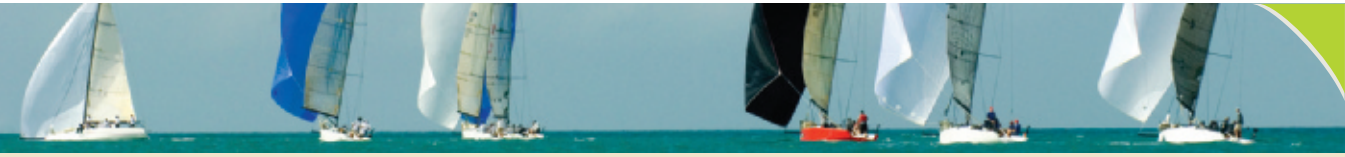
Research and Development Research and development (R&D) refers to the design of products and production processes. We may think of R&D as being associated with the design of physical products such as an iPhone or a Toyota, and/or production processes in manufacturing enterprises, service companies also undertake R&D. For example, banks compete with each other by developing new financial products and new ways of delivering those products to customers. Online banking and smart debit cards are examples of the fruits of new-product development in the banking industry. Earlier innovations in the banking industry include ATM machines, credit cards, and debit cards.

By creating superior product design, R&D can increase the functionality of products, making them more attractive to customers and thereby adding value. Alternatively, R&D may result in more efficient production processes, thereby lowering production costs. Either way, R&D can lower costs or raise a product's value, thus permitting a company to charge higher prices. At Intel, R&D creates value by developing ever-more powerful microprocessors and pioneering ever-more efficient manufacturing processes (in conjunction with equipment suppliers).

It is important to emphasize that R&D is not just about enhancing the features and functions of a product; it is also about the elegance of product design, which can create an impression of superior value in the minds of consumers. Apple's success with the iPhone is based upon the elegance and appeal of the iPhone design, which has turned an electronic device into a fashion accessory. For another example of how

primary activities

Activities related to the design, creation, and delivery of the product, its marketing, and its support and after-sales service.



3.1 STRATEGY IN ACTION

Value Creation at Burberry

When Rose Marie Bravo, the highly regarded president of Saks Fifth Avenue, announced in 1997 that she was leaving to become CEO of ailing British fashion house Burberry, people thought she was crazy. Burberry, best known as a designer of raincoats with a trademark tartan lining, had been described as an out-dated, stuffy business with a fashion cachet of almost zero. When Bravo stepped down in 2006, she was heralded in Britain and the United States as one of the world's best managers. In her tenure at Burberry, she had engineered a remarkable turnaround, leading a transformation of Burberry into what one commentator called an "achingly hip" high-end fashion brand whose famous tartan bedecks everything from raincoats and bikinis to handbags and luggage in a riot of color from pink to blue to purple. In less than a decade, Burberry had become one of the most valuable luxury fashion brands in the world.

When asked how she achieved the transformation, Bravo explained that there was hidden value in the brand, which was unleashed by constant creativity and innovation. Bravo hired world-class designers to redesign Burberry's tired fashion line and bought in

Christopher Bailey, one of the very best, to lead the design team. The marketing department worked closely with advertisers to develop hip ads that would appeal to a younger, well-heeled audience. The ads featured supermodel Kate Moss promoting the line, and Burberry hired a top fashion photographer to shoot Moss in Burberry. Burberry exercised tight control over distribution, pulling its products from stores whose image was not consistent with the Burberry brand, and expanding its own chain of Burberry stores.

Bravo also noted that "creativity doesn't just come from designers . . . ideas can come from the sales floor, the marketing department, even from accountants, believe it or not. People at whatever level they are working have a point of view and have something to say that is worth listening to." Bravo emphasized the importance of teamwork: "One of the things I think people overlook is the quality of the team. It isn't one person, and it isn't two people. It is a whole group of people—a team that works cohesively toward a goal—that makes something happen or not." She notes that her job is to build the team and then motivate the team, "keeping them on track, making sure that they are following the vision."

Sources: Quotes from S. Beatty, "Bass Talk: Plotting Plaid's Future," *The Wall Street Journal*, September 9, 2004, p. B1; C. M. Moore and G. Birtwistle, "The Burberry Business Model," *International Journal of Retail and Distribution Management* 32 (2004): 412–422; M. Dickson, "Bravo's Legacy in Transforming Burberry," *Financial Times*, October 6, 2005, p. 22.

design elegance can create value (see Strategy in Action 3.1) which discusses value creation at the fashion house Burberry.

Production Production refers to the creation of a good or service. For tangible products, this generally means manufacturing. For services such as banking or retail operations, "production" typically takes place while the service is delivered to the customer. For Nordstrom, production occurs every time a customer makes a purchase. By performing its activities efficiently, the production function of a company helps to lower its cost structure. The production function can also perform its activities in a way that is consistent with high product quality, which leads to differentiation (and higher value) and lower costs.

Marketing and Sales There are several ways in which the marketing and sales functions of a company can create value. Through brand positioning and advertising, the marketing function can increase the value that customers perceive to be contained in a company's product (and thus the utility they attribute to the product). Insofar as these help to create a favorable impression of the company's product in the minds of customers, they increase utility. For example, the French company Perrier persuaded U.S. customers that slightly carbonated, bottled water was worth \$2.50 per bottle rather than a price closer to the \$1.00 that it cost to collect, bottle, and distribute the water. Perrier's marketing function increased the perception of value that customers ascribed to the product. Similarly, by helping to rebrand the company and its product offering, the marketing department at Burberry helped create value (see Strategy in Action 3.1). Marketing and sales can also create value by discovering customer needs and communicating them back to the R&D function, which can then design products that better match those needs.

Customer Service The role of the service function of an enterprise is to provide after-sales service and support. This function can create superior utility by solving customer problems and supporting customers after they have purchased the product. For example, Caterpillar, the U.S.-based manufacturer of heavy earth-moving equipment, can ship spare parts to any location in the world within 24 hours, thereby minimizing the amount of downtime its customers face if their Caterpillar equipment malfunctions. This is an extremely valuable support capability in an industry where downtime is very expensive. The extent of customer support has helped to increase the utility that customers associate with Caterpillar products, and therefore the price that Caterpillar can charge for them.

3-4b Support Activities

The **support activities** of the value chain provide inputs that allow the primary activities to take place. These activities are broken down into four functions: materials management (or logistics), human resources, information systems, and company infrastructure (see Figure 3.5).

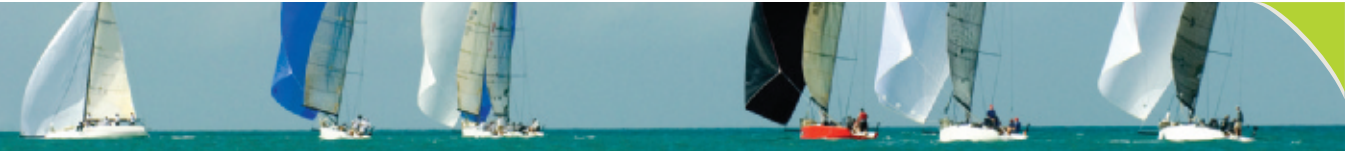
support activities

Activities of the value chain that provide inputs that allow the primary activities to take place.

Materials Management (Logistics) The materials-management (or logistics) function controls the transmission of physical materials through the value chain, from procurement through production and into distribution. The efficiency with which this is carried out can significantly lower cost, thereby generating profit. A company that has benefited from very efficient materials management, the Spanish fashion company Zara, is discussed in Strategy in Action 3.2 (see Figure 3.4).

Human Resources There are numerous ways in which the human resource function can help an enterprise create more value. This function ensures that the company has the right combination of skilled people to perform its value creation activities effectively. It is also the job of the human resource function to ensure that people are adequately trained, motivated, and compensated to perform their value creation tasks. If the human resources are functioning well, employee productivity rises (which lowers costs) and customer service improves (which raises value to consumers), thereby enabling the company to create more value. This has certainly been the case at Southwest Airlines, and it helps to explain the persistently low cost structure and high reliability of that company (see the Opening Case).

Information Systems Information systems are, primarily, the digital systems for managing inventory, tracking sales, pricing products, selling products, dealing with customer service inquiries, and so on. Modern information systems, coupled with the communications features of the Internet, have enabled many enterprises to significantly improve the efficiency and effectiveness with which they manage their other value creation activities. World-class information systems are an aspect of Zara's competitive advantage (see Strategy in Action 3.2).



3.2 STRATEGY IN ACTION

Competitive Advantage at Zara

Fashion retailer Zara is one of Spain's fastest-growing and most successful companies, with sales of some \$10 billion and a network of 6,500 stores in 88 countries. Zara's competitive advantage centers around one thing: speed. Whereas it takes most fashion houses 6 to 9 months to go from design to delivering merchandise to a store, Zara can complete the entire process in just 5 weeks. This competitive advantage enables Zara to quickly respond to changing fashion trends.

Zara achieves this by breaking many of the rules of operation in the fashion business. Whereas most fashion houses outsource production, Zara has its own factories and keeps approximately half of its production in-house. Zara also has its own designers and its own stores. Its designers, who are in constant contact with the stores, track what is selling on a real-time basis through information systems and talk to store managers weekly to get their impressions of what is "hot." This information supplements data gathered from other sources such as fashion shows.

Drawing on this information, Zara's designers create approximately 40,000 new designs a year, 10,000 of which are selected for production. Zara then purchases basic textiles from global suppliers, but performs capital-intensive production activities in its own factories. These factories use computer-controlled machinery to cut pieces for garments. Zara does not

produce in large volumes to attain economies of scale; instead, it produces in small lots. Labor-intensive activities such as sewing are performed by subcontractors located close to Zara's factories. Zara makes a practice of retaining more production capacity than necessary, so that when a new fashion trend emerges it can quickly respond by designing garments and ramping up production.

Completed garments are delivered to one of Zara's own warehouses, and then shipped to its own stores once a week. Zara deliberately underproduces products, supplying small batches of products in hot demand before quickly shifting to the next fashion trend. Often, its merchandise sells out quickly. The empty shelves in Zara stores create a scarcity value—which helps to generate demand. Customers quickly snap up products they like because they know these styles may soon be out of stock and never produced again.

As a result of this strategy, which is supported by competencies in design, information systems, and logistics management, Zara carries less inventory than its competitors (Zara's inventory equals about 10% of sales, compared to 15% at rival stores such as The Gap and Benetton). This means fewer price reductions to move products that haven't sold, and higher profit margins.

Sources: "Shining Examples," *The Economist: A Survey of Logistics*, June 17, 2006, pp. 4–6; K. Capell et al., "Fashion Conquistador," *Business Week*, September 4, 2006, pp. 38–39; K. Ferdows et al., "Rapid Fire Fulfillment," *Harvard Business Review* 82 (November 2004): 101–107; "Inditex is a leader in the fast fashion industry," *Morningstar*, December 15, 2009; "Pull based centralized manufacturing yields cost efficiencies for Zara," *Morningstar*, June 19, 2014.

Company Infrastructure Company infrastructure is the companywide context within which all the other value creation activities take place. This includes organizational structure, control systems, incentive systems, and organizational culture—what we refer to as the organizational architecture of a company. The company infrastructure also includes corporate-level legal, accounting, and finance functions. Because top management can exert considerable influence upon shaping all of these aspects of a company, top management should also be viewed as part of the infrastructure. Indeed, through strong leadership, top management can shape the infrastructure of a company and, through that, the performance of all other value creation activities that take place within it. A good example of this process is given in Strategy in Action 3.1, which looks at how Rose Marie Bravo helped to engineer a turnaround at Burberry.

3-4c Value-Chain Analysis: Implications

The concept of the value chain is useful because, when performing an internal analysis, managers can look at the different value-chain activities of the firm, identifying which activities result in the creation of the most value and which are not performing as well as they might be. In other words, value-chain analysis is a useful tool that helps managers identify the company's strengths and weaknesses. Furthermore, it helps managers pinpoint where valuable, rare, and inimitable resources reside within the company.

If managers are to perform a rigorous value-chain analysis, they need to do several things. First, they must analyze how efficiently and effectively each activity is being performed. This should go beyond a qualitative assessment to include an in-depth analysis of quantitative data. For example, the efficiency of the materials-management function might be measured by inventory turnover; the effectiveness of the customer service function might be measured by the speed with which customer complaints are satisfactorily resolved; and ability of the enterprise to deliver reliable products might be measured by customer returns and warranty costs. Managers need to identify those quantitative measures that are important for their business, collect data on them, and assess how well the firm is performing.

Second, as an aid to this process, whenever possible managers should benchmark each activity against a similar activity performed by rivals to see how well the company is doing. **Benchmarking** requires a company to measure how well it is performing against other enterprises using strategically relevant data. An airline, for example, can benchmark its activities against rivals by using publically available data that covers important aspects of airline performance such as departure and arrival delays, revenue per seat mile, and cost per seat mile. Government agencies, industry associations, or third-party providers may collect such data. The Department of Transportation and the Air Transport Industry Association collect a wealth of valuable information on the airline industry. Similarly, the market research company J.D. Power provides important information on product quality and customer satisfaction for companies operating in a number of industries, including automobiles and wireless telecommunications. With regard to web-based businesses, comScore.com collects a trove of valuable information on web traffic, search-engine performance, advertising conversions, and so on.

Third, in addition to benchmarking performance against rivals, it can be valuable to benchmark performance against best-in-class companies in other industries. For example, Apple is known for excellent customer services in its stores (through the Genius Bar). Comcast has a reputation for poor customer service. Thus, managers at Comcast

benchmarking

Measuring how well a company is doing by comparing it to another company, or to itself, over time.

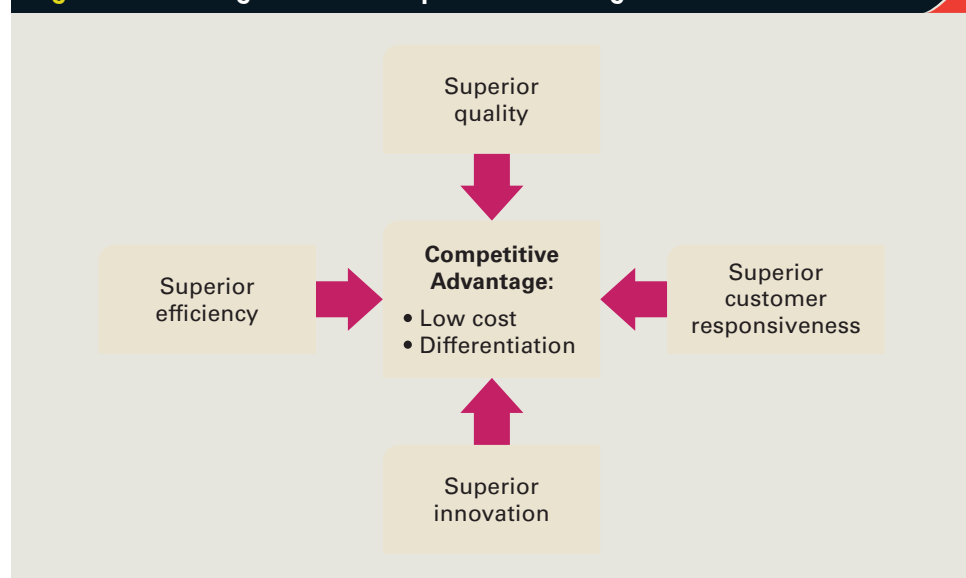
might want to benchmark their customer service activities against Apple. Although Apple and Comcast are very different organizations, the comparison might yield useful insights that could help Comcast improve its performance.

Fourth, there are a number of process improvement methodologies that managers can and should use to analyze how well value creation activities are performing, and to identify opportunities for improving the efficiency and effectiveness of those activities. One of the most famous process improvement tools, *Six Sigma*, is discussed in more detail in Chapter 4. Finally, whenever there is potential for improvement within a value-chain activity, leaders within the company need to (a) empower managers to take the necessary actions, (b) measure performance improvements over time against goals, (c) reward managers for meeting or exceeding improvement goals, and (d) when goals are not met, analyze why this is so and take corrective action if necessary.

3-5 THE BUILDING BLOCKS OF COMPETITIVE ADVANTAGE

Four factors help a company build and sustain competitive advantage: superior efficiency, quality, innovation, and customer responsiveness. We call these factors the building blocks of competitive advantage. Each factor is the *result* of the way the various value-chain activities within an enterprise are performed. By performing value-chain activities to achieve superior efficiency, quality, innovation, and customer responsiveness, a company can (1) differentiate its product offering, and hence offer more value to its customers, and (2) lower its cost structure (see Figure 3.6). Although each factor is discussed sequentially below, all are highly interrelated, and the

Figure 3.6 Building Blocks of Competitive Advantage



important ways in which these building blocks affect each other should be noted. For example, superior quality can lead to superior efficiency, and innovation can enhance efficiency, quality, and responsiveness to customers.

3-5a Efficiency

The simplest measure of efficiency is the quantity of inputs required to produce a given output; that is, $\text{efficiency} = \text{outputs/inputs}$. The more efficient a company is, the fewer inputs it requires to produce a particular output, and the lower its costs.

One common measure of efficiency is employee productivity. **Employee productivity** refers to the output produced per employee. For example, if it takes General Motors 30 hours of employee time to assemble a car, and it takes Ford 25 hours, we can say that Ford has higher employee productivity than GM and is more efficient. As long as other factors such as wage rates are equal, we can assume from this information that Ford will have a lower cost structure than GM. Thus, employee productivity helps a company attain a competitive advantage through a lower cost structure.

employee productivity

The output produced per employee.

Another important measure of efficiency is capital productivity. **Capital productivity** refers to the output produced by a dollar of capital invested in the business. Firms that use their capital very efficiently and don't waste it on unproductive assets or activities will have higher capital productivity. For example, a firm that adopts just-in-time inventory systems to reduce both its inventory and its need for warehouse facilities will use less working capital (have less capital tied up in inventory) and less fixed capital (have less capital tied up in warehouses). Consequently, its capital productivity will increase.

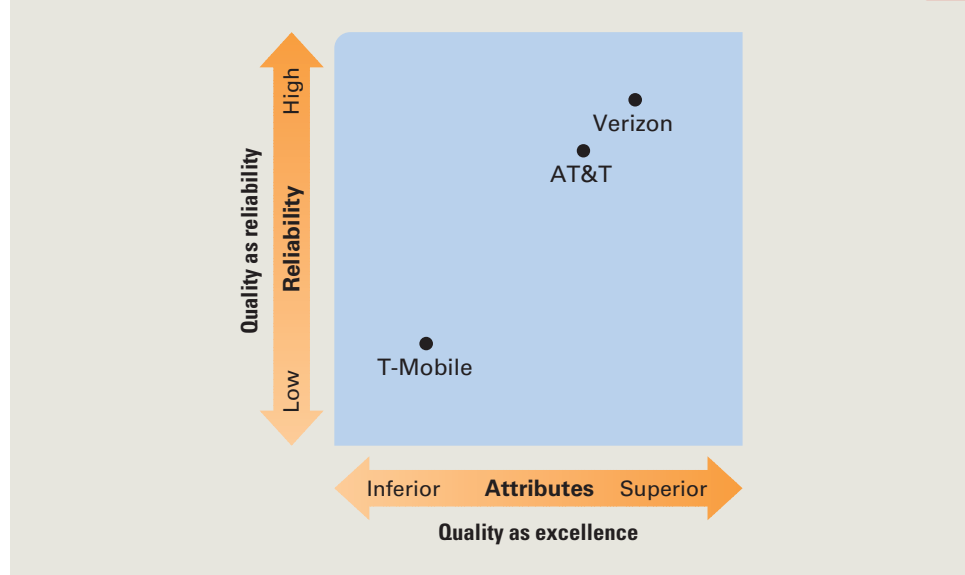
capital productivity

The sales produced by a dollar of capital invested in the business.

3-5b Quality as Excellence and Reliability

A product can be thought of as a bundle of attributes.¹² The attributes of many physical products include their form, features, performance, durability, reliability, style, and design.¹³ A product is said to have *superior quality* when customers perceive that its attributes provide them with higher utility than the attributes of products sold by rivals. For example, a Rolex watch has attributes such as design, styling, performance, and reliability that customers perceive as being superior to the same attributes in many other watches. Thus, we can refer to a Rolex as a high-quality product: Rolex has differentiated its watches by these attributes.

When customers evaluate the quality of a product, they commonly measure it against two kinds of attributes: those related to *quality as excellence* and those related to *quality as reliability*. From a quality-as-excellence perspective, the important attributes are a product's design and styling, its aesthetic appeal, its features and functions, the level of service associated with delivery of the product, and so on. For example, customers can purchase a pair of imitation-leather boots for \$20 from Wal-Mart, or they can buy a handmade pair of butter-soft, leather boots from Nordstrom for \$500. The boots from Nordstrom will have far superior styling, feel more comfortable, and look much better than those from Wal-Mart. The value consumers get from the Nordstrom boots will in all probability be much greater than the value derived from the Wal-Mart boots, but of course they will have to pay far more for them. That is the point: When excellence is built into a product offering, consumers must pay more to own or consume it.

Figure 3.7 A Quality Map for Wireless Service

With regard to quality as reliability, a product can be said to be reliable when it consistently performs the function it was designed for, performs it well, and rarely, if ever, breaks down. As with excellence, reliability increases the value (utility) a consumer derives from a product, and thus affects the price the company can charge for that product and/or the demand for that product.

The position of a product against two dimensions, reliability and other attributes, can be plotted, as shown in Figure 3.7. For example, Verizon has the most reliable network in the wireless service industry as measured by factors such as coverage, number of dropped calls, dead zones, and so on. Verizon also has the best ratings when it comes to excellence, as measured by download speeds, customer care, and the like. According to J.D. Power surveys, Sprint has the worst position in the industry as measured by reliability and excellence.

The concept of quality applies whether we are talking about Toyota automobiles, clothes designed and sold by Zara, Verizon's wireless service, the customer service department of Citibank, or the ability of airlines to arrive on time. Quality is just as relevant to services as it is to goods.¹⁴

The impact of high product quality on competitive advantage is twofold.¹⁵ First, providing high-quality products increases the value (utility) those products provide to customers, which gives the company the option of charging a higher price for the products. In the automobile industry, for example, Toyota has historically been able to charge a higher price for its cars because of the higher quality of its products.

Second, greater efficiency and lower unit costs associated with reliable products of high quality impact competitive advantage. When products are reliable, less employee time is wasted making defective products, or providing substandard services, and less time has to be spent fixing mistakes—which means higher employee productivity and lower unit costs. Thus, high product quality not only enables a company to differentiate its product from that of rivals, but, if the product is reliable, it also lowers costs.

The importance of reliability in building competitive advantage has increased dramatically over the past 30 years. The emphasis many companies place on reliability is so crucial to achieving high product reliability that it can no longer be viewed as just one way of gaining a competitive advantage. In many industries, it has become an absolute imperative for a company's survival.

3-5c Innovation

There are two main types of innovation: product innovation and process innovation. **Product innovation** is the development of products that are new to the world or have superior attributes to existing products. Examples are Intel's invention of the microprocessor in the early 1970s, Cisco's development of the router for routing data over the Internet in the mid-1980s, and Apple's development of the iPod, iPhone, and iPad in the 2000s. **Process innovation** is the development of a new process for producing and delivering products to customers. Examples include Toyota, which developed a range of new techniques collectively known as the "Toyota lean production system" for making automobiles: just-in-time inventory systems, self-managing teams, and reduced setup times for complex equipment.

Product innovation generates value by creating new products, or enhanced versions of existing products, that customers perceive as having more value, thus increasing the company's pricing options. Process innovation often allows a company to create more value by lowering production costs. Toyota's lean production system helped boost employee productivity, thus giving Toyota a cost-based competitive advantage.¹⁶ Similarly, Staples dramatically lowered the cost of selling office supplies by applying the supermarket business model to retail office supplies. Staples passed on some of this cost savings to customers in the form of lower prices, which enabled the company to increase its market share rapidly.

In the long run, innovation of products and processes is perhaps the most important building block of competitive advantage.¹⁷ Competition can be viewed as a process driven by innovations. Although not all innovations succeed, those that do can be a major source of competitive advantage because, by definition, they give a company something unique that its competitors lack (at least until they imitate the innovation). Uniqueness can allow a company to differentiate itself from its rivals and charge a premium price for its product, or, in the case of many process innovations, reduce its unit costs far below those of competitors.

product innovation

Development of products that are new to the world or have superior attributes to existing products.

process innovation

Development of a new process for producing and delivering products to customers.

3-5d Customer Responsiveness

To achieve superior responsiveness to customers, a company must be able to do a better job than competitors of identifying and satisfying its customers' needs. Customers will then attribute more value to its products, creating a competitive advantage based on differentiation. Improving the quality of a company's product offering is consistent with achieving responsiveness, as is developing new products with features that existing products lack. In other words, achieving superior quality and innovation is integral to achieving superior responsiveness to customers.

Another factor that stands out in any discussion of responsiveness to customers is the need to customize goods and services to the unique demands of individuals or groups. For example, the proliferation of soft drinks and beers can be viewed partly

customer response time

Time that it takes for a good to be delivered or a service to be performed.

as a response to this trend. An aspect of responsiveness to customers that has drawn increasing attention is **customer response time**: the time that it takes for a good to be delivered or a service to be performed.¹⁸ For a manufacturer of machinery, response time is the time it takes to fill customer orders. For a bank, it is the time it takes to process a loan, or the time that a customer must stand in line to wait for a free teller. For a supermarket, it is the time that customers must stand in checkout lines. For a fashion retailer, it is the time required to take a new product from design inception to placement in a retail store (see Strategy in Action 3.2 for a discussion of how the Spanish fashion retailer Zara minimizes this). Customer survey after customer survey has shown slow response time to be a major source of customer dissatisfaction.¹⁹

Other sources of enhanced responsiveness to customers are superior design, superior service, and superior after-sales service and support. All of these factors enhance responsiveness to customers and allow a company to differentiate itself from its less responsive competitors. In turn, differentiation enables a company to build brand loyalty and charge a premium price for its products. Consider how much more people are prepared to pay for next-day delivery of Express Mail, compared to delivery in 3 to 4 days. In 2018, a two-page letter sent by overnight Express Mail within the United States cost about \$10, compared to \$0.50 for regular mail. Thus, the price premium for express delivery (reduced response time) was \$9.50, or a premium of 1900% over the regular price.

3-6 ANALYZING COMPETITIVE ADVANTAGE AND PROFITABILITY

To perform a solid internal analysis and dig into how well different value-chain activities are performed, managers must be able to analyze the financial performance of their company, identifying how its strategies contribute (or not) to profitability. To identify strengths and weaknesses effectively, they must be able to compare, or benchmark, the performance of their company against competitors, as well as against the historic performance of the company itself. This will help them determine whether they are more or less profitable than competitors and whether the performance of the company has been improving or deteriorating through time; whether their company strategies are maximizing the value being created; whether their cost structure is out of alignment compared to competitors; and whether they are using the company resources to the greatest effect.

As we noted in Chapter 1, the key measure of a company's financial performance is its profitability, which captures the return that a company is generating on its investments. Although several different measures of profitability exist, such as return on assets and return on equity, many authorities on the measurement of profitability argue that return on invested capital (ROIC) is the best measure because “it focuses on the true operating performance of the company.”²⁰ (However, return on assets is very similar in formulation to return on invested capital.)

ROIC is defined as net profit over invested capital, or $ROIC = \text{net profit} / \text{invested capital}$. Net profit is calculated by subtracting the total costs of operating the company from its total revenues (total revenues – total costs). *Net profit* is what is left over after the government takes its share in taxes. *Invested capital* is the amount that is invested in the operations of a company: property, plants, equipment, inventories, and

other assets. Invested capital comes from two main sources: interest-bearing debt and shareholders' equity. *Interest-bearing debt* is money the company borrows from banks and those who purchase its bonds. *Shareholders' equity* is money raised from selling shares to the public, plus earnings that the company has retained in prior years (and that are available to fund current investments). ROIC measures the effectiveness with which a company is using the capital funds that it has available for investment. As such, it is recognized to be an excellent measure of the value a company is creating.²¹

A company's ROIC can be algebraically divided into two major components: return on sales and capital turnover.²² Specifically:

$$\begin{aligned}\text{ROIC} &= \text{net profits/invested capital} \\ &= \text{net profits/revenues} \times \text{revenues/invested capital}\end{aligned}$$

where net profits/revenues is the return on sales, and revenues/invested capital is capital turnover. Return on sales measures how effectively the company converts revenues into profits. Capital turnover measures how effectively the company employs its invested capital to generate revenues. These two ratios can be further divided into some basic accounting ratios, as shown in Figure 3.8 and defined in Table 3.1.²³

Figure 3.8 notes that a company's managers can increase ROIC by pursuing strategies that increase the company's return on sales. To increase the company's return on sales, they can pursue strategies that reduce the cost of goods sold (COGS) for a given level of sales revenues (COGS/sales); reduce the level of spending on sales force, marketing, general, and administrative expenses (SG&A) for a given level of sales revenues (SG&A/sales); and reduce R&D spending for a given level of sales revenues (R&D/sales). Alternatively, they can increase return on sales by pursuing strategies that increase sales revenues more than they increase the costs of the business as measured by COGS, SG&A, and R&D expenses. That is, they can increase the return on sales by pursuing strategies that lower costs or increase value through differentiation, and thus allow the company to increase its prices more than its costs.

Figure 3.8 also tells us that a company's managers can boost the profitability of their company by obtaining greater sales revenues from their invested capital, thereby

Figure 3.8 Drivers of Profitability (ROIC)

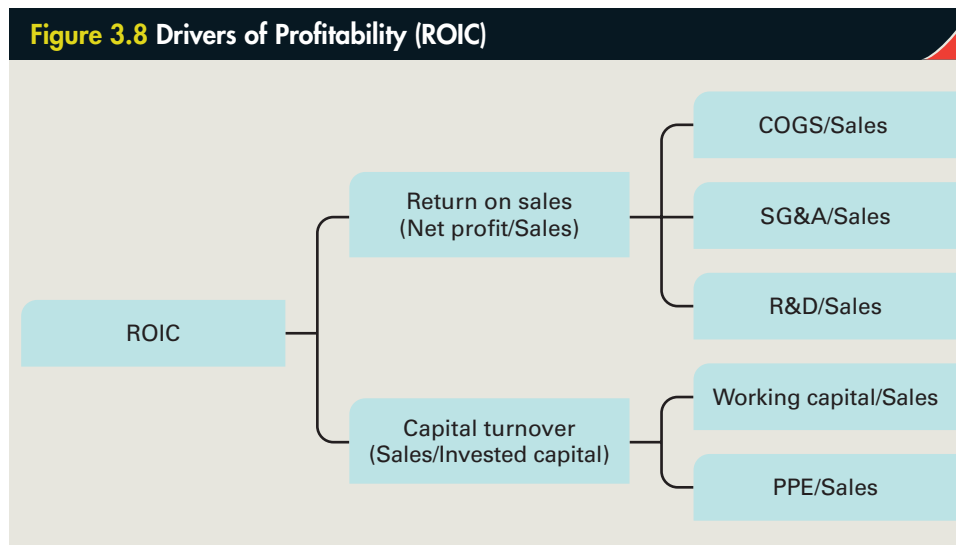


Table 3.1 Definitions of Basic Accounting Terms

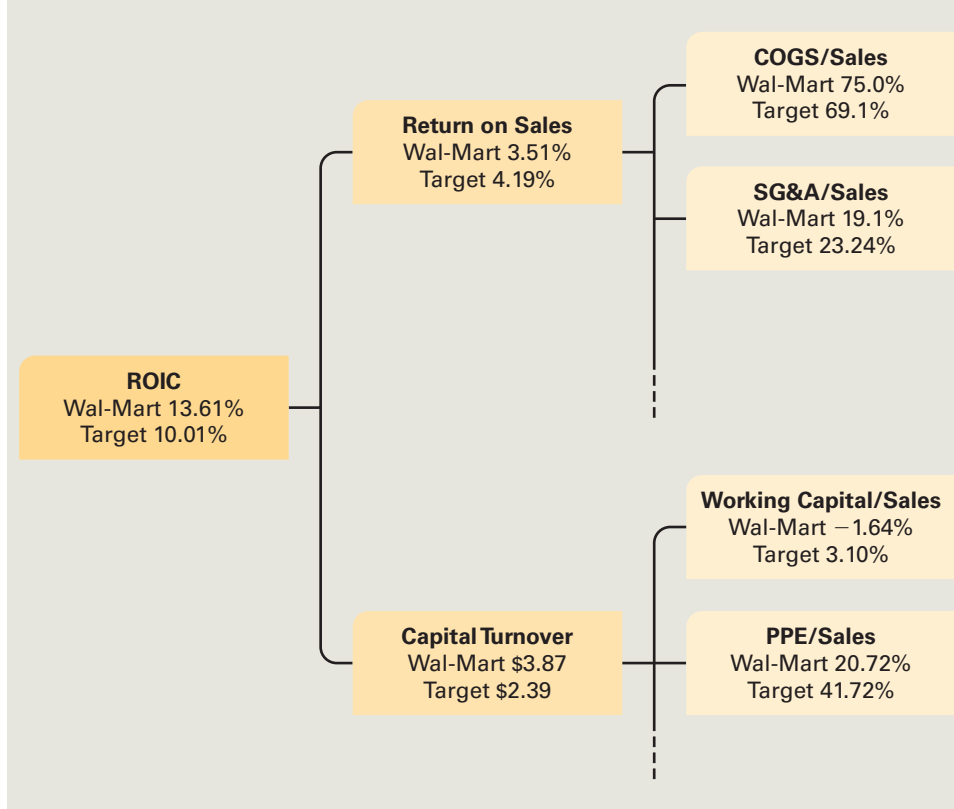
Terms	Definitions	Sources
Cost of goods sold (COGS)	Total costs of producing products	Income statement
Sales, general, and administrative expenses (SG&A)	Costs associated with selling products and administering the company	Income statement
Research and development (R&D) expenses	Research and development expenditure	Income statement
Working capital	The amount of money the company has to “work” with in the short term: Current assets – current liabilities	Balance sheet
Property, plant, and equipment (PPE)	The value of investments in the property, plant, and equipment that the company uses to manufacture and sell its products; also known as <i>fixed capital</i>	Balance sheet
Return on sales (ROS)	Net profit expressed as a percentage of sales; measures how effectively the company converts revenues into profits	Ratio
Capital turnover	Revenues divided by invested capital; measures how effectively the company uses its capital to generate revenues	Ratio
Return on invested capital (ROIC)	Net profit divided by invested capital	Ratio
Net profit	Total revenues minus total costs before tax	Income statement
Invested capital	Interest-bearing debt plus shareholders’ equity	Balance sheet

increasing capital turnover. They do this by pursuing strategies that reduce the amount of working capital, such as the amount of capital invested in inventories, needed to generate a given level of sales (working capital/sales) and then pursuing strategies that reduce the amount of fixed capital that they have to invest in property, plant, and equipment (PPE) to generate a given level of sales (PPE/sales). That is, they pursue strategies that reduce the amount of capital that they need to generate every dollar of sales, and therefore reduce their cost of capital. Recall that cost of capital is part of the cost structure of a company (see Figure 3.2), so strategies designed to increase capital turnover also lower the cost structure.

To see how these basic drivers of profitability help us understand what is going on in a company and identify its strengths and weaknesses, let us compare the financial performance of Wal-Mart against one of its more effective competitors, Target as it was in 2012. We have chosen this year because the performance differential between the two enterprises was particularly clear.

3-6a Comparing Wal-Mart and Target

For the financial year ending January 2012, Wal-Mart earned a ROIC of 13.61%, and Target earned a respectable 10.01%. Wal-Mart’s superior profitability can be understood in terms of the impact of its strategies on the various ratios identified in Figure 3.8. These are summarized in Figure 3.9.

Figure 3.9 Comparing Wal-Mart and Target, 2012

First, note that Wal-Mart has a *lower* return on sales than Target. The main reason for this is that Wal-Mart's cost of goods sold (COGS) as a percentage of sales is higher than Target's (75% versus 69.1%). For a retailer, the COGS reflects the price that Wal-Mart pays to its suppliers for merchandise. The lower COGS/sales ratio implies that Wal-Mart does not mark up prices much as Target—its profit margin on each item sold is lower. Consistent with its long-time strategic goal, Wal-Mart passes on the low prices it gets from suppliers to customers. Wal-Mart's higher COGS/sales ratio reflects its strategy of being the lowest-price retailer.

On the other hand, you will notice that Wal-Mart spends less on sales, general, and administrative (SG&A) expenses as a percentage of sales than Target (19.1% versus 22.24%). There are three reasons for this. First, Wal-Mart's early strategy was to focus on small towns that could only support one discounter. In small towns, the company does not have to advertise heavily because it is not competing against other discounters. Second, Wal-Mart has become such a powerful brand that the company does not need to advertise as heavily as its competitors, even when its stores are located close to them in suburban areas. Third, because Wal-Mart sticks to its low-price philosophy, and because the company manages its inventory so well, it does not usually have an overstocking problem. Thus, the company does not need to hold periodic sales—and nor bear the costs of promoting those sales (e.g., sending out advertisements and coupons in local newspapers). Reducing spending on sales promotions reduces Wal-Mart's SG&A/sales ratio.

In addition, Wal-Mart operates with a flat organizational structure that has very few layers of management between the head office and store managers. This reduces administrative expenses (which are a component of SG&A) and hence the SG&A/sales ratio. Wal-Mart can operate with such a flat structure because its information systems allow its top managers to monitor and control individual stores directly, rather than rely upon intervening layers of subordinates to do that for them.

It is when we turn to consider the capital turnover side of the ROIC equation, however, that the financial impact of Wal-Mart's competitive advantage in information systems and logistics becomes apparent. Wal-Mart generates \$3.87 for every dollar of capital invested in the business, whereas Target generates \$2.39 for every dollar of capital invested. Wal-Mart is much more efficient in its use of capital than Target. Why?

One reason is that Wal-Mart has a lower working capital/sales ratio than Target. In fact, Wal-Mart has a *negative* ratio (-1.64%), whereas Target has a positive ratio (3.10%). The negative working capital ratio implies that Wal-Mart does not need any capital to finance its day-to-day operations—in fact, Wal-Mart is using its *suppliers'* capital to finance its day-to-day operations. This is very unusual, but Wal-Mart is able to do this for two reasons. First, Wal-Mart is so powerful that it can demand and get very favorable payment terms from its suppliers. It does not take ownership of inventory until it is scanned at the checkout, and it does not pay for merchandise until 60 days after it is sold. Second, Wal-Mart turns over its inventory so rapidly—around eight times a year—that it typically sells merchandise *before* it has to pay its suppliers. Thus, suppliers finance Wal-Mart's inventory and the company's short-term capital needs. Wal-Mart's high inventory turnover is the result of strategic investments in information systems and logistics. It is these value-chain activities more than any other that explain Wal-Mart's competitive advantage.

Finally, note that Wal-Mart has a significantly lower PPE/sales ratio than Target: 20.72% versus 41.72% . There are several explanations for this. First, many of Wal-Mart's stores are still located in small towns where land is cheap, whereas most Target stores are located in more expensive, suburban locations. Thus, on average, Wal-Mart spends less on a store than Target—again, strategy has a clear impact on financial performance. Second, because Wal-Mart turns its inventory over so rapidly, it does not need to devote as much space in stores to holding inventory. This means that more floor space can be devoted to selling merchandise. Other things being equal, this will result in a higher PPE/sales ratio. By the same token, efficient inventory management means that it needs less space at a distribution center to support a store, which again reduces total capital spending on property, plant, and equipment. Third, the higher PPE/sales ratio may also reflect the fact that Wal-Mart's brand is so powerful, and its commitment to low pricing so strong, that store traffic is higher than at comparable discounters such as Target. The stores are simply busier and the PPE/sales ratio is higher.

In sum, Wal-Mart's high profitability is a function of its strategy, and the resources and distinctive competencies that its strategic investments have built over the years, particularly in the area of information systems and logistics. As in the Wal-Mart example, the methodology described in this section can be very useful for analyzing why and how well a company is achieving and sustaining a competitive advantage. It highlights a company's strengths and weaknesses, showing where there is room for improvement and where a company is excelling. As such, it can drive strategy formulation. Moreover, the same methodology can be used to analyze the performance of competitors and gain a greater understanding of their strengths and weakness, which in turn can inform strategy.

KEY TERMS

distinctive	organizational	VRIO framework	81	employee
competencies 78	architecture 79	barriers to imitation	83	productivity 95
resources 79	intellectual property 79	causal ambiguity	83	capital productivity 95
process	basic factors of	value chain	88	product innovation 97
knowledge 79	production 80	primary activities	89	process innovation 97
socially complex 79	advanced factors of	support activities	91	customer response
tacit 79	production 80	benchmarking	93	time 98

TAKEAWAYS FOR STRATEGIC MANAGERS

1. Distinctive competencies are the firm-specific strengths of a company. Valuable distinctive competencies enable a company to earn a profit rate that is above the industry average.
2. The distinctive competencies of an organization arise from its resources. Resources include land, labor, management, plants, equipment, process knowledge, intellectual property, and organizational architecture.
3. Resources are likely to result in a competitive advantage when they are valuable, rare, and inimitable, and when the firm is organized to exploit them.
4. Advanced factors of production (resources) such as intellectual property, process knowledge, and organizational architecture are most likely to result in a sustained competitive advantage. Valuable advanced resources are more likely to be rare and inimitable.
5. In order to achieve a competitive advantage, a company needs to pursue strategies that build on its existing resources and formulate strategies that create additional resources (and thus develop new competencies).
6. The amount of value a company creates is measured by the difference between the value (utility) consumers derive from its goods or services and the cost of creating that value.
7. To create more value a company must lower its costs or differentiate its product so that it creates more utility for consumers and can charge a higher price, or do both simultaneously.
8. The four building blocks of competitive advantage are efficiency, quality, innovation, and responsiveness to customers. Superior efficiency enables a company to lower its costs; superior quality allows it to charge a higher price and lower its costs; and superior customer service lets it charge a higher price. Superior innovation can lead to higher prices in the case of product innovations, or lower unit costs in the case of process innovations.
9. In order to perform a solid internal analysis, managers need to be able to analyze the financial performance of their company, identifying how the strategies of the company relate to its profitability as measured by the return on invested capital.

DISCUSSION QUESTIONS

1. What are the primary implications of the material discussed in this chapter for strategy formulation?
2. When is a company's competitive advantage most likely to be sustained over time?
3. It is possible for a company to be the lowest-cost producer in its industry and simultaneously have an output that is the most valued by customers. Discuss this statement.
4. Why is it important to understand the drivers of profitability as measured by the return on invested capital?
5. Which is more important in explaining the success and failure of companies: strategizing to create valuable resources, or luck?

CLOSING CASE

Southwest Airlines

Southwest Airlines has long been the standout performer in the U.S. airline industry. It is famous for its fares, which are often some 30% lower than those of its major rivals. These low fares are balanced by an even lower cost structure, which has enabled Southwest to record superior profitability even in its down years. Indeed, Southwest has been profitable for 44 consecutive years, making it the envy of an airline industry that has seen more than 180 bankruptcies since 1978. Even during 2001 to 2005—quite possibly the worst four years in the history of the airline industry—when every other major airline lost money, Southwest made money each year and earned a return on invested capital of 5.8%.

Southwest operates differently than many of its competitors. While operators like American Airlines and Delta route passengers through hubs, Southwest Airlines flies point-to-point, often through smaller airports. By operating this way, Southwest has found that it can reduce total travel time for its passengers. They are not routed through hubs and spend less time on the ground—something that most passengers value. This boosts demand and keeps planes full. Moreover, because it avoids many hubs, Southwest has experienced fewer long delays, which again helps to reduce total travel time. In 2017, a delayed flight at Southwest was on average 49.11 minutes late leaving the gate, compared to 69.99 minutes at Delta and 60.28 minutes at American Airlines. Southwest's high reliability translates into a solid brand reputation and strong demand, which further helps to fill its planes and consequently, reduce costs.

Furthermore, because Southwest flies point to point rather than through congested airport hubs, there is no need for dozens of gates and

thousands of employees to handle banks of flights that come arrive and depart within a 2-hour window, leaving the hub empty until the next flights arrive a few hours later. The result: Southwest operates with far fewer employees than do airlines that fly through hubs.

To further reduce costs and boost reliability, Southwest flies only one type of plane, the Boeing 737. This reduces training costs, maintenance costs, and inventory costs while increasing efficiency in crew and flight scheduling. The operation is nearly ticketless and there is no seat assignment, which reduces costs associated with back-office functions. There are no in-flight meals or movies, and the airline will not transfer baggage to other airlines, reducing the need for baggage handlers. Southwest also has high employee productivity, which means fewer employees per passenger. All of this helps to keep costs low. In 2017, for example, Southwest's cost per available seat miles flown was 11.35 cents, compared to 15.30 cents at Delta and 15.63 cents at American Airlines.

To help maintain high employee productivity, Southwest devotes enormous attention to its staff. On average, the company hires only 3% of candidates interviewed in a year. When hiring, it emphasizes teamwork and a positive attitude. Southwest reasons that skills can be taught, but a positive attitude and a willingness to pitch in cannot. Southwest also creates incentives for its employees to work hard. All employees are covered by a profit-sharing plan, and at least 25% of each employee's share in the plan must be invested in Southwest Airlines stock. This gives rise to a simple formula: The harder employees work, the more profitable Southwest becomes and the

more well off the employees become. The results are clear. At other airlines, one would never see a pilot helping to check passengers onto the plane. At Southwest, pilots and flight attendants have been known to help clean the aircraft and check in passengers at the gate in order to get a plane back into the air as quickly as possible, because no plane makes money when it is sitting on the ground. This flexible, motivated workforce

leads to higher productivity and reduces the need for more employees.

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CASE DISCUSSION QUESTIONS

1. What resources underlie Southwest' strong position in the U.S. Airline Industry?
2. How do these resources enable Southwest to improve one or more of the following: efficiency, quality, customer responsiveness and innovation?
3. Apply the VIRO framework and describe to what extent these resources can be considered valuable, rare, inimitable and well organized?
4. What must Southwest do to maintain its competitive advantage going forward in the U.S. Airline industry?

NOTES

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³R. Amit and P. J. H. Schoemaker, "Strategic Assets and Organizational Rent," *Strategic Management Journal* 14 (1993): 33–46; M. A. Peteraf, "The Cornerstones of Competitive Advantage: A Resource-Based View," *Strategic Management Journal* 14 (1993): 179–191; B. Wernerfelt, "A Resource-Based View of the Company," *Strategic Management Journal* 15 (1994): 171–180; K. M. Eisenhardt and J. A. Martin, "Dynamic Capabilities: What Are They?" *Strategic Management Journal* 21 (2000): 1105–1121.

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⁶The concept of barriers to imitation is grounded in the resource-based view of the company. For details, see R. Reed and R. J. DeFillippi, "Causal Ambiguity, Barriers to Imitation, and Sustainable Competitive Advantage," *Academy of Management Review* 15 (1990): 88–102.

⁷E. Mansfield, "How Economists See R&D," *Harvard Business Review* (November–December 1981): 98–106.

⁸R. Reed and R. J. DeFillippi, "Causal Ambiguity, Barriers to Imitation, and Sustainable Competitive Advantage," *Academy of Management Review* 15 (1990): 88–102.

⁹However, $P = V$ only in the special case when the company has a perfect monopoly and can charge each customer a unique price that reflects the utility of the product to that customer (i.e., where perfect price discrimination is possible). More generally, except in the limiting case of perfect price discrimination, even a monopolist will see most customers capture some of the value of a product in the form of a consumer surplus.

¹⁰This point is central to the work of Michael Porter. See M. E. Porter, *Competitive Advantage* (New York: Free Press, 1985). See also P. Ghemawat, *Commitment: The Dynamic of Strategy* (New York: Free Press, 1991), Chapter 4.

¹¹Porter, *Competitive Advantage*.

¹²This approach goes back to the pioneering work by K. Lancaster, *Consumer Demand: A New*

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¹³D. Garvin, "Competing on the Eight Dimensions of Quality," *Harvard Business Review* (November–December 1987): 101–119; P. Kotler, *Marketing Management* (Millennium Ed.) (Upper Saddle River, N.J.: Prentice-Hall, 2000).

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²¹Copeland, Koller, and Murrin, *Valuation*.

²²This is done as follows. Signifying net profit by π , invested capital by K , and revenues by R , then $ROIC = \pi/K$. If we multiply through by revenues, R , this becomes $R = (K) = (\pi = R)/(K = R)$, which can be rearranged as $\pi/R = R/K$, where π/R is the return on sales and R/K is capital turnover.

²³Figure 3.8 is a simplification that ignores other important items that enter the calculation, such as depreciation/sales (a determinant of ROS) and other assets/sales (a determinant of capital turnover).

CHAPTER 4

COMPETITIVE ADVANTAGE THROUGH FUNCTIONAL-LEVEL STRATEGIES

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OPENING CASE

Automation at Boeing

The last decade has been very good for Boeing's commercial airplane business. Along with its global rival Airbus, Boeing has racked up record orders from airlines thanks to booming demand for air travel and the introduction of a new generation of fuel efficient aircraft that include the 787 and 737 Max. Now they have to deliver all of those planes while keeping production costs low in order to maximize the profit from the current boom. In 2017, Boeing delivered 763 aircraft, a record, up from 462 aircraft in 2010. The boom is not over yet. By 2020, Boeing plans to deliver 900 aircraft—a level of output that will rival the burst of large aircraft production last seen in World War II.



Mike Kane/Bloomberg/Getty Images

LEARNING OBJECTIVES

- 4.1 Explain how an enterprise can use functional-level strategies to increase its efficiency
- 4.2 Explain how an enterprise can use functional-level strategies to increase its quality
- 4.3 Explain how an enterprise can use functional-level strategies to increase its innovation
- 4.4 Explain how an enterprise can use functional-level strategies to increase its customer responsiveness

To meet the challenge of ramping up production, Boeing is turning to advanced automation technologies that include robotics, drones, and human workers who wear powered exoskeletons. For example, until recently the more than 60,000 rivets that are used to hold a Boeing 777 fuselage together were installed by humans. One person would hold the rivet gun, while another would hold the steel bucking bar that forces the fastener into place. It was time-consuming, back breaking, labor-intensive work. Tired workers made mistakes that would require expensive rework. In late 2015, Boeing began to replace the manual labor with robots. The mechanics who once did the job by hand now operate the robots. The robots work in pairs, mimicking the humans they have replaced. The mechanics set up the machines. When they have the specifications correct, the robots take over, drilling and filling thousands of fasteners. This eliminates the physical stress on the mechanics, improves quality, and speeds up the production process. As one mechanic noted, if you drill a good hole when setting up the machine, the robots will then drill another 50,000 good holes for you.

Similar systems can be found on the Boeing 737 production line. A new robotic system drills holes in the main beams inside each wing, known as spars, again replacing human labor. This speeds up the process, requires half the space that was used in the prior production process, cuts the amount of rework required by production glitches, reduces injuries to human labor, and is supporting a sharp increase in output at Boeing's Renton factory near Seattle where the 737 is produced. In 2005, it took 9,300 workers at the Renton factory to build 21 planes per month. By 2018, some 12,000 employees, an increase of 30%, were producing double the output, or 52 planes per month. This represents a dramatic increase in both labor productivity and the productivity of the capital invested in the factory, which translates into lower costs for Boeing, enabling it to make more profit from every plane that rolls off the end of the line.

In the factory producing carbon fiber wings for the new 777x, Boeing has taken automation even further. The composite wings are built up by a robot that operates like a giant tape dispenser, zipping back and forth along a 110-foot mold laying carbon fiber strips, building up the wing layer by layer. As the robot traverses the wing at various angles, it lays down piles of epoxy-resin-infused carbon fiber in about 300 separately programmed runs. The process takes place in a "clean room" and is overseen by two employees dressed in lab coats. The completed wing is then moved into an oven, where it is baked for seven hours while a single employee oversees the process.

As the use of robotic systems and carbon fiber proliferates, employment levels at Boeing are unlikely to increase much, even as production expands rapidly. While Boeing employed 100,000 at its factories in Washington State in the late 1990s, today its workforce is down to 66,000 even though output has increased sharply.

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4-1 OVERVIEW

In Chapter 3, we saw how valuable, rare, inimitable resources that are well organized within an enterprise form the foundation of competitive advantage. These resources reside in the value creation activities (functions) of a company. In this chapter, we take a close look at how a firm can use functional-level strategies to build valuable resources that enable it to attain superior efficiency, quality, innovation, and customer responsiveness (see Figure 4.1). **Functional-level strategies** are actions that managers take to improve the efficiency and effectiveness of one or more of value creation activities (see Figure 3.5 in the previous chapter).

The Opening Case illustrates some of these relationships. In recent years, Boeing has been making major investments in automation to speed up the manufacturing of its large commercial jet aircraft. By using robots in the production process, Boeing has increased both labor and capital productivity, boosting the *efficiency* of its operations and lowering costs. Moreover, robots are more reliable than human labor for some tasks. For example, drilling holes for rivets with a consistency that human beings cannot achieve. This boosts the *quality* of Boeing's output, reduces the need for expensive rework, and further lowers costs.

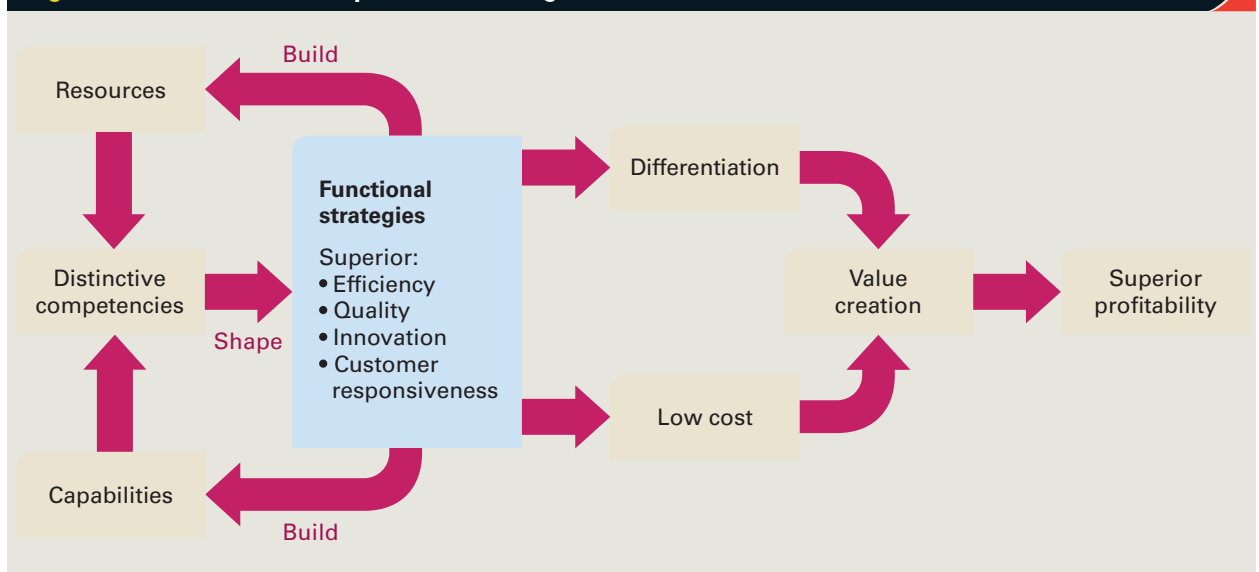
functional-level strategies

Actions that managers take to improve the efficiency and effectiveness of one or more value creation activities.

4-2 ACHIEVING SUPERIOR EFFICIENCY

A company is a device for transforming inputs (labor, land, capital, management, and technological knowhow) into outputs (the goods and services produced). The simplest measure of efficiency is the quantity of inputs that it takes to produce a given output; that is, $\text{efficiency} = \text{outputs}/\text{inputs}$. The more efficient a company, the fewer the inputs

Figure 4.1 The Roots of Competitive Advantage



required to produce a given output, and therefore the lower its cost structure. Put another way, an efficient company has higher productivity and therefore lower costs than its rivals. Here we review the steps that companies can take at the functional level to increase efficiency and lower cost structure.

4-2a Efficiency and Economies of Scale

economies of scale

Reductions in unit costs attributed to larger output.

Economies of scale are unit cost reductions associated with large-scale output. You will recall from the Chapter 3 that it is very important for managers to understand how the cost structure of their enterprise varies with output, because this understanding should help to drive strategy. For example, if unit costs fall significantly as output is expanded—that is, if there are significant economies of scale—a company may benefit by keeping prices down and increasing volume.

fixed costs

Costs that must be incurred to produce a product regardless of level of output.

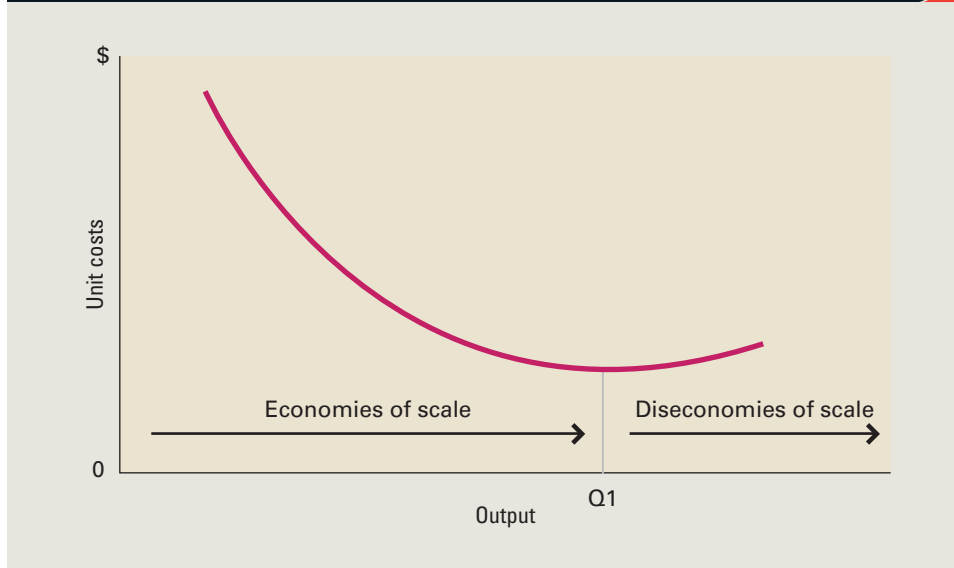
One source of economies of scale is the ability to spread fixed costs over a large production volume. **Fixed costs** are costs that must be incurred to produce a product regardless of the level of output; examples are the costs of purchasing machinery, setting up machinery for individual production runs, building facilities, advertising, and research and development (R&D). For example, Microsoft spent approximately \$5 billion to develop its Windows operating system, Windows 8. It can realize substantial scale economies by distributing the fixed costs associated with developing the new operating system over the enormous unit sales volume it expects for this system (over 90% of the world's 1.6 billion personal computers (PCs) use Windows). These scale economies are significant because of the trivial incremental (or marginal) cost of producing additional copies of Windows 8. For example, once the master copy has been produced, original equipment manufacturers (OEMs) can install copies of Windows 8 on new PCs for zero marginal cost to Microsoft. The key to Microsoft's efficiency and profitability (and that of other companies with high fixed costs and trivial incremental or marginal costs) is to increase sales rapidly enough that fixed costs can be spread out over a large unit volume and substantial scale economies realized.

Another source of scale economies is the ability of companies producing in large volumes to achieve a greater division of labor and specialization. Specialization is said to have a favorable impact on productivity, primarily because it enables employees to become very skilled at performing a particular task. The classic example of such economies is Ford's Model T automobile. The Model T Ford, introduced in 1923, was the world's first mass-produced car. Until 1923, Ford had made cars using an expensive, hand-built, craft production method. Introducing mass-production techniques allowed the company to achieve greater division of labor (it split assembly into small, repeatable tasks) and specialization, which boosted employee productivity. Ford was also able to distribute the fixed costs of developing a car and setting up production machinery over a large volume of output. As a result of these economies, the cost of manufacturing a car at Ford fell from \$3,000 to less than \$900 (in 1958 dollars).

The concept of scale economies is depicted in Figure 4.2, which illustrates that, as a company increases its output, unit costs decrease. This process comes to an end at an output of Q1, where all scale economies are exhausted. Indeed, at outputs of greater than Q1, the company may encounter **diseconomies of scale**, which are the unit cost increases associated with a large scale of output. Diseconomies of scale occur primarily because of the increased bureaucracy associated with large-scale enterprises and the managerial inefficiencies that can result.¹ Larger enterprises have a tendency to

diseconomies of scale

Unit cost increases associated with a large scale of output.

Figure 4.2 Economies and Diseconomies of Scale

develop extensive managerial hierarchies in which dysfunctional political behavior is commonplace. Information about operating matters can accidentally and/or deliberately be distorted by the number of managerial layers through which the information must travel to reach top decision makers. The result is poor decision making. Therefore, past a specific point—such as Q1 in Figure 4.2—inefficiencies that result from such developments outweigh any additional gains from economies of scale. As output expands, unit costs begin to rise.

Managers must know the extent of economies of scale, and where diseconomies of scale begin to occur. At Nucor Steel, for example, the realization that diseconomies of scale exist has led to the company's decision to build plants that employ only 300 individuals or fewer. The belief is that it is more efficient to build two plants, each employing 300 people, than one plant employing 600 people. Although the larger plant may theoretically make it possible to reap greater scale economies, Nucor's management believes that larger plants would suffer from the diseconomies of scale associated with large organizational units.

4-2b Efficiency and Learning Effects

Learning effects are cost savings that result from “learning by doing.” Labor, for example, learns by repetition how to best carry out a task. Therefore, labor productivity increases over time, and unit costs decrease as individuals learn the most efficient way to perform a particular task. Equally important, management in a new manufacturing facility typically learns over time how best to run the new operation. Hence, production costs decline because of increasing labor productivity and management efficiency. Put differently, over time, management and labor accumulate valuable process knowledge that leads to higher productivity. Japanese companies such as Toyota are noted for making the accumulation of process knowledge central to their operating philosophy.

learning effects

Cost savings that come from learning by doing.

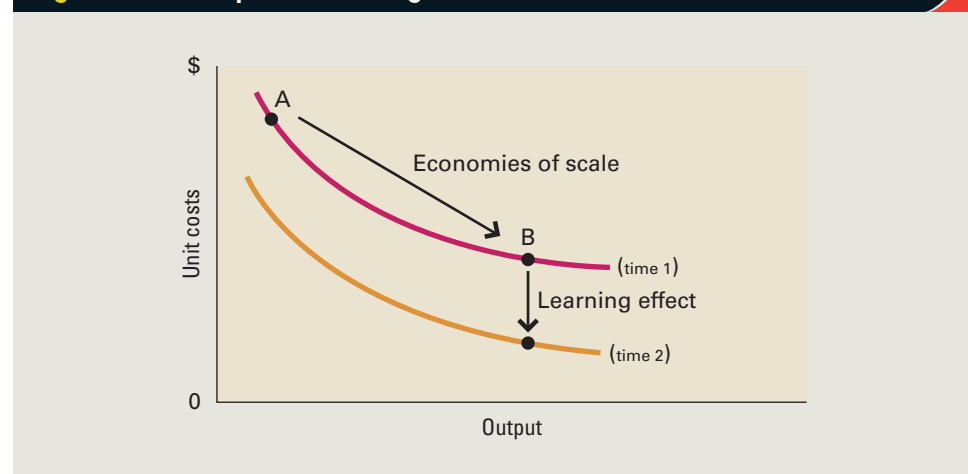
Learning effects tend to be more significant when a technologically complex task is repeated because there is more to learn. Thus, learning effects will be more significant in an assembly process that has 1,000 complex steps than in a process with 100 simple steps. Although learning effects are normally associated with the manufacturing process, there is substantial evidence that they are just as important in service industries. One famous study of learning in the health-care industry discovered that more-experienced medical providers posted significantly lower mortality rates for a number of common surgical procedures, suggesting that learning effects are at work in surgery.² The authors of this study used the evidence to argue in favor of establishing regional referral centers for the provision of highly specialized medical care. These centers would perform many specific surgical procedures (such as heart surgery), replacing local facilities with lower volumes and presumably higher mortality rates. Strategy in Action 4.1 looks at the determinants of differences in learning effects across a sample of hospitals performing cardiac surgery.

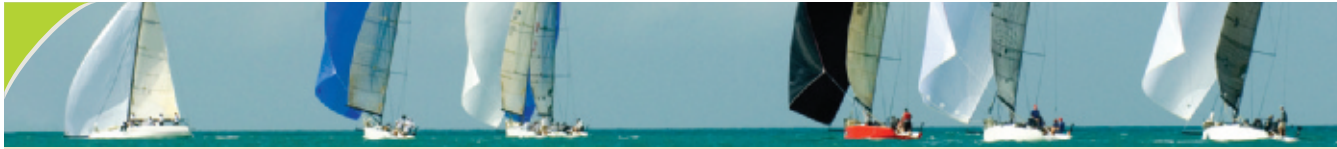
Another recent study found strong evidence of learning effects in a financial institution. This study looked at a newly established document-processing unit with 100 staff members and found that, over time, documents were processed much more rapidly as the staff learned the process. Overall, the study concluded that unit costs decreased every time the cumulative number of documents processed doubled.³

In terms of the unit cost curve of a company, economies of scale imply a movement along the curve (say, from A to B in Figure 4.3). The realization of learning effects implies a downward shift of the entire curve (B to C in Figure 4.3) as both labor and management become more efficient over time at performing their tasks at every level of output. In accounting terms, learning effects in a production setting reduce the cost of goods sold as a percentage of revenues, enabling the company to earn a higher return on sales and return on invested capital.

No matter how complex the task, learning effects typically diminish in importance after a period of time. Indeed, it has been suggested that they are most important during the start-up period of a new process and become trivial after a few years.⁴ When a company's production system changes—as a result of the use of new information technology, for example—the learning process must begin again.

Figure 4.3 The Impact of Learning and Scale Economies on Unit Costs





4.1 STRATEGY IN ACTION

Learning Effects in Cardiac Surgery

Researchers at the Harvard Business School carried out a study to estimate the importance of learning effects in the case of a new technology for minimally invasive heart surgery that was approved by federal regulators. The researchers looked at 16 hospitals and obtained data on operations for 660 patients who underwent surgery using the new technology. They examined how the time required to undertake the procedure varied with cumulative experience. Across the 16 hospitals, they found that average time decreased from 280 minutes for the first procedure with the new technology to 220 minutes once a hospital had performed 50 procedures (note that not all hospitals performed 50 procedures, and the estimates represent an extrapolation based on the data).

Next, the study observed differences across hospitals; here they found evidence of very large differences in learning effects. One hospital, in particular, stood out. This hospital, called “Hospital M,” reduced its net procedure time from 500 minutes on case 1 to 132 minutes by case 50. Hospital M’s 88-minute procedure time advantage over the average hospital at case 50 meant a cost savings of approximately \$2,250 per case, which allowed surgeons at the hospital to complete one more revenue-generating procedure per day.

The researchers inquired into factors that made Hospital M superior. They noted that all hospitals had similar, state-of-the-art operating rooms, all used the same devices, approved by the Food and Drug Administration (FDA), all surgeons who adopted the new technology

completed the same training courses, and all surgeons came from highly respected training hospitals. Follow-up interviews, however, suggested that Hospital M differed in how it implemented the new procedure. The adopting surgeon handpicked the team that would perform the surgery. Members of the team had significant prior experience working together, which was a key criterion for member selection, and the team trained together to perform the surgery with the new technology. Before undertaking the surgery, the entire team met with the operating room nurses and anesthesiologists to discuss it. In addition, the adopting surgeon mandated that no changes would be made to either the team or the procedure in the early stages of using the technology. The initial team completed 15 procedures before members were added or substituted, and completed 20 cases before the procedure was modified. The adopting surgeon also insisted that the team meet prior to each of the first 10 cases, and after the first 20 cases, to debrief.

The picture that emerges is a core team selected and managed to maximize gains from learning unlike other hospitals where team members and procedures were less consistent, and where there was not the same attention to briefing, debriefing, and learning, surgeons at Hospital M learned much faster and ultimately achieved higher productivity than their peers in other institutions. Clearly, differences in the implementation of the new procedure were very significant.

Source: G. P. Pisano, R. M. J. Bohmer, and A. C. Edmondson, “Organizational Differences in Rates of Learning: Evidence from the Adoption of Minimally Invasive Cardiac Surgery,” *Management Science* 47 (2001): 752–768.

4-2c Efficiency and the Experience Curve

The **experience curve** refers to the systematic lowering of the cost structure, and consequent unit-cost reductions, that have been observed to occur over the life of a product.⁵ According to the experience-curve concept, per-unit production costs for a product typically decline by some characteristic amount each time accumulated output of

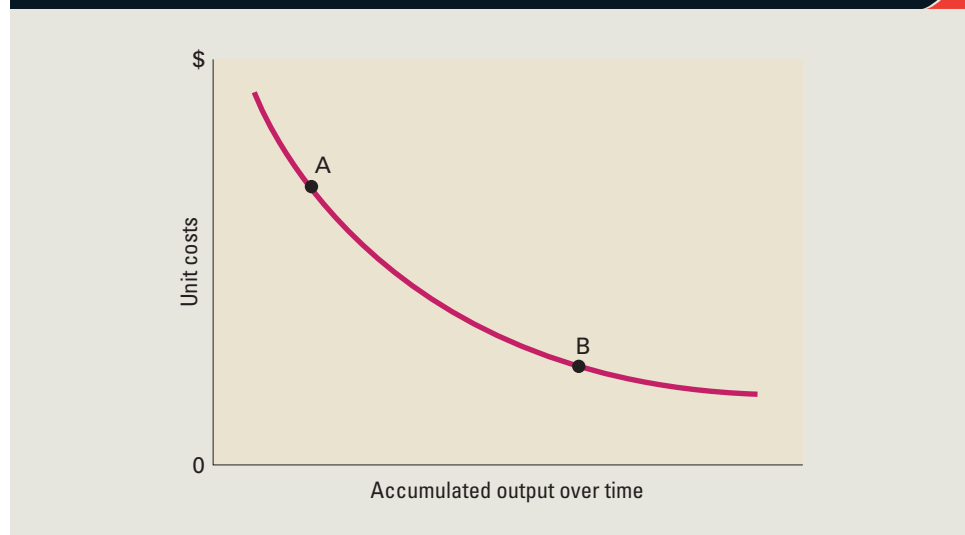
experience curve

The systematic lowering of the cost structure and consequent unit cost reductions that have been observed to occur over the life of a product.

the product is doubled (accumulated output is the total output of a product since its introduction). This relationship was first observed in the aircraft industry, where it was found that each time the accumulated output of airframes doubled, unit costs declined to 80% of their previous level.⁶ As such, the fourth airframe typically cost only 80% of the second airframe cost to produce, the eighth airframe only 80% of the fourth, the sixteenth only 80% of the eighth, and so on. The outcome of this process is a relationship between unit manufacturing costs and accumulated output similar to the illustration in Figure 4.3. Economies of scale and learning effects underlie the experience-curve phenomenon. Put simply, as a company increases the accumulated volume of its output over time, it is able to realize both economies of scale (as volume increases) and learning effects. Consequently, unit costs and cost structure fall with increases in accumulated output.

The strategic significance of the experience curve is clear: Increasing a company's product volume and market share will lower its cost structure relative to its rivals. In Figure 4.4, Company B has a cost advantage over Company A because of its lower cost structure, and because it is farther down the experience curve. This concept is very important in industries that mass-produce a standardized output—for example, the manufacture of semiconductor chips. A company that wishes to become more efficient and lower its cost structure must try to move down the experience curve as quickly as possible. This means constructing manufacturing facilities that are scaled for efficiency even before the company has generated demand for its product, and aggressively pursuing cost reductions from learning effects. It might also need to adopt an aggressive marketing strategy, cutting prices drastically and stressing heavy sales promotions and extensive advertising in order to build up demand and accumulated volume as quickly as possible. A company is likely to have a significant cost advantage over its competitors because of its superior efficiency once it is down the experience curve. It has been argued that Intel uses such tactics to ride down the experience curve and gain a competitive advantage over its rivals in the microprocessor market.⁷

Figure 4.4 The Experience Curve



It is worth emphasizing that this concept is just as important outside of manufacturing. For example, as it invests in its distribution network, online retailer Amazon is trying to both realize economies of scale (spreading the fixed costs of its distribution centers over a large sales volume) and improve the efficiency of its inventory-management and order-fulfillment processes at distribution centers (a learning effect). Together these two sources of cost savings should enable Amazon to ride down the experience curve ahead of its rivals, thereby gaining a low-cost position that enables it to make greater profits at lower prices than its rivals.

Managers should not become complacent about efficiency-based cost advantages derived from experience effects. First, because neither learning effects nor economies of scale are sustained forever, the experience curve will bottom out at some point; it must do so by definition. When this occurs, further unit-cost reductions from learning effects and economies of scale will be difficult to attain. Over time, other companies can lower their cost structures and match the cost leader. Once this happens, many low-cost companies can achieve cost parity with each other. In such circumstances, a sustainable competitive advantage must rely on strategic factors other than the minimization of production costs by using existing technologies—factors such as better responsiveness to customers, product quality, or innovation.

Second, cost advantages gained from experience effects can be rendered obsolete by the development of new technologies. For example, the large, “big box” bookstores Borders and Barnes & Noble may have had cost advantages that were derived from economies of scale and learning. However, those advantages diminished when Amazon, utilizing Web technology, launched its online bookstore in 1994. By selling online, Amazon was able to offer a larger selection at a lower cost than established rivals with physical storefronts. When Amazon introduced its Kindle digital reader in 2007 and started to sell eBooks, it changed the basis of competition once more, effectively nullifying the experience-based advantage enjoyed by Borders and Barnes & Noble. By 2012, Borders was bankrupt, and Barnes & Noble was in financial trouble and closing stores. Amazon, in the meantime, has gone from strength to strength.

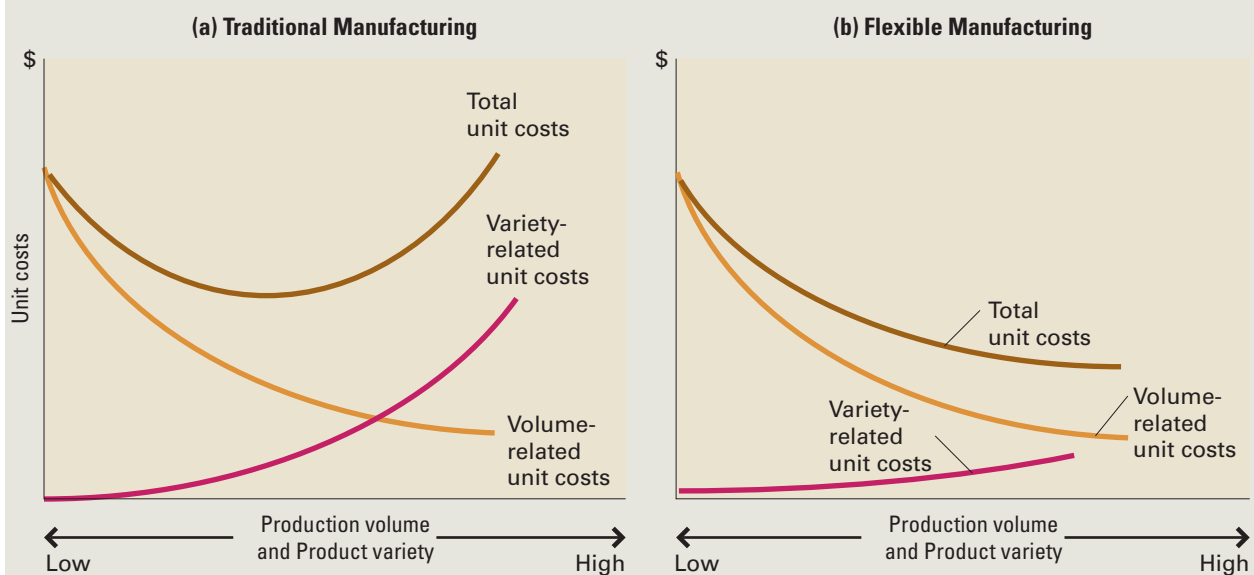
4-2d Efficiency, Flexible Production Systems, and Mass Customization

Central to the concept of economies of scale is the idea that a lower cost structure, attained through the mass production of a standardized output, is the best way to achieve high efficiency. There is an implicit trade-off in this idea between unit costs and product variety. Wide product variety shipped from a single factory implies shorter production runs, which implies an inability to realize economies of scale and thus higher costs. That is, greater product variety makes it difficult for a company to increase its production efficiency and reduce its unit costs. According to this logic, the way to increase efficiency and achieve a lower cost structure is to limit product variety and produce a standardized product in large volumes (see Figure 4.5a).

This view of production efficiency has been challenged by the rise of flexible production technologies. The term **flexible production technology** covers a range of technologies designed to reduce setup times for complex equipment, increase the use of individual machines through better scheduling, and improve quality control at all stages of the manufacturing process.⁸ Flexible production technologies allow the company to produce a wider variety of end products at a unit cost that at one time could be achieved only through the mass production of a standardized output (see Figure 4.5b).

flexible production technology

A range of technologies designed to reduce setup times for complex equipment, increase the use of machinery through better scheduling, and improve quality control at all stages of the manufacturing process.

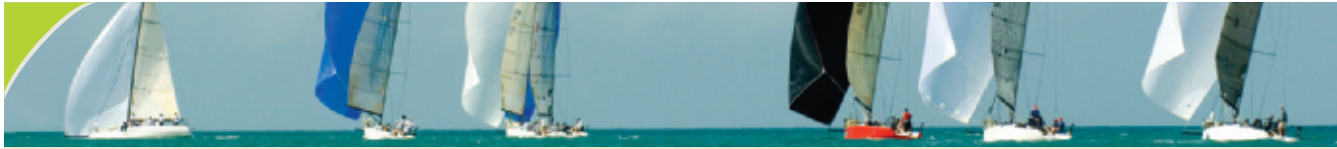
Figure 4.5 Trade-off Between Costs and Product Variety**mass customization**

The use of flexible manufacturing technology to reconcile two goals that were once thought to be incompatible: low cost and differentiation through product customization.

Research suggests that the adoption of flexible production technologies may increase efficiency and lower unit costs relative to what can be achieved by the mass production of a standardized output, while at the same time enabling the company to customize its product offering to a much greater extent than was once thought possible. The term **mass customization** describes a company's ability to use flexible manufacturing technology to reconcile two goals that were once thought to be incompatible: low cost and differentiation through product customization.⁹

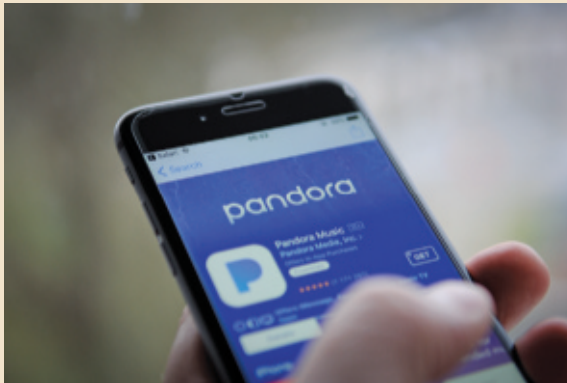
Dell Computer pursues a mass-customization strategy when it allows its customers to build their own machines online. Dell keeps costs and prices under control by allowing customers to make choices within a limited menu of options (different amounts of memory, hard-drive capacity, video card, microprocessor, and so on). The result is to create more value for customers than is possible for rivals that sell a limited range of PC models through retail outlets. Similarly, Mars offers a service, My M&Ms, that enables customers to design personalized M&Ms online. Customers can pick different colors and have messages or pictures printed on their M&Ms. Another example of mass customization is the Internet radio service Pandora, which is discussed in Strategy in Action 4.2.

The effects of installing flexible production technology on a company's cost structure can be dramatic. Over the last two decades, the Ford Motor Company has been introducing such technologies in its automotive plants around the world. These technologies have enabled Ford to produce multiple models from the same line, and to switch production from one model to another much more quickly than in the past. Ford removed \$2 billion out of its cost structure between 2006 and 2010 through flexible manufacturing.¹⁰



4.2 STRATEGY IN ACTION

Pandora: Mass Customizing Internet Radio



Jaap Arriens/Sipa USA/Newscom

Pandora Media streams music to PCs and mobile devices. Customers start by typing in the kind of music that they want to listen to. With a database of over 100,000 artists, there is a good chance that Pandora has something for you, however particular your tastes. Customers can then rate the music that Pandora plays for them (thumbs up or down). Pandora takes this feedback and refines the music it streams to a customer. The company also uses sophisticated predictive statistical analysis (what do other customers who also like this song listen to?) and product analysis (what Pandora calls its Music Genome, which analyzes songs and identifies similar songs) to further customize the experience for the individual listener. The Music Genome has the added benefit of introducing listeners to new songs they might like based on an analysis of their listening habits. The result is a radio station attuned to each

individual's unique listening preferences. This is mass customization at its most pure.

Launched in 2000, by late 2017 Pandora's annualized revenue run rate was \$1.7 billion. There were 250 million registered users and 78 million active users, giving Pandora a 69% share of the online radio market in the United States. Pandora's revenue comes primarily from advertising, although premium subscribers can pay \$109 a year and get commercial-free music.

Despite its rapid growth—a testament to the value of mass customization—Pandora does have its problems. Pandora pays more than half of its revenue in royalties to music publishers. By comparison, satellite-radio company Sirius-XM pays out only 7.5% of its revenue in the form of royalties, and cable companies that stream music pay only 15%. The different royalty rates are due to somewhat arcane regulations under which three judges who serve on the Copyright Royalty Board, an arm of the Library of Congress, set royalty fees for radio broadcasters. This method of setting royalty rates has worked against Pandora, although the company is lobbying hard to change the law. Pandora is also facing growing competition from Spotify and Rdio, two customizable music-streaming services that have sold equity stakes to recording labels in exchange for access to their music libraries. There are also reports that Apple will soon be offering its own customizable music-streaming service. Whatever happens to Pandora in the long run, however, it would seem that the mass customization of Internet radio is here to stay.

Sources: A. Fixmer, "Pandora Is Boxed in by High Royalty Fees," *Bloomberg Businessweek*, December 24, 2012; E. Smith and J. Letzing, "At Pandora Each Sales Drives up Losses," *The Wall Street Journal*, December 6, 2012; E. Savitz, "Pandora Swoons on Weak Outlook," *Forbes.com*, December 5, 2012; G. Peoples, "Pandora Revenue Up 40 percent, Listening Growth Softens," *Billboardbiz*, October 23, 2014; Craig Smith, "80 interesting Pandora statistics and facts," *DMR*, February 3, 2018.

4-2e Efficiency, Automation and Artificial Intelligence

One of the most notable developments of the last decade has been the rapid rise of robotics and the growing sophistication of artificial intelligence. We seem to be entering the age of robots.¹¹ Adoption of robots is growing rapidly. In China, the number of robots per 10,000 employees increased from 25 units in 2013 to 68 units in 2016. It is forecast to hit 150 units per 10,000 employees by 2020. In the United States, there were 189 robots per 10,000 employees in 2016, and robot installations are growing at 15% per year. In South Korea, the world leader in robot adoption, there are 631 robots per 10,000 employees.

The resulting automation of manufacturing and service activities is reducing labor costs and increasing productivity in a wide range of industries. As we saw in the Opening Case, robots are taking over the tasks of drilling holes and putting fasteners in Boeing's commercial jet aircraft. Other robots are building carbon-fiber wings automatically with minimal human involvement, transforming what used to be a very labor-intensive process into one that is highly automated. By speeding up production activities, Boeing is able to increase the output of its factories without adding any labor or floor space. For example, the output at Boeing's Renton factory near Seattle, where it builds 737 jets, doubled between 2005 and 2018, primarily as a result of automation, while the labor force increased only 30%. The consequences of such striking gains in efficiency are lower variable costs for Boeing and higher profit margins.

For another example, consider how autonomous trucks can potentially transform the trucking industry. In the United States, trucks carry more than 70% of domestic freight, and the trucking industry generates \$800 billion in annual revenues. With numerous companies from Google and Uber to Daimler Benz and Tesla investing heavily in autonomous vehicles, it seems to be only a matter of time before self-driving trucks are a standard site on American roads. By eliminating the costs associated with human labor, which include not only wages but also the enforced breaks that drivers have to take, and by optimizing driving routes based on a real-time analysis of traffic flows, autonomous vehicles could take a significant slice out of logistics costs, and lead to significant improvements in efficiency for a wide range of industries. Obvious beneficiaries include delivery companies such as United Parcel Service (UPS) and FedEx (both of which are now testing autonomous vehicles).

4-2f Marketing and Efficiency

The marketing strategy that a company adopts can have a major impact on its efficiency and cost structure. **Marketing strategy** refers to the position that a company takes with regard to market segmentation, pricing, promotion, advertising, product design, and distribution. Some of the steps leading to greater efficiency are fairly obvious. For example, moving down the experience curve to achieve a lower cost structure can be facilitated by aggressive pricing, promotion, and advertising—all of which are tasks of the marketing function. Other aspects of marketing strategy have a less obvious—but no less important—impact on efficiency. One important aspect is the relationship of customer defection rates, cost structure, and unit costs.¹²

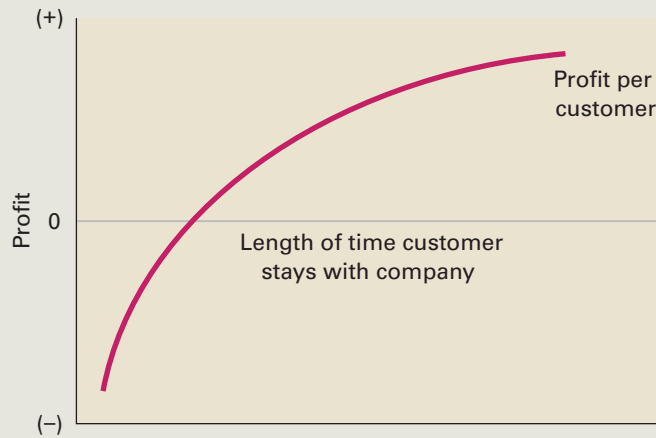
Customer defection (or “churn rate”) is the percentage of a company's customers who defect every year to competitors. Defection rates are determined by customer loyalty, which in turn is a function of the ability of a company to satisfy its customers.

marketing strategy

The position that a company takes with regard to pricing, promotion, advertising, product design, and distribution.

customer defection

The percentage of a company's customers who defect every year to competitors.

Figure 4.6 The Relationship Between Customer Loyalty and Profit per Customer

Because acquiring a new customer often entails one-time fixed costs, there is a direct relationship between defection rates and costs. For example, when a wireless service company signs up a new subscriber, it has to bear the administrative cost of opening a new account and the cost of a subsidy that it pays to the manufacturer of the handset the new subscriber chooses. There are also the costs of advertising and promotions designed to attract new subscribers. The longer a company retains a customer, the greater the volume of customer-generated unit sales that can be set against these fixed costs, and the lower the average unit cost of each sale. Thus, lowering customer defection rates allows a company to achieve a lower cost structure.

One consequence of the defection–cost relationship illustrated in Figure 4.6. Because of the relatively high fixed costs of acquiring new customers, serving customers who stay with the company only for a short time before switching to competitors often leads to a loss on the investment made to acquire those customers. The longer a customer stays with the company, the more the fixed costs of acquiring that customer can be distributed over repeat purchases, boosting the profit per customer. Thus, there is a positive relationship between the length of time that a customer stays with a company and profit per customer. A company that can reduce customer defection rates can make a much better return on its investment in acquiring customers, and thereby boost its profitability.

For example, consider the credit card business.¹³ Most credit card companies spend an average of \$50 per customer for recruitment and new account setup. These costs accrue from the advertising required to attract new customers, the credit checks required for each customer, and the mechanics of setting up an account and issuing a card. These onetime fixed costs can be recouped only if a customer stays with the company for at least 2 years. Moreover, when customers stay a second year, they tend to increase their use of the credit card, which raises the volume of revenues generated by each customer over time. As a result, although the credit card business loses \$50 per customer in year 1, it makes a profit of \$44 in year 3 and \$55 in year 6.

Another economic benefit of long-time customer loyalty is the free advertising that customers provide for a company. Loyal customers can dramatically increase the volume of business through referrals.

The key message, then, is that reducing customer defection rates and building customer loyalty can be major sources of a lower cost structure. One study has estimated that a 5% reduction in customer defection rates leads to the following increases in profits per customer over average customer life: 75% in the credit card business, 50% in the insurance brokerage industry, 45% in the industrial laundry business, and 35% in the computer software industry.¹⁴

A central component of developing a strategy to reduce defection rates is to identify customers who have defected, find out why they defected, and act on that information so that other customers do not defect for similar reasons in the future. To take these measures, the marketing function must have information systems capable of tracking customer defections.

4-2g Materials Management, Just-in-Time Systems and Efficiency

The contribution of materials management (logistics) to boosting the efficiency of a company can be just as dramatic as the contribution of production and marketing. Materials management encompasses the activities necessary to get inputs and components to a production facility (including the costs of purchasing inputs), through the production process, and out through a distribution system to the end-user.¹⁵ Because there are so many sources of cost in this process, the potential for reducing costs through more efficient materials-management strategies is enormous. For a typical manufacturing company, materials and transportation costs account for 50 to 70% of its revenues, so even a small reduction in these costs can have a substantial impact on profitability. According to one estimate, for a company with revenues of \$1 million, a return on invested capital (ROIC) of 5% and materials-management costs that amount to 50% of sales revenues (including purchasing costs), increasing total profits by \$15,000 would require either a 30% increase in sales revenues or a 3% reduction in materials costs.¹⁶ In a typical competitive market, reducing materials costs by 3% is usually much easier than increasing sales revenues by 30%.

Improving the efficiency of the materials-management function typically requires the adoption of a **just-in-time (JIT) inventory system**, which is designed to economize on inventory holding costs by scheduling components to arrive at a manufacturing plant just in time to enter the production process, or to have goods arrive at a retail store only when stock is almost depleted. The major cost saving comes from increasing inventory turnover, which reduces both inventory holding costs, such as warehousing and storage costs, and the company's need for working capital. For example, through efficient logistics, Wal-Mart can replenish the stock in its stores at least twice a week; many stores receive daily deliveries if they are needed. The typical competitor replenishes its stock every 2 weeks, so it must carry a much higher inventory, which requires more working capital per dollar of sales. Compared to its competitors, Wal-Mart can maintain the same service levels with a lower investment in inventory—a major source of its lower cost structure. Thus, faster inventory turnover has helped Wal-Mart achieve an efficiency-based competitive advantage in the retailing industry.¹⁷

More generally, in terms of the profitability model developed in Chapter 3, JIT inventory systems reduce the need for working capital (because there is less inventory

just-in-time (JIT) inventory system

System of economizing on inventory holding costs by scheduling components to arrive just in time to enter the production process or only as stock is depleted.

to finance) and the need for fixed capital to finance storage space (because there is less to store), which reduces capital needs, increases capital turnover, and, by extension, boosts ROIC.

The drawback of JIT systems is that they leave a company without a buffer stock of inventory. Although buffer stocks are expensive to store, they can help a company prepare for shortages on inputs brought about by disruption among suppliers (e.g., a labor dispute at a key supplier), and can help a company respond quickly to increases in demand. However, there are ways around these limitations. For example, to reduce the risks linked to dependence on just one supplier for an important input, a company might decide to source inputs from multiple suppliers.

Recently, the efficient management of materials and inventory has been recast in terms of **supply chain management**: the task of managing the flow of inputs and components from suppliers into the company's production processes to minimize inventory holding and maximize inventory turnover. Dell, whose goal is to streamline its supply chain to such an extent that it "replaces inventory with information," is exemplary in terms of supply chain management.

supply chain management

The task of managing the flow of inputs and components from suppliers into the company's production processes to minimize inventory holding and maximize inventory turnover.

4-2h Research and Development Strategy and Efficiency

The role of superior research and development (R&D) in helping a company achieve a greater efficiency and a lower cost structure is twofold. First, the R&D function can boost efficiency by designing products that are easy to manufacture. By cutting down on the number of parts that make up a product, R&D can dramatically decrease the required assembly time, which results in higher employee productivity, lower costs, and higher profitability. For example, after Texas Instruments redesigned an infrared sighting mechanism that it supplies to the Pentagon, it found that it had reduced the number of parts from 47 to 12, the number of assembly steps from 56 to 13, the time spent fabricating metal from 757 minutes per unit to 219 minutes per unit, and unit assembly time from 129 minutes to 20 minutes. The result was a substantial decline in production costs. Design for manufacturing requires close coordination between the production and R&D functions of the company. Cross-functional teams that contain production and R&D personnel who work jointly can best achieve this.

Pioneering process innovations is the second way in which the R&D function can help a company achieve a lower cost structure. A process innovation is a new, unique way that production processes can operate more efficiently. Process innovations are often a major source of competitive advantage. Toyota's competitive advantage is based partly on the company's invention of new, flexible manufacturing processes that dramatically reduced setup times. This process innovation enabled Toyota to obtain efficiency gains associated with flexible manufacturing systems years ahead of its competitors.

4-2i Human Resource Strategy and Efficiency

Employee productivity is a key determinant of an enterprise's efficiency, cost structure, and profitability.¹⁸ Productive manufacturing employees can lower the cost of goods sold as a percentage of revenues; a productive sales force can increase sales revenues for a given level of expenses; and productive employees in the company's R&D function can boost the percentage of revenues generated from new products for a given level of R&D expenses. Thus, productive employees lower the costs of generating revenues,

increase the return on sales, and, by extension, boost the company's ROIC. The challenge for a company's human resource function is to devise ways to increase employee productivity. Among its choices are using strategic hiring strategies, training employees, organizing the workforce into self-managing teams, and linking pay to performance.

Hiring Strategy Many companies that are well known for their productive employees devote considerable attention to hiring. Southwest Airlines hires people who have a positive attitude and who work well in teams because it believes that people who have a positive attitude will work hard and interact well with customers, therefore helping to create customer loyalty. Nucor hires people who are self-reliant and goal-oriented because its employees, who work in self-managing teams, require these skills to perform well. As these examples suggest, it is important to assure that the hiring strategy of the company is consistent with its internal organization, culture, and strategic priorities. A company's hires should have attributes that match its strategic objectives.

Employee Training Employees are a major input into the production process. Those who are highly skilled can perform tasks faster and more accurately, and are more likely to learn the complex tasks associated with many modern production methods than are individuals with lesser skills. Training upgrades employee skill levels, bringing the company productivity-related efficiency gains from learning and experimentation.¹⁹

self-managing teams

Teams where members coordinate their own activities and make their own hiring, training, work, and reward decisions.

Self-Managing Teams The use of **self-managing teams**, whose members coordinate their own activities and make their own hiring, training, work, and reward decisions, has been spreading rapidly. The typical team comprises 5 to 15 employees who produce an entire product or undertake an entire task. Team members learn all team tasks and rotate from job to job. Because a more flexible workforce is one result, team members can fill in for absent coworkers and take over managerial duties such as scheduling work and vacation, ordering materials, and hiring new members. The greater responsibility delegated to team members, and the empowerment that it implies, are seen as motivators. (*Empowerment* is the process of giving lower-level employees decision-making power.) People often respond well to being given greater autonomy and responsibility. Performance bonuses linked to team production and quality targets work as an additional motivator.

The effect of introducing self-managing teams is reportedly an increase in productivity of 30% or more and a substantial increase in product quality. Further cost savings arise from eliminating supervisors and creating a flatter organizational hierarchy, which lowers the cost structure of the company. In manufacturing companies, perhaps the most potent way to lower the cost structure is to combine self-managing teams with flexible manufacturing cells. For example, after the introduction of flexible manufacturing technology and work practices based on self-managing teams, a General Electric (GE) plant in Salisbury, North Carolina, increased productivity by 250% compared with GE plants that produced the same products 4 years earlier.²⁰

Still, teams are no panacea. In manufacturing companies, self-managing teams may fail to live up to their potential unless they are integrated with flexible manufacturing technology. Also, many management responsibilities are placed upon team members, and helping them cope with these responsibilities often requires substantial training—a fact that many companies often forget in their rush to drive down costs. Haste can result in teams that don't work out as well as planned.²¹

Pay for Performance It is hardly surprising that linking pay to performance can help increase employee productivity, but the issue is not quite as simple as just introducing incentive pay systems. It is also important to define what kind of job performance is to be rewarded and how. Some of the most efficient companies in the world, mindful that cooperation among employees is necessary to realize productivity gains, link pay to group or team (rather than individual) performance. Nucor Steel divides its workforce into teams of about 30, with bonus pay, which can amount to 30% of base pay, linked to the ability of the team to meet productivity and quality goals. This link creates a strong incentive for individuals to cooperate in pursuit of team goals; that is, it facilitates teamwork.

4-2j Information Systems and Efficiency

With the rapid spread of computers and digital devices such as smart phones, the ubiquity of the Internet and corporate intranets (internal corporate computer networks based on Internet standards), and the spread of high-bandwidth fiber-optics and digital wireless technology, the information systems function has moved to center stage in the quest for operating efficiencies and a lower cost structure.²² The impact of information systems on productivity is wide ranging and potentially affects all other activities of a company. For example, Cisco Systems was able to realize significant cost savings by moving its ordering and customer service functions online. The company found it could operate with just 300 service agents handling all of its customer accounts, compared to the 900 it would need if sales were not handled online. The difference represented an annual savings of \$20 million a year. Moreover, without automated customer service functions, Cisco calculated that it would need at least 1,000 additional service engineers, at a cost of close to \$75 million.²³

Like Cisco, many companies are using web-based information systems to reduce the costs of coordination between the company and its customers and the company and its suppliers. By using web-based programs to automate customer and supplier interactions, they can substantially reduce the staff required to manage these interfaces, thereby reducing costs. This trend extends beyond high-tech companies. Banks and financial-service companies have found that they can substantially reduce costs by moving customer accounts and support functions online. Such a move reduces the need for customer service representatives, bank tellers, stockbrokers, insurance agents, and others. For example, it costs an average of about \$1.07 to execute a transaction at a bank, such as shifting money from one account to another; executing the same transaction over the Internet costs \$0.01.²⁴

Similarly, the concept behind Internet-based retailers such as Amazon.com is that replacing physical stores and their supporting personnel with an online, virtual store and automated ordering and checkout processes allows a company to eliminate significant costs from the retailing system. Cost savings can also be realized by using web-based information systems to automate many internal company activities, from managing expense reimbursements to benefits planning and hiring processes, thereby reducing the need for internal support personnel.

4-2k Infrastructure and Efficiency

A company's infrastructure—including its organizational structure, culture, style of strategic leadership, and control system—determines the context within which all other value creation activities take place. It follows that improving infrastructure can

help a company increase efficiency and lower its cost structure. Above all, an appropriate infrastructure can help foster a companywide commitment to efficiency and promote cooperation among different functions in pursuit of efficiency goals. These issues are addressed at length in Chapter 12.

For now, it is important to note that strategic leadership is especially important in building a companywide commitment to efficiency. The leadership task is to articulate a vision that recognizes the need for all functions of a company to focus on improving efficiency. It is not enough to improve the efficiency of production, or of marketing, or of R&D in a piecemeal fashion. Achieving superior efficiency requires a companywide commitment to this goal that must be articulated by general and functional managers. A further leadership task is to facilitate the cross-functional cooperation needed to achieve superior efficiency. For example, designing products that are easy to manufacture requires that production and R&D personnel communicate; integrating JIT systems with production scheduling requires close communication between materials management and production; and designing self-managing teams to perform production tasks requires close cooperation between human resources and production.

4-2| Summary

Table 4.1 summarizes the primary roles of various functions in achieving superior efficiency. Keep in mind that achieving superior efficiency is not something that can be tackled on a function-by-function basis. It requires organizationwide commitment and

Table 4.1 Primary Roles of Value Creation Functions in Achieving Superior Efficiency

Value Creation Function	Primary Role
Infrastructure (leadership)	<ol style="list-style-type: none"> 1. Provide companywide commitment to efficiency. 2. Facilitate cooperation among functions.
Production	<ol style="list-style-type: none"> 1. Where appropriate, pursue economies of scale and learning economics. 2. Implement flexible manufacturing systems.
Marketing	<ol style="list-style-type: none"> 1. Where appropriate, adopt aggressive marketing to ride down the experience curve. 2. Limit customer defection rates by building brand loyalty.
Materials management	<ol style="list-style-type: none"> 1. Implement JIT systems. 2. Implement supply chain coordination.
R&D	<ol style="list-style-type: none"> 1. Design products for ease of manufacture. 2. Seek process innovations.
Information systems	<ol style="list-style-type: none"> 1. Use information systems to automate processes. 2. Use information systems to reduce costs of coordination.
Human resources	<ol style="list-style-type: none"> 1. Institute training programs to build skills. 2. Implement self-managing teams. 3. Implement pay for performance.

the ability to ensure close cooperation among functions. Top management, by exercising leadership and influencing the infrastructure, plays a significant role in this process.

4-3 ACHIEVING SUPERIOR QUALITY

In Chapter 3, we noted that quality can be thought of in terms of two dimensions: *quality as reliability* and *quality as excellence*. High-quality products are reliable, do well the job for which they were designed, and are perceived by consumers to have superior attributes. We also noted that superior quality provides a company with two advantages. First, a strong reputation for quality allows a company to differentiate its products from those offered by rivals, thereby creating more value in the eyes of customers and giving the company the option of charging a premium price for its products. Second, eliminating defects or errors from the production process reduces waste, increases efficiency, lowers the cost structure of the company, and increases its profitability. For example, reducing the number of defects in a company's manufacturing process will lower the cost of goods sold as a percentage of revenues, thereby raising the company's return on sales and ROIC. In this section, we look in more depth at what managers can do to enhance the reliability and other attributes of the company's product offering.

4-3a Attaining Superior Reliability

The principal tool that most managers now use to increase the reliability of their product offering is the Six Sigma quality improvement methodology. Six Sigma is a direct descendant of the **total quality management (TQM)** philosophy that was widely adopted, first by Japanese companies and then by American companies, during the 1980s and early 1990s.²⁵ The TQM concept was developed by a number of American management consultants, including W. Edwards Deming, Joseph Juran, and A. V. Feigenbaum.²⁶

Originally, these consultants won few converts in the United States. However, managers in Japan embraced their ideas enthusiastically, and even named their premier annual prize for manufacturing excellence after Deming. Underlying TQM, according to Deming, are five factors:

1. Improved quality means that costs decrease because of less rework, fewer mistakes, fewer delays, and better use of time and materials.
2. As a result, productivity improves.
3. Better quality leads to higher market share and allows the company to raise prices.
4. Higher prices increase the company's profitability and allow it to stay in business.
5. Thus, the company creates more jobs.²⁷

Deming identified a number of steps that should be part of any quality improvement program:

1. Management should embrace the philosophy that mistakes, defects, and poor-quality materials are not acceptable and should be eliminated.
2. Quality of supervision should be improved by allowing more time for supervisors to work with employees, and training employees in appropriate skills for the job.

total quality management (TQM)

Increasing product reliability so that it consistently performs as it was designed to and rarely breaks down.

3. Management should create an environment in which employees will not fear reporting problems or recommending improvements.
4. Work standards should not only be defined as numbers or quotas, but should also include some notion of quality to promote the production of defect-free output.
5. Management is responsible for training employees in new skills to keep pace with changes in the workplace.
6. Achieving better quality requires the commitment of everyone in the company.

Western businesses were blind to the importance of the TQM concept until Japan rose to the top rank of economic powers in the 1980s. Since that time, quality improvement programs have spread rapidly throughout Western industry. Strategy in Action 4.3 describes one of the most successful implementations of a quality improvement process, GE's Six Sigma program.

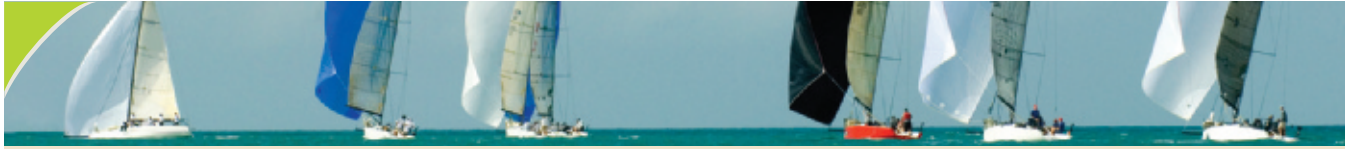
4-3b Implementing Reliability Improvement Methodologies

Among companies that have successfully adopted quality improvement methodologies, certain imperatives stand out. These are discussed in the following sections in the order in which they are usually tackled in companies implementing quality improvement programs. However, it is essential to understand that improvement in product reliability is a cross-functional process. Its implementation requires close cooperation among all functions in the pursuit of the common goal of improving quality; it is a process that works across functions. The roles played by the different functions in implementing reliability improvement methodologies are summarized in Table 4.2.

First, it is important that senior managers agree to a quality improvement program and communicate its importance to the organization. Second, if a quality improvement program is to be successful, individuals must be identified to lead the program. Under the Six Sigma methodology, exceptional employees are identified and put through a “black belt” training course on the Six Sigma methodology. The black belts are taken out of their normal job roles, and assigned to work solely on Six Sigma projects for the next 2 years. In effect, the black belts become internal consultants *and* project leaders. Because they are dedicated to Six Sigma programs, the black belts are not distracted from the task at hand by day-to-day operating responsibilities. To make a black belt assignment attractive, many companies now endorse the program as an advancement in a career path. Successful black belts might not return to their prior job after 2 years, but could instead be promoted and given more responsibility.

Third, quality improvement methodologies preach the need to identify defects that arise from processes, trace them to their source, find out what caused the defects, and make corrections so that they do not recur. Production and materials management are primarily responsible for this task. To uncover defects, quality improvement methodologies rely upon the use of statistical procedures to pinpoint variations in the quality of goods or services. Once variations have been identified, they must be traced to their respective sources and eliminated.

One technique that helps greatly in tracing defects to the source is reducing lot sizes for manufactured products. With short production runs, defects show up immediately. Consequently, they can quickly be sourced, and the problem can be rectified. Reducing lot sizes also means that defective products will not be produced in large lots, thus decreasing waste. Flexible manufacturing techniques can be used to reduce



4.3 STRATEGY IN ACTION

General Electric's Six Sigma Quality Improvement Process

Six Sigma, a quality and efficiency program adopted by many major corporations, including Motorola, General Electric, and AlliedSignal, aims to reduce defects, boost productivity, eliminate waste, and cut costs throughout a company. "Sigma" refers to the Greek letter that statisticians use to represent a standard deviation from a mean: the higher the number of sigmas, the smaller the number of errors. At Six Sigma, a production process would be 99.99966% accurate, creating just 3.4 defects per million units. Although it is almost impossible for a company to achieve such precision, several companies strive toward that goal.

General Electric (GE) is perhaps the most well-known adopter of the Six Sigma program. Under the direction of long-serving CEO Jack Welch, GE spent nearly \$1 billion to convert all of its divisions to the Six Sigma method.

One of the first products designed using Six Sigma processes was a \$1.25-million diagnostic computed tomography (CT) scanner, the LightSpeed VCT, which produces rapid, three-dimensional images of the human body. The new scanner captured multiple images simultaneously, requiring only 20 seconds to do full-body scans that once took 3 minutes—important because patients must remain perfectly still during the scan. GE spent \$50 million to run 250 separate Six Sigma analyses designed to improve the reliability and lower the manufacturing cost of the new scanner. Its efforts were rewarded when LightSpeed VCT's first customers soon noticed that it ran without downtime between patients—a testament to its reliability.

Achieving that reliability took immense work. GE's engineers deconstructed the scanner into its basic

components and tried to improve the reliability of each one through a detailed, step-by-step analysis. For example, the most important components of CT scanners are vacuum tubes that focus x-ray waves. The tubes that GE used in previous scanners, which cost \$60,000 each, suffered from low reliability. Hospitals and clinics wanted the tubes to operate for 12 hours a day for at least 6 months, but typically they lasted only half that long. Moreover, GE was scrapping some \$20 million in tubes each year because they failed preshipping performance tests, and disturbing numbers of faulty tubes were slipping past inspection, only to prove dysfunctional upon arrival.

To try to solve the reliability problem, the Six Sigma team disassembled the tubes. They knew that one problem was a petroleum-based oil used in the tubes to prevent short circuits by isolating the anode (which has a positive charge) from the negatively charged cathode. The oil often deteriorated after a few months, leading to short circuits, but the team did not know why. Using statistical "what-if" scenarios on all parts of the tube, the researchers discovered that the lead-based paint on the inside of the tube was contaminating the oil. Acting on this information, the team developed a paint that would preserve the tube and protect the oil.

By pursuing this and other improvements, the Six Sigma team was able to extend the average life of a vacuum tube in the CT scanner from 3 months to over 1 year. Although the improvements increased the cost of the tube from \$60,000 to \$85,000, the increased cost was outweighed by the reduction in replacement costs, making it an attractive proposition for customers.

Sources: C. H. Deutsch, "Six-Sigma Enlightenment," *New York Times*, December 7, 1998, p. 1; J. J. Barshay, "The Six-Sigma Story," *Star Tribune*, June 14, 1999, p. 1; D. D. Bak, "Rethinking Industrial Drives," *Electrical/Electronics Technology*, November 30, 1998, p. 58. G. Eckes, *The Six-Sigma Revolution* (New York: Wiley, 2000); General Electric, "What Is Six Sigma?" <http://www.ge.com/en/company/companyinfo/quality/whatis.htm>.

Table 4.2 Roles Played by Different Functions in Implementing Reliability Improvement Methodologies

Infrastructure (leadership)	<ol style="list-style-type: none"> 1. Provide leadership and commitment to quality. 2. Find ways to measure quality. 3. Set goals and create incentives. 4. Solicit input from employees. 5. Encourage cooperation among functions.
Production	<ol style="list-style-type: none"> 1. Shorten production runs. 2. Trace defects back to the source.
Marketing	<ol style="list-style-type: none"> 1. Focus on the customer. 2. Provide customer feedback on quality.
Materials management	<ol style="list-style-type: none"> 1. Rationalize suppliers. 2. Help suppliers implement quality improvement methodologies. 3. Trace defects back to suppliers.
R&D	<ol style="list-style-type: none"> 1. Design products that are easy to manufacture.
Information systems	<ol style="list-style-type: none"> 1. Use information systems to monitor defect rates.
Human resources	<ol style="list-style-type: none"> 1. Institute quality improvement training programs. 2. Identify and train black belts. 3. Organize employees into quality teams

lot sizes without raising costs. JIT inventory systems also play a part. Under a JIT system, defective parts enter the manufacturing process immediately. They are not warehoused for several months before use. Hence, defective inputs can be quickly spotted. The problem can then be traced to the supply source and corrected before more defective parts are produced. Under a more traditional system, the practice of warehousing parts for months before they are used may mean that suppliers deliver large quantities of parts with defects before they are detected in the production process.

Fourth, another key to any quality improvement program is to create a metric that can be used to measure quality. In manufacturing companies, quality can be measured by criteria such as defects per million parts. In service companies, suitable metrics can be devised with a little creativity. For example, one of the metrics Florida Power & Light uses to measure quality is meter-reading errors per month.

Fifth, once a metric has been devised, the next step is to set a challenging quality goal and create incentives for reaching it. Under Six Sigma programs, the goal is 3.4 defects per million units. One way of creating incentives to attain such a goal is to link rewards such as bonus pay and promotional opportunities to the goal.

Sixth, shop floor employees can be a major source of ideas for improving product quality, so these employees must participate and be incorporated into a quality improvement program.

Seventh, a major source of poor-quality finished goods is poor-quality component parts. To decrease product defects, a company must work with its suppliers to improve the quality of the parts they supply.

Eighth, the more assembly steps a product requires, the more opportunities there are for mistakes. Thus, designing products with fewer parts is often a major component of any quality improvement program.

Finally, implementing quality improvement methodologies requires organizationwide commitment and substantial cooperation among functions. R&D must cooperate with production to design products that are easy to manufacture; marketing must cooperate with production and R&D so that customer problems identified by marketing can be acted on; and human resource management must cooperate with all the other functions of the company in order to devise suitable quality-training programs.

4-3c Improving Quality as Excellence

As we stated in Chapter 3, a product is comprised of different attributes. Reliability is just one attribute, albeit an important one. Products can also be *differentiated* by attributes that collectively define product excellence. These attributes include the form, features, performance, durability, and styling of a product. In addition, a company can create quality as excellence by emphasizing attributes of the service associated with the product. Dell Inc., for example, differentiates itself on ease of ordering (via the Web), prompt delivery, easy installation, and the ready availability of customer support and maintenance services. Differentiation can also be based on the attributes of the people in the company with whom customers interact when making a purchase, such as competence, courtesy, credibility, responsiveness, and communication. Singapore Airlines enjoys an excellent reputation for quality service, largely because passengers perceive their flight attendants as competent, courteous, and responsive to their needs. Thus, we can talk about the product attributes, service attributes, and personnel attributes associated with a company's product offering (see Table 4.3).

To be regarded as being high in the excellence dimension, a company's product offering must be seen as superior to that of rivals. Achieving a perception of high quality on any of these attributes requires specific actions by managers. First, it is important for managers to collect marketing intelligence indicating which attributes are most

Table 4.3 Attributes Associated with a Product Offering

Product Attributes	Service Attributes	Associated Personnel Attributes
Form	Ordering ease	Competence
Features	Delivery	Courtesy
Performance	Installation	Credibility
Durability	Customer training	Reliability
Reliability	Customer consulting	Responsiveness
Style	Maintenance and repair	Communication

important to customers. For example, consumers of PCs may place a low weight on durability because they expect their PCs to be made obsolete by technological advances within 3 years, but they may place a high weight on features and performance. Similarly, ease of ordering and timely delivery may be very important attributes for customers of online booksellers (as indeed they are for customers of Amazon.com), whereas customer training and consulting may be very important attributes for customers who purchase complex, business-to-business software to manage their relationships with suppliers.

Second, once the company has identified the attributes that are important to customers, it needs to design its products (and the associated services) in such a way that those attributes are embodied in the product. It also needs to train personnel in the company so that the appropriate attributes are emphasized during design creation. This requires close coordination between marketing and product development (the topic of the next section) and the involvement of the human resource management function in employee selection and training.

Third, the company must decide which significant attributes to promote and how best to position them in the minds of consumers; that is, how to tailor the marketing message so that it creates a consistent image in the minds of customers.²⁸ At this point, it is important to recognize that although a product might be differentiated on the basis of six attributes, covering all of those attributes in the company's communications may lead to an unfocused message. Many marketing experts advocate promoting only one or two central attributes. For example, Volvo consistently emphasizes the safety and durability of its vehicles in all marketing messages, creating the perception in the minds of consumers (backed by product design) that Volvos are safe and durable. Volvos are also very reliable and have high performance, but the company does not emphasize these attributes in its marketing messages. In contrast, Porsche emphasizes performance and styling in all of its marketing messages; thus, a Porsche is positioned differently in the minds of consumers than Volvo. Both are regarded as high-quality products because both have superior attributes, but each company differentiates its models from the average car by promoting distinctive attributes.

Finally, it must be recognized that competition is not stationary, but instead continually produces improvement in product attributes, and often the development of new-product attributes. This is obvious in fast-moving high-tech industries where product features that were considered leading edge just a few years ago are now obsolete—but the same process is also at work in more stable industries. For example, the rapid diffusion of microwave ovens during the 1980s required food companies to build new attributes into their frozen-food products: they had to maintain their texture and consistency while being cooked in the microwave; a product could not be considered high quality unless it could do that. This speaks to the importance of a strong R&D function within the company that can work with marketing and manufacturing to continually upgrade the quality of the attributes that are designed into the company's product offerings. Exactly how to achieve this is covered in the next section.

4-4 ACHIEVING SUPERIOR INNOVATION

In many ways, innovation is the most important source of competitive advantage. This is because innovation can result in new products that better satisfy customer needs, can improve the quality (attributes) of existing products, or can reduce the costs of

making products that customers want. The ability to develop innovative new products or processes gives a company a major competitive advantage that allows it to: (1) differentiate its products and charge a premium price, and/or (2) lower its cost structure below that of its rivals. Competitors, however, attempt to imitate successful innovations and often succeed. Therefore, maintaining a competitive advantage requires a continuing commitment to innovation.

Successful new-product launches are major drivers of superior profitability. Robert Cooper reviewed more than 200 new-product introductions and found that of those classified as successes, some 50% achieve a return on investment in excess of 33%, half have a payback period of 2 years or less, and half achieve a market share in excess of 35%.²⁹ Many companies have established a track record for successful innovation. Among them are Apple, whose successes include the iPod, iPhone, and iPad; Pfizer, a drug company that during the 1990s and early 2000s produced eight new blockbuster drugs; 3M, which has applied its core competency in tapes and adhesives to developing a wide range of new products; and Intel, which has consistently managed to lead in the development of innovative microprocessors to run PCs.

4-4a The High Failure Rate of Innovation

Although promoting innovation can be a source of competitive advantage, the failure rate of innovative products is high. Research evidence suggests that only 10 to 20% of major R&D projects give rise to commercial products.³⁰ Well-publicized product failures include Apple's Newton, an early, handheld computer that flopped in the marketplace; Sony's Betamax format in the videocassette recorder segment; Sega's Dreamcast videogame console; and Windows Mobile, an early smartphone operating system created by Microsoft that was made obsolete in the eyes of consumers by the arrival of Apple's iPhone. Although many reasons have been advanced to explain why so many new products fail to generate an economic return, five explanations for failure repeatedly appear.³¹

First, many new products fail because the demand for innovation is inherently uncertain. It is impossible to know prior to market introduction whether the new product has tapped an unmet customer need, and if there is sufficient market demand to justify manufacturing the product. Although good market research can reduce the uncertainty about likely future demand for a new technology, that uncertainty cannot be fully eradicated; a certain failure rate is to be expected.

Second, new products often fail because the technology is poorly commercialized. This occurs when there is definite customer demand for a new product, but the product is not well adapted to customer needs because of factors such as poor design and poor quality. For instance, the failure of Microsoft to establish an enduring, dominant position in the market for smartphones, despite the fact that phones using the Windows Mobile operating system were introduced in 2003—4 years before Apple's iPhone hit the market—can be traced to its poor design. Windows Mobile phones had a physical keyboard, and a small, cluttered screen that was difficult to navigate, which made the product unattractive to many consumers. In contrast, the iPhone's large touchscreen and associated keyboard appealed to many consumers, who rushed out to buy it in droves.

Third, new products may fail because of poor positioning strategy. **Positioning strategy** is the specific set of options a company adopts for a product based upon four main dimensions of marketing: price, distribution, promotion and advertising,

positioning strategy

The specific set of options a company adopts for a product based upon four main dimensions of marketing: price, distribution, promotion and advertising, and product features.

and product features. Apart from poor design, another reason for the failure of Windows Mobile phones was poor positioning strategy. They were targeted at business users, whereas Apple developed a mass market by targeting the iPhone at retail consumers.

Fourth, many new-product introductions fail because companies make the mistake of marketing a technology for which there is not enough demand. A company can become blinded by the wizardry of a new technology and fail to determine whether there is sufficient customer demand for it. A classic example is the Segway two-wheeled personal transporter. Despite the fact that its gyroscopic controls were highly sophisticated, and that the product introduction was accompanied by massive media hype, sales fell well below expectations when it transpired that most consumers had no need for such a conveyance.

Finally, companies fail when products are slowly marketed. The more time that elapses between initial development and final marketing—the slower the “cycle time”—the more likely it is that a competitor will beat the company to market and gain a first-mover advantage.³² In the car industry, General Motors (GM) long suffered from being a slow innovator. Its typical product development cycle used to be about 5 years, compared with 2 to 3 years at Honda, Toyota, and Mazda, and 3 to 4 years at Ford. Because GM’s offerings were based on 5-year-old technology and design concepts, they are already out of date when they reached the market.

4-4b Reducing Innovation Failures

One of the most important things that managers can do to reduce the high failure rate associated with innovation is to make sure that there is tight integration between R&D, production, and marketing.³³ Tight, cross-functional integration can help a company ensure that:

1. Product development projects are driven by customer needs.
2. New products are designed for ease of manufacture.
3. Development costs are not allowed to spiral out of control.
4. The time it takes to develop a product and bring it to market is minimized.
5. Close integration between R&D and marketing is achieved to ensure that product development projects are driven by the needs of customers.

Customers can be a primary source of new-product ideas. The identification of customer needs, particularly unmet needs, can set the context within which successful product innovation takes place. As the point of contact with customers, the marketing function can provide valuable information. Moreover, integrating R&D and marketing is crucial if a new product is to be properly commercialized—otherwise, a company runs the risk of developing products for which there is little or no demand.

Integration between R&D and production can help a company ensure that products are designed with manufacturing requirements in mind. Design for manufacturing lowers manufacturing costs and leaves less room for error. Thus it can lower costs and increase product quality. Integrating R&D and production can help lower development costs and speed products to market. If a new product is not designed with manufacturing capabilities in mind, it may prove too difficult to build with existing manufacturing technology. In that case, the product will need to be redesigned, and both overall development costs and time to market may increase

significantly. Making design changes during product planning can increase overall development costs by 50%, and add 25% to the time it takes to bring the product to market.³⁴

One of the best ways to achieve cross-functional integration is to establish cross-functional product development teams composed of representatives from R&D, marketing, and production. The objective of a team should be to oversee a product development project from initial concept development to market introduction. Specific attributes appear to be important in order for a product development team to function effectively and meet all its development milestones.³⁵

First, a project manager who has high status within the organization and the power and authority required to secure the financial and human resources that the team needs to succeed should lead the team and be dedicated primarily, if not entirely, to the project. The leader should believe in the project (be a champion for the project) and be skilled at integrating the perspectives of different functions and helping personnel from different functions work together for a common goal. The leader should also act as an advocate of the team to senior management.

Second, the team should be composed of at least one member from each key function or position. Individual team members should have a number of attributes, including an ability to contribute functional expertise, high standing within their function, a willingness to share responsibility for team results, and an ability to put functional advocacy aside. It is generally preferable if core team members are 100% dedicated to the project for its duration. This ensures that their focus is on the project, not on their ongoing, individual work.

Third, team members work in proximity to one another to create a sense of camaraderie and facilitate communication. Fourth, the team should have a clear plan and clear goals, particularly with regard to critical development milestones and development budgets. The team should have incentives to attain those goals; for example, bonuses paid when major development milestones are attained. Fifth, each team needs to develop its own processes for communication, as well as conflict resolution. For example, one product development team at Quantum Corporation, a California-based manufacturer of disk drives for PCs, mandated that all major decisions would be made and conflicts resolved during meetings that were held every Monday afternoon. This simple rule helped the team meet its development goals.³⁶

Finally, there is substantial evidence that developing competencies in innovation requires managers to proactively learn from their experience with product development, and to incorporate the lessons from past successes and failures into future new-product development processes.³⁷ This is easier said than done. To learn, managers need to undertake an objective assessment after a product development project has been completed, identifying key success factors and the root causes of failures, and allocating resources to repairing failures. Leaders also must admit their own failures if they are to encourage other team members to responsibly identify what they did wrong.

The primary role that the various functions play in achieving superior innovation is summarized in Table 4.4. The table makes two matters clear. First, top management must bear primary responsibility for overseeing the entire development process. This entails both managing the development process and facilitating cooperation among the functions. Second, the effectiveness of R&D in developing new products and processes depends upon its ability to cooperate with marketing and production.

Table 4.4 Functional Roles for Achieving Superior Innovation

Value Creation Function	Primary Role
Infrastructure (leadership)	<ol style="list-style-type: none"> 1. Manage overall project (i.e., manage the development function). 2. Facilitate cross-functional cooperation.
Production	<ol style="list-style-type: none"> 1. Cooperate with R&D on designing products that are easy to manufacture. 2. Work with R&D to develop process innovations.
Marketing	<ol style="list-style-type: none"> 1. Provide market information to R&D. 2. Work with R&D to develop new products.
Materials management	No primary responsibility.
R&D	<ol style="list-style-type: none"> 1. Develop new products and processes. 2. Cooperate with other functions, particularly marketing and manufacturing, in the development process.
Information systems	<ol style="list-style-type: none"> 1. Use information systems to coordinate cross-functional, cross-company product development.
Human resources	<ol style="list-style-type: none"> 1. Hire talented scientists and engineers.

4-5 ACHIEVING SUPERIOR CUSTOMER RESPONSIVENESS

To achieve superior customer responsiveness, a company must give customers what they want, when they want it, and at a price they are willing to pay—and not compromise the company's long-term profitability in the process. Customer responsiveness is an important differentiating attribute that can help build brand loyalty. Strong product differentiation and brand loyalty give a company more pricing options; it can charge a premium price for its products, or keep prices low to sell more goods and services to customers. Whether prices are at a premium or kept low, the company that is most responsive to customers' needs will gain the competitive advantage.

Achieving superior responsiveness to customers means giving customers value for their money, and steps taken to improve the efficiency of a company's production process and the quality of its products should be consistent with this aim. In addition, giving customers what they want may require the development of new products with new features. In other words, achieving superior efficiency, quality, and innovation are all part of achieving superior responsiveness to customers. There are two other prerequisites for attaining this goal. First, a company must develop a competency in listening to its customers, focusing on its customers, and investigating and identifying their needs. Second, it must constantly seek better ways to satisfy those needs.

4-5a Focusing on the Customer

A company cannot respond to its customers' needs unless it knows what those needs are. Thus, the first step to building superior customer responsiveness is to motivate the entire company to focus on the customer. The means to this end are demonstrating leadership, shaping employee attitudes, and using mechanisms for making sure that customer needs are well known within the company.

4-5b Demonstrating Leadership

Customer focus must emanate from the top of the organization on down. A commitment to superior responsiveness to customers brings attitudinal changes throughout a company that can only be built through strong leadership. A mission statement that puts customers first is one way to send a clear message to employees about the desired focus. Another avenue is top management's own actions. For example, Tom Monaghan, the founder of Domino's Pizza, stayed close to the customer by eating Domino's pizza regularly, visiting as many stores as possible every week, running some deliveries himself, and insisting that top managers do the same.³⁸

4-5c Shaping Employee Attitudes

Leadership alone is not enough to attain superior customer responsiveness. All employees must see the customer as the focus of their activity and be trained to concentrate on the customer—whether their function is marketing, manufacturing, R&D, or accounting. The objective should be to put employees in customers' shoes, a perspective that enables them to become better able to identify ways to improve the quality of a customer's experience with the company.

To reinforce this mindset, incentive systems should reward employees for satisfying customers. For example, senior managers at the Four Seasons hotel chain, who pride themselves on customer focus, tell the story of Roy Dymont, a doorman in Toronto who neglected to load a departing guest's briefcase into his taxi. The doorman called the guest, a lawyer, in Washington, D.C., and found that he desperately needed the briefcase for a morning meeting. Dymont hopped on a plane to Washington and returned it—without first securing approval from his boss. Far from punishing Dymont for not checking with management before going to Washington, Four Seasons responded by naming Dymont Employee of the Year.³⁹ This sent a powerful message to Four Seasons employees, stressing the importance of satisfying customer needs.

4-5d Knowing Customer Needs

"Know thy customer" is one of the keys to achieving superior responsiveness to customers. Knowing the customer not only requires that employees think like customers; it also demands that they listen to what customers have to say. This involves communicating customers' opinions by soliciting feedback from customers on the company's goods and services, and by building information systems that disseminate the feedback to the relevant people.

For an example, consider clothing retailer Lands' End. Through its catalog, the Internet, and customer-service telephone operators, Lands' End actively solicits

comments about the quality of its clothing and the kind of merchandise customers want Lands' End to supply. Indeed, it was customer insistence that initially prompted the company to move into the clothing segment. Lands' End formerly supplied equipment for sailboats through mail-order catalogs. However, it received so many requests from customers to include outdoor clothing in its offering that it responded by expanding the catalog to fill this need. Soon, clothing became its main business, and Lands' End ceased selling sailboat equipment. Today, the company continues to pay close attention to customer requests. Every month, data on customer requests and comments is reported to managers. This feedback helps the company fine-tune the merchandise it sells; new lines of merchandise are frequently introduced in response to customer requests.

4-5e Satisfying Customer Needs

Once customer focus is integral to the organization, the next requirement is to satisfy those customer needs that have been identified. As already noted, efficiency, quality, and innovation are crucial competencies that help a company satisfy customer needs. Beyond that, companies can provide a higher level of satisfaction if they differentiate their products by (1) customizing them, where possible, to the requirements of individual customers, and (2) reducing the time it takes to respond to or satisfy customer needs.

Customization Customization involves varying the features of a good or service to tailor it to the unique needs or tastes of a group of customers, or—in the extreme case—individual customers. Although extensive customization can raise costs, the development of flexible manufacturing technologies has made it possible to customize products to a greater extent than was feasible 10 to 15 years ago, without experiencing a prohibitive rise in cost structure (particularly when flexible manufacturing technologies are linked with web-based information systems). For example, online retailers such as Amazon.com have used web-based technologies to develop a homepage customized for each individual user. When a customer accesses Amazon.com, he or she is offered a list of recommended books and music to purchase based on an analysis of prior buying history—a powerful competency that gives Amazon.com a competitive advantage.

The trend toward customization has fragmented many markets, particularly customer markets, into ever-smaller niches. An example of this fragmentation occurred in Japan in the early 1980s, when Honda dominated the motorcycle market there. Second-place Yamaha was determined to surpass Honda's lead. It announced the opening of a new factory that, when operating at full capacity, would make Yamaha the world's largest manufacturer of motorcycles. Honda responded by proliferating its product line and increasing its rate of new-product introduction. At the start of what became known as the "Motorcycle Wars," Honda had 60 motorcycles in its product line. Over the next 18 months thereafter, it rapidly increased its range to 113 models, customizing them to ever-smaller niches. Because of its competency in flexible manufacturing, Honda accomplished this without bearing a prohibitive cost penalty. The flood of Honda's customized models pushed Yamaha out of much of the market, effectively stalling its bid to overtake Honda.⁴⁰

Response Time To gain a competitive advantage, a company must often respond to customer demands very quickly, whether the transaction is a furniture manufacturer's

completion of an order, a bank's processing of a loan application, an automobile manufacturer's delivery of a spare part, or the wait in a supermarket checkout line. We live in a fast-paced society where time is a valuable commodity. Companies that can satisfy customer demands for rapid response build brand loyalty, differentiate their products, and can charge higher prices for products.

Increased speed often lets a company opt for premium pricing, as the mail delivery industry illustrates. The air-express niche of the mail delivery industry is based on the notion that customers are often willing to pay substantially more for overnight express mail than for regular mail. Another exemplar of the value of rapid response is Caterpillar, the manufacturer of heavy-earthmoving equipment, which can deliver a spare part to any location in the world within 24 hours. Downtime for heavy-construction equipment is very costly, so Caterpillar's ability to respond quickly in the event of equipment malfunction is of prime importance to its customers. As a result, many customers have remained loyal to Caterpillar despite the aggressive, low-price competition from Komatsu of Japan.

In general, reducing response time requires: (1) a marketing function that can quickly communicate customer requests to production, (2) production and materials-management functions that can quickly adjust production schedules in response to unanticipated customer demands, and (3) information systems that can help production and marketing in this process.

Table 4.5 summarizes the steps different functions must take if a company is to achieve superior responsiveness to customers. Although marketing plays a critical role in helping a company attain this goal (primarily because it represents the point of contact with the customer), Table 4.5 shows that the other functions also have major roles. Achieving superior responsiveness to customers requires top management to lead in building a customer orientation within the company.

Table 4.5 Primary Roles of Different Functions in Achieving Superior Customer Responsiveness

Value Creation Function	Primary Role
Infrastructure (leadership)	<ul style="list-style-type: none"> Through leadership by example, build a companywide commitment to responsiveness to customers
Production	<ul style="list-style-type: none"> Achieve customization through implementation of flexible manufacturing Achieve rapid response through flexible manufacturing
Marketing	<ul style="list-style-type: none"> Know the customer Communicate customer feedback to appropriate functions
Materials management	<ul style="list-style-type: none"> Develop logistics systems capable of responding quickly to unanticipated customer demands (JIT)
R&D	<ul style="list-style-type: none"> Bring customers into the product development process
Information systems	<ul style="list-style-type: none"> Use web-based information systems to increase responsiveness to customers
Human resources	<ul style="list-style-type: none"> Develop training programs that get employees to think like customers

KEY TERMS

functional-level strategies 109	experience curve 113	just-in-time (JIT) inventory system 120	total quality management (TQM) 125
economies of scale 110	flexible production technology 115	supply chain management 121	positioning strategy 131
fixed costs 110	mass customization 116		
diseconomies of scale 110	marketing strategy 118	self-managing teams 122	
learning effects 111	customer defection 118		

TAKEAWAYS FOR STRATEGIC MANAGERS

1. A company can increase efficiency through a number of steps: exploiting economies of scale and learning effects; adopting flexible manufacturing technologies; reducing customer defection rates; implementing just-in-time systems; getting the R&D function to design products that are easy to manufacture; upgrading the skills of employees through training; introducing self-managing teams; linking pay to performance; building a companywide commitment to efficiency through strong leadership; and designing structures that facilitate cooperation among different functions in pursuit of efficiency goals.
2. Superior quality can help a company lower its costs, differentiate its product, and charge a premium price.
3. Achieving superior quality demands an organizationwide commitment to quality and a clear focus on the customer. It also requires metrics to measure quality goals and incentives that emphasize quality; input from employees regarding ways in which quality can be improved; a methodology for tracing defects to their source and correcting the problems that produce them; a rationalization of the company's supply base; cooperation with approved suppliers to implement total quality management programs; products that are designed for ease of manufacturing; and substantial cooperation among functions.
4. The failure rate of new-product introductions is high because of factors such as uncertainty, poor commercialization, poor positioning strategy, slow cycle time, and technological shortsightedness.
5. To achieve superior innovation, a company must build skills in basic and applied research; design good processes for managing development projects; and achieve close integration between the different functions of the company, primarily through the adoption of cross-functional product development teams and partly parallel development processes.
6. Achieving superior customer responsiveness often requires that the company achieve superior efficiency, quality, and innovation.
7. Furthermore, to achieve superior customer responsiveness, a company must give customers what they want, when they want it. It must ensure a strong customer focus, which can be attained by emphasizing customer focus through leadership; training employees to think like customers; bringing customers into the company through superior market research; customizing products to the unique needs of individual customers or customer groups; and responding quickly to customer demands.

DISCUSSION QUESTIONS

1. How are the four building blocks of competitive advantage related to each other?
2. What role can top management play in helping a company achieve superior efficiency, quality, innovation, and responsiveness to customers?
3. Over time, will the adoption of Six Sigma quality improvement processes give a company a competitive advantage, or will it be required only to achieve parity with competitors?
4. What is the relationship between innovation and competitive advantage?

CLOSING CASE

Trouble at McDonald's

For most of its history, McDonald's has been an extraordinarily successful enterprise. It began in 1955, when the legendary Ray Kroc decided to franchise the McDonald brothers' fast-food concept. Since its inception, McDonald's has grown into the largest restaurant chain in the world, with almost 37,000 stores in 120 countries.

For decades, McDonald's success was grounded in a simple formula: Give consumers value for money, good quick service, and consistent quality in a clean environment, and they will return time and time again. To deliver value for money and consistent quality, McDonald's standardized the process of order taking, making food, and providing service. Standardized processes raised employee productivity while ensuring that customers had the same experience in all branches of the restaurant. McDonald's also developed close ties with wholesalers and food producers, managing its supply chain to reduce costs. As it became larger, buying power enabled McDonald's to realize economies of scale in purchasing and pass on cost savings to customers in the form of low-priced meals, which drove increased demand. There was also the ubiquity of McDonald's; their restaurants could be found everywhere. This accessibility, coupled with the consistent experience and low prices, built brand loyalty.

The formula worked well until the early 2000s. By then, McDonald's was under attack for contributing to obesity. Its low-priced, high-fat foods were dangerous, claimed critics. By 2002, sales

were stagnating and profits were falling. It seemed that McDonald's had lost its edge. The company responded with a number of steps. It scrapped its supersize menu and added healthier options such as salads and apple slices. Executives mined data to discover that people were eating more chicken and less beef. So McDonald's added grilled chicken sandwiches, chicken wraps, Southern-style chicken sandwiches, and more recently, chicken for breakfast to their menu. Chicken sales doubled at McDonald's between 2002 and 2008, and the company now buys more chicken than beef.

McDonald's also shifted its emphasis on beverages. For decades, drinks were an afterthought, but executives couldn't help but note the rapid growth of Starbucks. In 2006, McDonald's decided to offer better coffee, including lattes. McDonald's improved the quality of its coffee by purchasing high-quality beans, using better equipment, and filtering its water. The company did not lose sight of the need to keep costs low and service quick, however, and continues to add coffee-making machines that produce lattes and cappuccinos in 45 seconds, at the push of a button. Starbucks it is not, but for many people a latte from the McDonald's drive-through window is comparable. Today, the latte machines have been installed in almost half of the stores in the United States.

All of these strategies seemed to work. Revenues, net profits and profitability all improved between 2002 and 2013. By 2014, however, McDonald's was once more running into headwinds. Same-store

sales declined in 2014, impacting profitability. Among the problems that analysts identified at McDonald's was an inability to attract customers in the 19- to 30-year-old age group. Rivals offering healthier alternatives, such as Chipotle Mexican Grill, and "better burger" chains that appeal to this demographic, such as Smashburger, are gaining ground at the expense of McDonald's. A recent *Consumer Reports* survey ranked McDonald's burgers the worst among its peers. Another problem is that the quality of customer service at McDonald's seems to have slipped. Many customers say that employees at McDonalds are rude and unprofessional. One reason why McDonald's employees might be feeling stressed out is that the menu has grown quite large in recent years, and many restaurants are not longer staffed given the diversity of the menu.

In 2015, management at McDonald's took steps to fix these problems. The company emphasized a

number of "velocity growth accelerators" including (1) an "Experience of the Future" layout, which features a combination of ordering flexibility (including counter, kiosk, Web, and mobile ordering), customer experience (including a blend of front counter, table service, and curbside delivery), and a more streamlined menu (but one that still allows for personalization); (2) mobile ordering and payments; and (3) delivery alternatives. The results of these initiatives have been promising, with McDonald's starting to see faster growth and better profitability.

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CASE DISCUSSION QUESTIONS

1. What functional-level strategies has McDonald's pursued to boost its efficiency?
2. What functional-level strategies has McDonald's pursued to boost its customer responsiveness?
3. What does product quality mean for McDonald's? What functional-level strategies has it pursued to boost its product quality?
4. How has innovation helped McDonald's improve its efficiency, customer responsiveness, and product quality?
5. Do you think that McDonald's has any rare and valuable resources? In what value creation activities are these resources located?
6. How sustainable is McDonald's competitive position in the fast-food restaurant business?

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3

STRATEGIES

- Chapter 5 Business-Level Strategy
- Chapter 6 Business-Level Strategy and the Industry Environment
- Chapter 7 Strategy and Technology
- Chapter 8 Strategy in the Global Environment
- Chapter 9 Corporate-Level Strategy: Horizontal Integration, Vertical Integration, and Strategic Outsourcing
- Chapter 10 Corporate-Level Strategy: Related and Unrelated Diversification



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CHAPTER 5

BUSINESS-LEVEL STRATEGY

LEARNING OBJECTIVES

- 5.1 Explain the difference between low-cost and differentiation strategies
- 5.2 Articulate how the attainment of a differentiated or low-cost position can give a company a competitive advantage
- 5.3 Explain how a company executes its business-level strategy through function-level strategies and organizational arrangements
- 5.4 Describe what is meant by the term “value innovation”
- 5.5 Discuss the concept of blue ocean strategy, and explain how innovation in business-level strategy can change the competitive game in an industry, giving the innovator a sustained competitive advantage

OPENING CASE

Reinventing The New York Times

The 167-year-old *New York Times* has long been regarded as one of the premium newspapers in the United States, with a reputation for producing original, authoritative, in-depth, quality journalism. The articulated strategy of the *Times* is to provide journalism “so strong that several million people around the world are willing to pay for it.” Maintaining that reputation does not come cheap. The *Times* employs some 1,300



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full-time journalists, more than any other U.S. newspaper. In 2016, the company's journalists filed stories from more than 150 countries—nearly 80% of all countries on the planet. This gives the *Times* an international reach that far outstrips its rivals. Its reputation makes it the employer of choice for many top journalists, and the paper has a reputation for hiring some of the field's most creative people. But that toptier journalistic brain trust is an expensive asset to maintain.

The evidence suggests that the *Times* has been successful in its quest for quality. It is by far the most cited news publisher by other media organizations, the most discussed on Twitter, and the most searched on Google. That being said, like all traditional print media outlets, the *Times* is facing an existential threat as the world transitions from print to digital media for its news. Print newspapers were once a highly successful business, generating steady revenue growth from a combination of subscriptions and advertising, but the Internet has changed all of that. Today, revenue from print subscriptions and print ads are in decline. At the *Times*, the print business has been shrinking by 4% a year since 2011.

To survive in this new world, the *Times* has pushed aggressively online. In 2011, it established a paywall for its digital content. Critics predicted that online readers would simply ignore the *Times* and switch to news media sites where the content is paid for by advertising and is thus subscription free. In fact, the subscriber base at the *Times* has surged, and its digital revenues now tower above those of any other news competitor. By the end of 2017, it had 2.2 million digital subscribers—an increase of 47% over the prior year—and it earned \$340 million from subscriptions alone. To put this in context, the growth in subscription revenue since 2011 is similar to the growth rate achieved by Facebook and faster than that of Google. In 2017, the *Times* made another \$240 million from digital advertising, a 14% increase from the prior year.

While advertising revenue plays a role, the strategy of the *Times* is clear: It will go for subscription revenues over advertising revenues in order to differentiate its offering from advertising saturated “free” news sites like *BuzzFeed*, *The Guardian*, and *Vice*. So far the approach appears to be working. At its current pace, the *Times* is on track to achieve digital revenues of \$800 million by 2020, a goal it set back in 2011. At that point, the *Times* will be generating half of its revenue digitally. If the company can maintain this growth rate into the middle of the next decade, it will be able to support those 1,300 quality journalists on its staff, even in the face of the continued, steady decline in print newspaper circulation.

Sources: “Journalism that Stands Apart,” *New York Times*, January 2017; Gabriel Snyder, *The New York Times* claws its way into the future,” *Wired*, February 12, 2017; E. Lee and Rani Molla, “The *New York Times* digital paywall is growing as fast as Facebook, and faster than Google,” *Recode*, February 8, 2018.

5-1 OVERVIEW

business-level strategy

A business's overall competitive theme; the way it positions itself in the marketplace to gain a competitive advantage, and the different positioning strategies that it can use in different industry settings.

In this chapter we look at the formulation of **business-level strategy**. As you may recall from Chapter 1, business-level strategy refers to the overarching competitive theme of a company in a given market. At its most basic, business-level strategy is about *whom* a company decides to serve (its customer segments), what customer *needs* and *desires* the company is trying to satisfy, and *how* the company decides to satisfy those needs and desires.¹ If this sounds familiar, it is because we have already discussed this in Chapter 1 when we considered how companies construct a mission statement.

The *New York Times* provides us with an illustration of how this works (see the Opening Case). The *Times* targets an educated, liberal-leaning demographic *segment* that *desires* to read original, high-quality journalism and opinions, and are willing to pay a premium price for that experience (most importantly, they are willing to subscribe to digital versions of the newspaper). The *Times* strives to satisfy the desires of this demographic by hiring talented journalists and retaining an unusually large newsroom for the postprint era so that it can continue to *differentiate* itself by producing original high-quality news. In addition, the *Times* is conscious of not overloading this demographic with advertisements, so it strives to cover its costs by aggressively growing its digital subscriber base rather than focusing on advertising. By 2017, six years after it first introduced digital subscriptions, the newspaper already has twice as many digital subscribers as print subscribers, suggesting that the strategy is working.

In this chapter, we will look at how managers decide what business-level strategy to pursue, and how they go about executing that strategy in order to attain a sustainable competitive advantage. We start by looking at the two basic ways that companies compete in a marketplace—by *lowering costs* and by *differentiating* their goods or services from those offered by rivals so that they create more value. Next, we consider the issue of *customer choice* and *market segmentation*, and discuss the decisions that managers must make when it comes to their company's segmentation strategy. Then, synthesizing this, we discuss the various business-level strategies that an enterprise can adopt, and what must be done to successfully implement those strategies. The chapter closes with a discussion of how managers can think about formulating an innovative, business-level strategy that gives their company a unique and defensible position in the marketplace.

5-2 LOW COST AND DIFFERENTIATION

Strategy is about the search for competitive advantage. As we saw in Chapter 3, at the most fundamental level, a company has a competitive advantage if it can lower costs relative to rivals and/or if it can differentiate its product offering from those of rivals, thereby creating more value. We will look at lowering costs first, and then at differentiation.²

5-2a Lowering Costs

Imagine that all enterprises in an industry offer products that are very similar in all respects except for price, and that each company is small relative to total market

demand, so that they are unable to influence the prevailing price. This situation exists in commodity markets such as those for oil, wheat, aluminum, and steel. In the global oil market, for example, prices are set by the interaction of supply and demand. Even the world's largest private oil producer, Exxon Mobile, only produces around 3.5% of world output and cannot influence the prevailing price.

In commodity markets, competitive advantage goes to the company that has the lowest costs. Low costs enable a company to make a profit at price points where its rivals are losing money. Low costs can also allow a company to undercut rivals on price, gain market share, and maintain or even increase profitability. Being the low-cost player in an industry can be a very advantageous position.

Although lowering costs below those of rivals is a particularly powerful strategy in a pure commodity industry, it can also have great utility in other settings. General merchandise retailing, for example, is not a classic commodity business. Nevertheless, Wal-Mart has built a very strong competitive position in the U.S. market by being the low-cost player in its segment. Because its costs are so low, Wal-Mart can cut prices, grow its market share, and still make profits at price points where its competitors lose money. The same is true in the airline industry, where Southwest Airlines has established a low-cost position. Southwest's operating efficiencies have enabled it to make money in an industry that has been hit by repeated bouts of price warfare, and where many of its rivals have been forced into bankruptcy.

5-2b Differentiation

Now let's look at the differentiation side of the equation. Differentiation involves distinguishing your company from its rivals by offering something that they find hard to match. As we saw in the Opening Case, the *New York Times* differentiated itself from its rivals in the minds of its customers by producing original, high-quality journalism. A company can differentiate itself from rivals in many ways. A product can be differentiated by superior reliability (it breaks down less often, or not at all), better design, superior functions and features, better point-of-sale service, better after-sales service and support, better branding, and so on. A Rolex watch is differentiated from a Timex watch by superior design, materials, and reliability; a Toyota car is differentiated from a General Motors (GM) car by superior reliability (historically, new Toyota models have had fewer defects than new GM models); Apple differentiates its iPhone from rival offerings through superior product design, ease of use, excellent customer service at its Apple stores, and easy synchronization with other Apple products such as computers, tablets, iTunes, and iCloud.

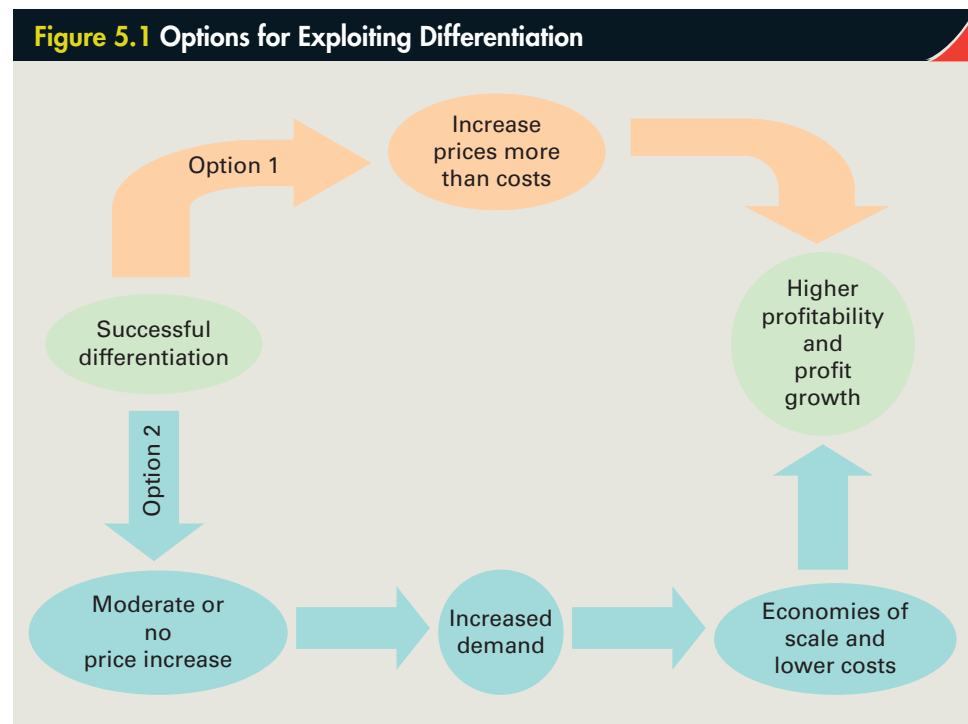
Differentiation gives a company two advantages. First, it can allow the company to charge a premium price for its good or service should it choose to do so. Second, it can help the company grow overall demand and capture market share from its rivals. In the case of the iPhone, Apple has reaped both of these benefits through its successful differentiation strategy. Apple charges more for its iPhone than people pay for rival smartphone offerings, and the differential appeal of Apple products has led to strong demand growth.

It is important to note that differentiation often (but not always) raises the cost structure of the firm. It costs the *Times* more to produce high-quality journalism. It is often the case that companies pursuing a differentiation strategy have a higher cost structure than companies pursuing a low-cost strategy. On the other hand, somewhat counterintuitively, there are situations where successful differentiation, because it increases primary demand so much, can actually lower costs. Apple's iPhone is a case in

point. Apple uses very expensive materials in the iPhone—Gorilla Glass for the screen and brushed aluminum for the case. It could have used cheaper plastic, but then the product would not have looked as good and would have scratched easily. Although these decisions about materials originally raised the unit cost of the iPhone, the fact is that Apple has sold so many iPhones that it now enjoys economies of scale in purchasing and can effectively bargain down the price it pays for expensive materials. The result for Apple—successful differentiation of the iPhone—not only has allowed the company to charge a premium price, it has also grown demand to the point where Apple can lower costs through the attainment of scale economies, thereby widening profit margins. This is why Apple captured 79% of all profits in the global smartphone business in the second half of 2016.

The Apple example points to an essential truth: Successful differentiation gives managers options. One option is to raise the price to reflect the differentiated nature of the product offering and cover any incremental increase in costs (see Figure 5.1). Many firms pursue this option, which can by itself enhance profitability as long as prices increase more than costs. For example, Four Seasons hotels are very luxurious—and it costs a lot to provide that luxury—but it also charges very high prices for its rooms, and the firm is profitable as a result.

However, the Apple example also suggests that increased profitability and profit growth can come from the increased demand associated with successful differentiation, which enables the firm to use its assets more efficiently and thereby realize *lower costs* from scale economies. This leads to another option: The successful differentiator can hold prices constant, or only increase them slightly, sell more, and boost profitability through the attainment of scale economies (see Figure 5.1).³



Source: Charles W.L. Hill © Copyright 2013.

For another example, consider Starbucks. The company has successfully differentiated its product offering from that of rivals such as Tully's by the excellent quality of its coffee-based drinks; by the quick, efficient, friendly service that its baristas offer customers; by the comfortable atmosphere created by the design of its stores; and by its strong brand image. This differentiation increases traffic volume in each Starbucks store, thereby increasing the productivity of employees (they are always busy) and the productivity of the capital invested in the store. Thus, each store realizes scale economies from greater volume, which lowers the average unit costs at each store. Spread across the 27,000 stores that Starbucks operates, this represents potentially huge cost savings that translate into higher profitability. Add this to the enhanced demand that comes from successful differentiation—which in the case of Starbucks not only enables the firm to sell more from each store, but also to open more stores—and profit growth will also accelerate.

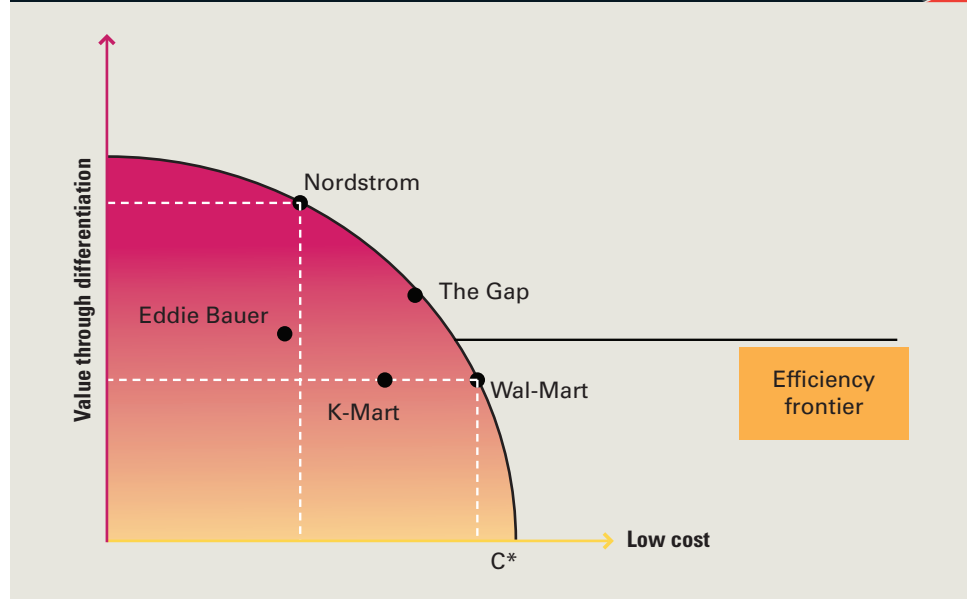
5-2c The Differentiation–Low-Cost Trade-off

The thrust of our discussion so far is that a low-cost position and a differentiated position are two very different ways of gaining a competitive advantage. The enterprise striving for the lowest costs does everything it can to be productive and drive down its cost structure, whereas the enterprise striving for differentiation necessarily has to bear higher costs to achieve that differentiation. Put simply, one cannot be both Wal-Mart and Nordstrom, Porsche and Kia, Rolex and Timex. Managers must choose between these two basic ways of attaining a competitive advantage.

However, presenting the choice between differentiation and low costs in these terms is something of a simplification. As we have already noted, the successful differentiator might be able to subsequently reduce costs if differentiation leads to significant demand growth and the attainment of scale economies. But in actuality, the relationship between low cost and differentiation is subtler than this. In reality, strategy is not so much about making discrete choices as it is about achieving the right balance is between differentiation and low costs.

To understand these issues, see Figure 5.2. The convex curve in Figure 5.2 illustrates what is known as an *efficiency frontier* (also known in economics as a production possibility frontier).⁴ The efficiency frontier shows all of the different positions that a company can adopt with regard to differentiation and low cost, *assuming* that its internal functions and organizational arrangements are configured efficiently to support a particular position (note that the horizontal axis in Figure 5.2 is reverse scaled—moving along the axis to the right implies lower costs). The efficiency frontier has a convex shape because of diminishing returns. Diminishing returns imply that when an enterprise already has significant differentiation built into its product offering, increasing differentiation by a relatively small amount requires significant additional costs. The converse also holds: A company that already has a low-cost structure must relinquish much differentiation in its product offering to achieve additional cost reductions.

The efficiency frontier shown in Figure 5.2 is for the U.S. retail apparel business (Wal-Mart sells more than apparel, but that need not concern us here). As you can see, the high-end retailer Nordstrom and the low-cost retailer Wal-Mart are both shown to be on the frontier, implying that both organizations have configured their internal functions and organizations efficiently. However, they have adopted very different positions; Nordstrom has high differentiation and high costs, whereas Wal-Mart has low costs and low differentiation. These are not the only viable positions in the industry, however. The Gap, too, is on the frontier. The Gap offers higher-quality apparel

Figure 5.2 The Differentiation–Low-Cost Trade-off

Source: Charles W.L. Hill © Copyright 2013.

merchandise than does Wal-Mart, sold in a more appealing environment, but its offering is nowhere near as differentiated as that of Nordstrom; it is positioned between Wal-Mart and Nordstrom. This mid-level position, offering moderate differentiation at a higher cost than Wal-Mart, makes perfect sense because there are enough consumers demanding this option. They don't want to look as if they purchased their clothes at Wal-Mart; they want fashionable, casual clothes that are more affordable than those available at Nordstrom.

The essential point is that *there are often multiple positions on the differentiation–low-cost continuum that are viable in the sense that they have enough demand to support an offering*. The task for managers is to identify a position in the industry that is viable and then configure the functions and organizational arrangements of the enterprise so that they are run as efficiently and effectively as possible, and enable the firm to reach the frontier. Not all companies are able to do this. Only those that can get to the frontier have a competitive advantage. Getting to the frontier requires excellence in strategy implementation. As has been suggested already in this chapter, business-level strategy is implemented through function and organization. Therefore, *to successfully implement a business-level strategy and reach the efficiency frontier, a company must pursue the right functional-level strategies and be appropriately organized; business-level strategy, functional-level strategy, and organizational arrangement must all be in alignment*.

It should be noted that not all positions on an industry's efficiency frontier are equally attractive. For some positions, there may not be sufficient demand to support a product offering. For other positions, there may be too many competitors going after the same basic position—the competitive space might be too crowded—and the resulting competition might drive prices below acceptable levels.

In Figure 5.2, K-Mart is inside the frontier. K-Mart is trying to position itself in the same basic space as Wal-Mart, but its internal operations are not efficient (the

company was operating under bankruptcy protection in the early 2000s, although it is now out of bankruptcy). Also shown in Figure 5.2 is Seattle-based clothing retailer Eddie Bauer, which is owned by Spiegel. Like K-Mart, Eddie Bauer is not an efficiently run operation relative to its rivals. Its parent company has operated under bankruptcy protection three times in the last 20 years.

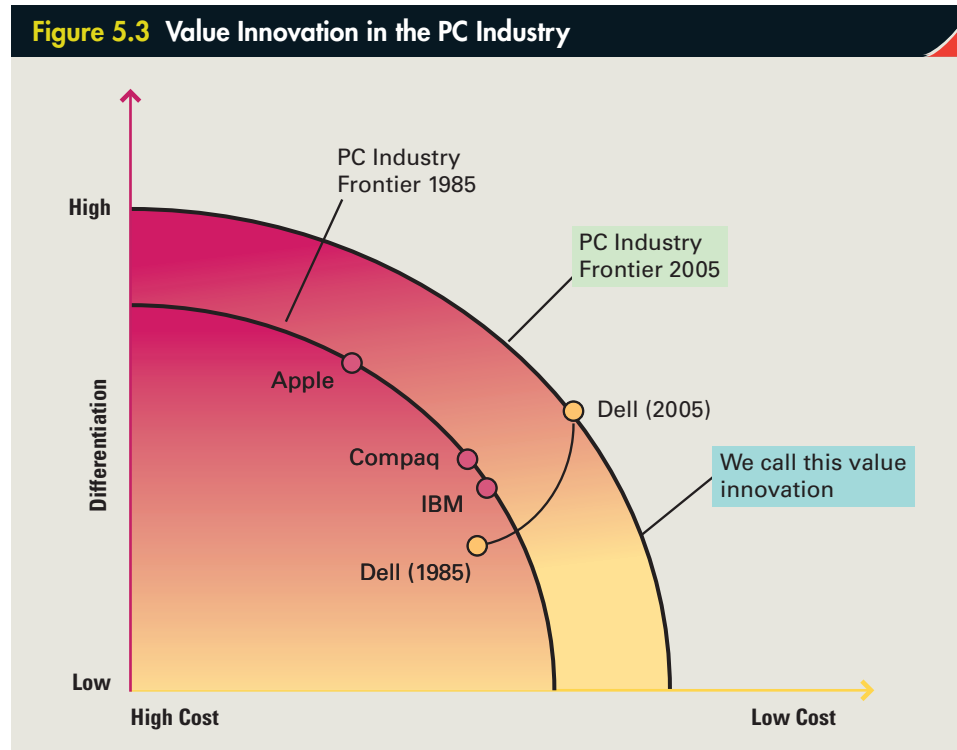
5-2d Value Innovation: Greater Differentiation at a Lower Cost

The efficiency frontier is not static; it is continually being pushed outward by the efforts of managers to improve their firm's performance through innovation. For example, in the mid-1990s, Dell pushed out the efficiency frontier in the personal computer (PC) industry (see Figure 5.3). Dell pioneered the online sale of PCs, allowing customers to build their own machines and effectively creating value through customization. In other words, the strategy of selling online allowed Dell to *differentiate* itself from rivals that sold PCs through retail outlets. At the same time, Dell used order information submitted over the Web to efficiently coordinate and manage the global supply chain, driving down production costs in the process. The net result was that Dell was able to offer more value (through superior *differentiation*) at a *lower cost* than its rivals. Through its process innovations, it redefined the frontier of what was possible in the industry.

We use the term **value innovation** to describe what happens when innovation pushes out the efficiency frontier in an industry, allowing for greater value to be offered through superior differentiation at a lower cost than was previously thought possible.⁵ When

value innovation

When innovations push out the efficiency frontier in an industry, allowing for greater value to be offered through superior differentiation at a lower cost than was previously thought possible.



Source: Charles W.L. Hill © Copyright 2013.

a company pioneers process innovations that lead to value innovation, it effectively changes the game in an industry and may be able to outperform its rivals for a long period of time. This is what happened to Dell. After harnessing the power of the Internet to sell PCs online and coordinate the global supply chain, Dell outperformed its rivals in the industry for over a decade while they scrambled to catch up with the industry leader.

Toyota too has benefitted from value innovation. As we have discussed in Chapters 3 and 4, Toyota pioneered lean production systems that improved the quality of automobiles while simultaneously lowering costs. Toyota *redefined what was possible in the automobile industry*, effectively pushing out the efficiency frontier and enabling the company to better differentiate its product offering at a cost level that its rivals couldn't match. The result was a competitive advantage that persisted for over two decades. For another example of value innovation, see Strategy in Action 5.1, which describes how IKEA redefined competition in the furniture business.



5.1 STRATEGY IN ACTION

IKEA: Value Innovation in Furniture Retailing

IKEA, the privately held furniture retailer, is a global colossus. The world's largest furniture retailer, in 2014, IKEA had 361 stores around the globe, 164,000 employees, revenues in excess of 30 billion Euros, and 861 million customer visits to its stores. The company started out with a single store in Sweden in 1958. The vision of the company's founder, Ingvar Kamprad, was to "democratize furniture," making stylish, functional furniture available at a low cost.

Kamprad's vision was a reaction to the existing market for furniture. Furniture was either seen as an expensive heirloom, which typically had to be ordered from the manufacturer after the consumer had made a purchase decision in a retail store, and might take 3 months to deliver, or was poorly designed, low-quality, cheap furniture sold in discount stores. As IKEA's strategy evolved, its core target market became young professionals looking to furnish their first apartments or homes with stylish but inexpensive furniture that could be disposed of when they were able to buy more traditional, heirloom-style furniture.

Over the years, Kamprad assembled a world-class team that designed stylish, quality furniture that

emphasized clean, "Swedish" lines. An important goal was to make IKEA offerings 30% cheaper than comparable items produced by rivals. To drive down costs, Kamprad and his associates worked out ways to reduce the costs of making and delivering this furniture. They cooperated closely with long-term suppliers to drive down material and manufacturing costs. They designed furniture that could be flat packed, which reduced transportation and storage costs. They pushed assembly onto the consumer, but gave them lower prices as part of the bargain. They even made the consumer responsible for pulling inventory out of the warehouse, which was typically placed between the product-display areas and the cash registers. As a result of these actions, all taken at the functional level within the company, IKEA was able to offer more value to its target market than its rivals, and to do so at a lower cost. Through astute market segmentation and a well-thought-out strategy of value innovation, IKEA redefined the furniture market not just in Sweden but in countries around the globe, in the process becoming the world's largest furniture retailer and making Ingvar Kamprad one of the world's richest men.

Source: C. W. L. Hill, "IKEA in 2013: Furniture Retailer to the World," in C.W.L. Hill, G.R. Jones, and M. Shilling, *Strategic Management*, 11th edition (Boston: Cengage, 2015).

5-3 WHO ARE OUR CUSTOMERS? MARKET SEGMENTATION

As noted in the introduction to this chapter, business-level strategy begins with deciding *who* the company is going to serve, what *needs* or *desires* it is trying to satisfy, and *how* it is going to satisfy those needs and desires. Answering these questions is not straightforward, because customers in a market are not homogenous. They often differ in fundamental ways. Some are wealthy, some are not; some are old, some are young; some are women, some are men; some are influenced by popular culture, some never watch TV; some live in cities, some in the suburbs; some care deeply about status symbols, others do not; some place a high value on luxury, others value for money; some exercise every day, others have never seen the inside of a gym; some speak English most of the time, while for others Spanish is their first language; and so on.

One fundamental decision that every company faces is whether to recognize such differences in customers, and if so, how to tailor its approach depending on which customer segment or segments it decides to serve. The first step toward answering these questions is to segment the market according to differences in customer demographics, needs, and desires.

Market segmentation refers to the process of subdividing a market into clearly identifiable groups of customers with similar needs, desires, and demand characteristics. Customers within these segments are relatively homogenous, whereas they differ in important ways from customers in other segments of the market. For example, Nike segments the athletic shoe market according to sport and gender because it believes that people participating in different sports expect different things from an athletic shoe (a shoe designed for running is not suitable for playing basketball), and that men and women desire different shoe styling and construction (most men don't want to wear pink shoes). Similarly, in the market for colas, Coca-Cola segments the market by needs—regular Coke for the average consumer, and diet cola for consumers concerned about their weight. The diet cola segment is further subdivided by gender, with Diet Coke targeted at women, and Coke Zero targeted at men.

market segmentation

The way a company decides to group customers, based on important differences in their needs, in order to gain a competitive advantage.

5-3a Three Approaches to Market Segmentation

Companies adopt one of three basic approaches to market segmentation. The first is to *not* tailor different offerings to different segments and instead produce and sell a standardized product that is targeted at the average customer in that market. This was the approach adopted by Coca-Cola until the early 1980s, before the introduction of Diet Coke and flavored cola drinks such as Cherry Cola. In those days, Coke was *the* drink for everyone. Coke was differentiated from the offerings of rivals, particularly Pepsi Cola, by lifestyle advertising that positioned Coke as the iconic American drink, the “Real Thing.” Some network broadcast news programs adopt this approach today. The coverage offered by ABC News, for example, is tailored toward the average American viewer. The giant retailer Wal-Mart targets the average customer in the market, although, unlike Coca-Cola, Wal-Mart's goal is to drive down costs so that it can charge everyday low prices, give its customers value for money, and still make a profit.

A second approach is to recognize differences between segments and create different product offerings for each segment. Coca-Cola has adopted this approach since the 1980s. In 1982, it introduced Diet Coke, targeting that drink at the weight and health conscious. In 2007, it introduced Coke Zero, also a diet cola, but targeted at men because company research found that men tended to associate Diet Coke with women. Since 2007, Diet Coke has been repositioned as more of a women's diet drink. Similarly, in the automobile industry, Toyota has brands that address the entire market—Scion for budget-constrained, young, entry-level buyers; Toyota for the middle market, and Lexus for the luxury end of the market. In each segment, Toyota tries to differentiate itself from rivals in the segment by the excellent reliability and high quality of its offerings.

A third approach is to target only a limited number of market segments, or just one, and to become the very best at serving that particular segment. In the automobile market, Porsche focuses exclusively on the very top end of the market, targeting wealthy, middle-aged, male consumers who have a passion for the speed, power, and engineering excellence associated with its range of sports cars. Porsche is clearly pursuing a differentiation strategy with regard to this segment, although it emphasizes a different type of differentiation than Toyota. Alternatively, Kia of South Korea got its start by positioning itself as low-cost player in the industry, selling vehicles that were aimed at value-conscious buyers in the middle- and lower-income brackets. In the network broadcasting news business, Fox News and MSNBC have also adopted a focused approach. Fox tailors its content toward viewers on the right of the political spectrum, whereas MSNBC is differentiated toward viewers on the left.

When managers decide to ignore different segments and produce a standardized product for the average consumer, we say they are pursuing a **standardization strategy**. When they decide to serve many segments, or even the entire market, producing different offerings for different segments, we say they are pursuing a **segmentation strategy**. When they decide to serve a limited number of segments, or just one segment, we say they are pursuing a **focus strategy**. Today, Wal-Mart is pursuing a standardization strategy, Toyota a segmentation strategy, and Nordstrom a focus strategy.

standardization strategy

When a company decides to ignore different segments and produces a standardized product for the average consumer.

segmentation strategy

When a company decides to serve many segments, or even the entire market, producing different offerings for different segments.

focus strategy

When a company decides to serve a limited number of segments, or just one segment.

5-3b Market Segmentation, Costs and Revenues

It is important to understand that these different approaches to market segmentation have different implications for costs and revenues. Consider first the comparison between a standardization strategy and a segmentation strategy.

A standardization strategy, which is typically associated with lower costs than a segmentation strategy, involves the company producing one basic offering and trying to attain economies of scale by achieving high-volume sales. Wal-Mart pursues a standardization strategy and achieves enormous economies of scale in purchasing, driving down its cost of goods sold.

In contrast, a segmentation strategy requires that the company customize its product offering to different segments, producing multiple offerings, one for each segment. Customization can drive up costs for two reasons; first, the company may sell less of each offering, making it harder to achieve economies of scale; second, products targeted at segments at the higher-income end of the market may require more functions and features, which can raise the costs of production and delivery.

On the other hand, it is important not to lose sight of the fact that advances in production technology, and particularly lean production techniques, have allowed for *mass customization*—that is, the production of more product variety without a large cost penalty (see Chapter 4 for details). In addition, by designing products that share common components, some manufacturing companies achieve substantial economies of scale in component production while still producing a variety of end products aimed at different segments. This approach is adopted by large automobile companies, which try to utilize common components and platforms across a wide range of models. To the extent that mass customization and component sharing is possible, the cost penalty borne by a company pursuing a segmentation strategy may be limited.

Although a standardization strategy may have lower costs than a segmentation strategy, a segmentation strategy has one big advantage. It allows the company to capture incremental revenues by customizing its offerings to the needs of different groups of consumers and thus selling more in total. A company pursuing a standardization strategy where a product is aimed at the average consumer may lose sales from customers who desire more functions and features and are prepared to pay more for them. Similarly, it may lose sales from customers who cannot afford to purchase the average product but might enter the market if a more basic offering was available.

This reality was first recognized in the automobile industry back in the 1920s. The early leader in the automobile industry was Ford with its Model T offering. Henry Ford famously said that consumers could have it in “any color as long as it’s black.” Ford was in essence pursuing a standardization strategy. However, in the 1920s, Ford rapidly lost market share to GM, a company that pursued a segmentation strategy and offered a range of products aimed at different customer groups.

For a focus strategy, the impact on costs and revenues is subtler. Companies that focus on the higher-income or higher-value end of the market will tend to have a higher cost structure for two reasons. First, they have to add features and functions to their products that appeal to higher-income consumers, and this raises costs. For example, luxury retailer Nordstrom locates its stores in areas where real estate is expensive; its stores have costly fittings and fixtures and a wide-open store plan with lots of room to browse; the merchandise is expensive and does not turn over as quickly as the basic clothes and shoes sold at stores like Wal-Mart. Second, the relatively limited nature of demand associated with serving a given segment of the market may make it hard to attain economies of scale. Offsetting this, however, is the fact that the customization and exclusivity associated with a strategy of focusing on the high-income end of the market may enable a firm to charge significantly higher prices than enterprises pursuing standardization and segmentation strategies.

For companies focusing on the lower-income end of the market, or a segment that desires value for money, a different calculus comes into play. First, such companies tend to produce a more basic offering that is relatively inexpensive to produce and deliver. This may help them to drive down their cost structure. The retailer Costco, for example, focuses on consumers who seek value for money and are less concerned about brand than they are about price. Costco sells a limited range of merchandise in large, warehouse-like stores. A Costco store has about 3,750 stock-keeping units (SKUs), compared to 142,000 SKUs at the average Wal-Mart superstore. Products are stored on pallets stacked on utilitarian metal shelves. Costco offers consumers the opportunity to purchase basic goods such as breakfast cereal, dog food, and paper towels in bulk quantities and at lower prices than found elsewhere. It turns over inventory rapidly, typically selling it before it has to pay its suppliers and thereby reducing

its working capital needs. Thus, by tailoring its business to the needs of a segment, Costco is able to undercut the cost structure and pricing of a retail giant such as Wal-Mart, even though it lacks Wal-Mart's enormous economies of scale in purchasing. The drawback, of course, is that Costco offers much less choice than you will find at a Wal-Mart superstore; so, for customers looking for one-stop shopping at a low price, Wal-Mart is likely to be the store of choice.

5-4 BUSINESS-LEVEL STRATEGY CHOICES

generic business-level strategy

A strategy that gives a company a specific form of competitive position and advantage vis-à-vis its rivals, resulting in above-average profitability.

broad low-cost strategy

When a company lowers costs so that it can lower prices and still make a profit.

broad differentiation strategy

When a company differentiates its product in some way, such as by recognizing different segments or offering different products to each segment.

focus low-cost strategy

When a company targets a certain segment or niche and tries to be the low-cost player in that niche.

focus differentiation strategy

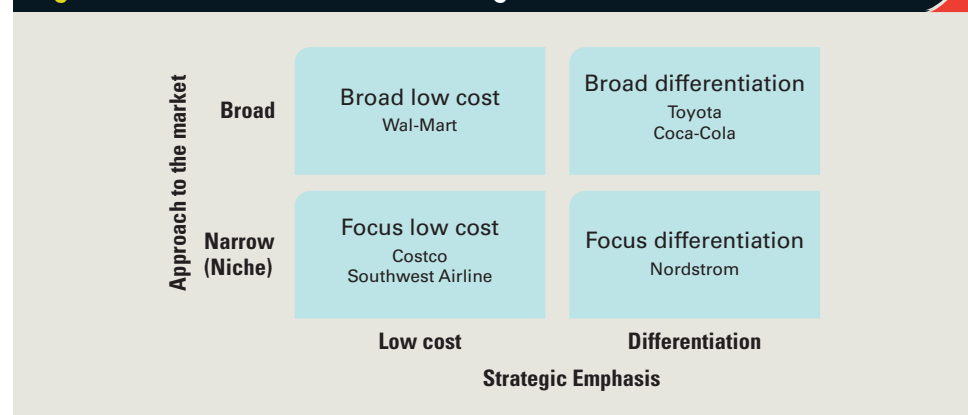
When a company targets a certain segment or niche and customizes its offering to the needs of that particular segment through the addition of features and functions.

We now have enough information to identify the basic, business-level strategy choices that companies make. These basic choices, sometimes collectively called the **generic business-level strategy**, are illustrated in Figure 5.4.

Companies that pursue a standardized or segmentation strategy both target a broad market. However, those pursuing a segmentation strategy recognize different segments and tailor their offering accordingly, whereas those pursuing a standardization strategy focus on serving the average consumer. Companies that target the broad market can either concentrate on lowering their costs so that they can lower prices and still make a profit, in which case they are pursuing a **broad low-cost strategy**, or they can try to differentiate their product in some way, in which case they are pursuing a **broad differentiation strategy**. Companies that decide to recognize different segments and offer different product to each one are by default pursuing a broad differentiation strategy. It is possible, however, to pursue a differentiation strategy while not recognizing different segments, as Coca-Cola did prior to the 1980s. Today, Wal-Mart pursues a broad low-cost strategy, whereas Toyota and Coca-Cola pursue a broad differentiation strategy.

Companies that target a few segments, or more typically just one, are pursuing a focus or niche strategy. These companies can either try to be the low-cost player in that niche, as Costco has done, in which case we say they are pursuing a **focus low-cost strategy**, or they can try to customize their offering to the needs of their particular segment through the addition of features and functions, as Nordstrom has done, in which case we say they are pursuing a **focus differentiation strategy**.

Figure 5.4 Generic Business-Level Strategies



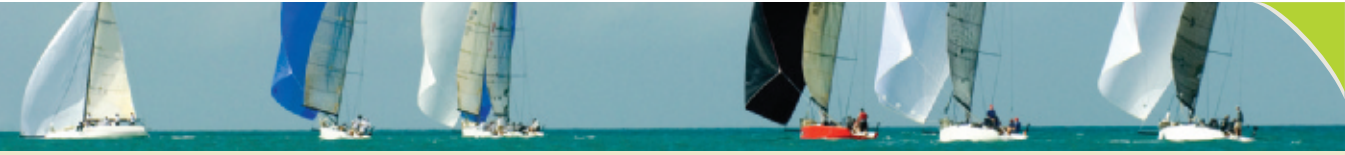
It is important to understand that there is often no one best way to compete in an industry. Different strategies may be equally viable. Wal-Mart, Costco, and Nordstrom are all in the retail industry; all three compete in different ways; and all three have done very well financially. The important thing is that managers are confident in their business-level strategy, have clear logic for pursuing that strategy, have an offering that matches their strategy, and have aligned functional activities and organizational arrangements with that strategy in order to execute it well.

Michael Porter, the originator of the concept of generic business-level strategies, has argued that companies must make a clear choice between the different options outlined in Figure 5.4.⁶ If they don't, he argues, they may become "stuck in the middle" and experience relatively poor performance. Central to Porter's thesis is the assertion that it is not possible to be both a differentiated company and a low-cost enterprise. According to Porter, differentiation by its very nature raises costs and makes it impossible to attain the low-cost position in an industry. By the same token, to achieve a low-cost position, companies necessarily must limit spending on product differentiation.

There is certainly considerable value in this perspective. As we have noted, one company cannot be both Nordstrom and Wal-Mart, Timex and Rolex, or Porsche and Kia. Low cost and differentiation are very different ways of competing—they require different functional strategies and different organizational arrangements. Trying to do both at the same time may not work. On the other hand, there are important caveats to this argument.

First—as we have already seen in this chapter when we discussed value innovation through improvements in process and product—a company can push out the efficiency frontier in its industry, redefining what is possible, and deliver more differentiation at a lower cost than its rivals. In such circumstances, a company might find itself in the fortunate position of being both the differentiated player in its industry and having a low-cost position. Ultimately its rivals might catch up, in which case it may well have to make a choice between emphasizing low cost and differentiation, but as we have seen from the case histories of Dell and Toyota, value innovators can gain a competitive advantage that lasts for years, if not decades (another example of value innovation is given in Strategy in Action 5.2, which recounts the history of Microsoft Office).

Second, it is important for the differentiated company to recognize that it cannot waver in its focus on efficiency. Similarly, the low-cost company cannot ignore product differentiation. The task facing a company pursuing a differentiation strategy is to be as efficient as possible given its choice of strategy. The differentiated company should not cut costs so deeply that it harms its capability to differentiate its offering from that of rivals. At the same time, it cannot let costs get out of control. Nordstrom, for example, is very efficient given its choice of strategic position. It is not a low-cost company by any means, but given its choice of how to compete it operates as efficiently as possible. Similarly, the low-cost company cannot totally ignore key differentiators in its industry. Wal-Mart does not provide the high level of customer service found at Nordstrom, but Wal-Mart cannot simply ignore customer service. Even though Wal-Mart has a self-service business model, employees are on hand to help customers with questions if needed. The task for low-cost companies such as Wal-Mart is to be "good enough" with regard to key differentiators. For another example of how this plays out, see Strategy in Action 5.2, which examines the competition between Google and Microsoft in the market for office-productivity software.



5.2 STRATEGY IN ACTION

Microsoft Office Versus Google Apps

Microsoft has long been the dominant player in the market for office productivity software with its Office suite of programs, which includes word processing, spreadsheet, and presentation software, and an e-mail client. Microsoft's rise to dominance in this market was the result of an important innovation—in 1989, Microsoft was the first company to bundle word processing, spreadsheet, and presentation programs together into a single offering that was interoperable. At the time, the market leader in word-processing software was WordPerfect; in spreadsheet software it was Lotus; and in presentation software it was Harvard Graphics. Microsoft was number 2 in each of these markets. However, by offering a bundle and pricing it below the price of each program purchased on its own, Microsoft grabbed share from its competitors, none of which had a full suite of offerings. In effect, Microsoft Office offered consumers more value (interoperability), at a lower price, than could be had from rivals.

As demand for Office expanded, Microsoft was able to spread the fixed costs of product development over a much larger volume than its rivals, and unit costs fell, giving Microsoft the double advantage of a differentiated product offering and a low-cost position. The results included the creation of a monopoly position in office-productivity software and two decades of extraordinary high returns for Microsoft in this market.

The landscape shifted in 2006, when Google introduced Google Apps, an online suite of office productivity software that was aimed squarely at Microsoft's profitable Office franchise. Unlike Office at the time, Google Apps was an online service. The basic programs reside on the cloud, and documents are saved on the cloud. At first, Google lacked a full suite of programs, and traction was slow, but since 2010 adoption of Google Apps has accelerated. Today, Google Apps offers the same basic programs as Office—word processing, spreadsheet, and presentation software, and an e-mail client—but far fewer features. Google's approach is not to match Office on features, but to *be good enough* for the majority of users. This helps to reduce development costs. Google also distributes Google Apps exclusively over the Internet, which is a very-low-cost distribution model, whereas

Office still has a significant presence in the physical retail channel, raising costs.

In other words, Google is pursuing a low-cost strategy with regard to Google Apps. Consistent with this, Google Apps is priced significantly below Office. Google charges \$50 per year for each person using its product. In contrast, Microsoft Office costs \$400 per computer for business users (although significant discounts are often negotiated). Initially, Google Apps was targeted at small businesses and start-ups, but more recently, Google seems to be gaining traction in the enterprise space, which is Microsoft's core market for Office. In 2012, Google scored an impressive string of wins, including licenses with the Swiss drug company Hoffman La Roche, where over 80,000 employees use the package, and with the U.S. Interior Department, where 90,000 use it. In total, Google Apps earned approximately \$1 billion in revenue in 2012. Estimates suggest that the company has more than 30 million paying subscribers. This still makes it a small offering relative to Microsoft Office, which is installed on over 1 billion computers worldwide. Microsoft Office, which generated \$24 billion in revenue in 2012, remains Microsoft's most profitable business. However, Microsoft cannot ignore Google Apps.

Indeed, Microsoft is not standing still. In 2012, Microsoft rolled out its own cloud-based Office offering, Office 365. Office 365 starts out at \$69.99 per year, although most people pay \$99.99 per year, for a version that can be downloaded onto multiple devices. According to a Microsoft spokesperson, demand for Office 365 has been very strong. By late 2017, 28 million consumers had purchased Office 365 licenses, and 120 million business licenses had been issued, while revenues surpassed those from the traditional Office offering for the first time. Microsoft argues that Google cannot match the quality of the enterprise experience that Microsoft can provide in areas like privacy, security, and data handling. Microsoft's message is clear—it still believes that Office is the superior product offering, differentiated by features, functions, privacy, data handling, and security. Whether Office 365 will keep Google Apps in check, however, remains to be seen.

Sources: Author interviews at Microsoft and Google; Q. Hardy, "Google Apps Moving onto Microsoft's Business Turf," *New York Times*, December 26, 2012; A. R. Hickey, "Google Apps: A \$1-Billion Business?" *CRN*, February 3, 2012, www.crn.com; M. Foley, "Microsoft now has \$120 million business users for Office 365," *ZDNet*, October 26, 2017.

5-5 BUSINESS-LEVEL STRATEGY, INDUSTRY, AND COMPETITIVE ADVANTAGE

Properly executed, a well-chosen, well-crafted business-level strategy can give a company a competitive advantage over actual and potential rivals. More precisely, it can put the company in an advantageous position relative to each of the competitive forces that we discussed in Chapter 2—specifically, the threat of entrants, the power of buyers and suppliers, the threat posed by substitute goods or services, and the intensity of rivalry between companies in the industry.

Consider first the low-cost company; by definition, the low-cost enterprise can make profits at price points that its rivals cannot profitably match. This makes it very hard for rivals to enter its market. In other words, the low-cost company can build an entry barrier into its market; it can, in effect, erect an economic moat around its business that thwarts higher-cost rivals. Amazon has done this in the online retail business. Through economies of scale and other operating efficiencies, Amazon has attained a very-low-cost structure that effectively constitutes a high entry barrier into this business. Rivals with less volume and fewer economies of scale than Amazon cannot match it on price without losing money—not a very appealing proposition.

A low-cost position and the ability to charge low prices and still make profits also protect a company against substitute goods or services. Low costs can help a company absorb cost increases that may be passed on downstream by powerful suppliers. Low costs can also enable the company to respond to demands for deep price discounts from powerful buyers and still make money. The low-cost company is often best positioned to survive price rivalry in its industry. Indeed, a low-cost company may deliberately initiate a price war in order to grow volume and drive its weaker rivals out of the industry. Dell did this during its glory days in the early 2000s, when it repeatedly cut prices for PCs to drive up sales volume and force marginal competitors out of the business. This strategy enabled Dell to become the largest computer company in the world by the mid-2000s.

Now let us consider the differentiated company. The successful differentiator is also protected against each of the competitive forces we discussed in Chapter 2. The brand loyalty associated with differentiation can constitute an important entry barrier, protecting the company's market from potential competitors. The brand loyalty enjoyed by Apple in the smartphone business has set a very high hurdle for any new entrant to match, and effectively acts as a deterrent to entry. Because the successful differentiator sells on non-price factors such as design or customer service, it is also less exposed to pricing pressure from powerful buyers. Indeed, the opposite may be the case—the successful differentiator may be able to implement price increases without encountering much, if any, resistance from buyers. The differentiated company can also fairly easily absorb price increases from powerful suppliers and pass them on downstream in the form of higher prices for its offerings, without suffering much, if any, loss in market share. The brand loyalty enjoyed by the differentiated company also protects it from substitute goods and service.

The differentiated company is protected from intense price rivalry within its industry by its brand loyalty, and by the fact that non-price factors are important to its customer set. At the same time, the differentiated company often does have to invest

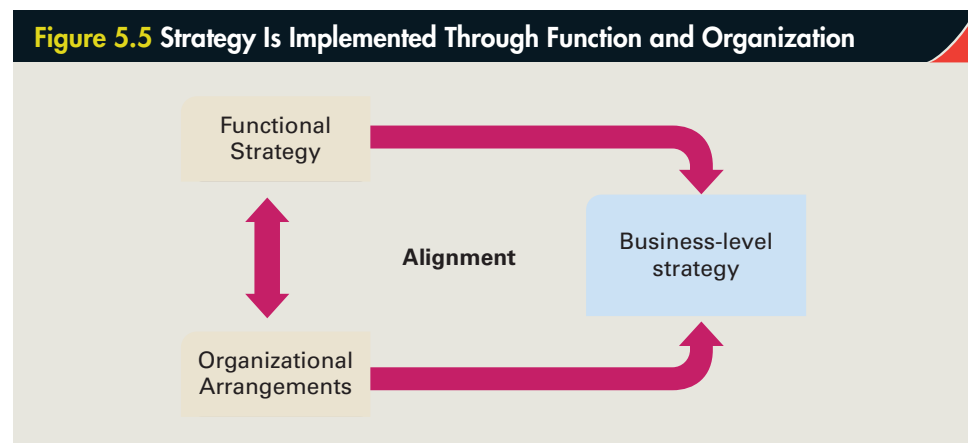
significant effort and resources in non-price rivalry, such as brand building through marketing campaigns or expensive product development efforts, but to the extent that it is successful, it can reap the benefits of these investments in the form of stable or higher prices.

This being said, it is important to note that focused companies often have an advantage over their broad market rivals in the segment or niche in which they compete in. For example, although Wal-Mart and Costco are both low-cost companies, Costco has a cost advantage over Wal-Mart in the segment that it serves. This primarily is due to the fact that Costco carries far fewer SKUs, and those it does are sold in bulk. However, if Costco tried to match Wal-Mart and serve the broader market, the need to carry a wider product selection (Wal-Mart has over 140,000 SKUs) means that its cost advantage would be lost.

The same can be true for a differentiated company. By focusing on a niche, and customizing the offering to that segment, a differentiated company can often outsell differentiated rivals that target a broader market. Thus, Porsche can outsell broad market companies like Toyota or GM in the high-end sports car niche of the market, in part because the company does not sell outside of its core niche. Porsche creates an image of exclusivity that appeals to its customer base. Were Porsche to start moving down market, it would lose this exclusive appeal and become just another broad market differentiator.

5-6 IMPLEMENTING BUSINESS-LEVEL STRATEGY

As we have already suggested in this chapter, for a company's business-level strategy to translate into a competitive advantage, it must be well implemented. This means that actions taken at the functional level should support the business-level strategy, as should the organizational arrangements of the enterprise. There must, in other words, be *alignment* or *fit* between business-level strategy, functional strategy, and organization (see Figure 5.5). We have discussed functional strategy in Chapter 4; detailed discussion of organizational arrangements is postponed until Chapter 12.



Source: Charles W.L. Hill © Copyright 2013.

Notwithstanding, we will make some basic observations about the functional strategies and organizational arrangements required to implement the business-level strategies of low cost and differentiation.

5-6a Lowering Costs Through Functional Strategy and Organization

Companies achieve a low-cost position primarily by pursuing functional-level strategies that result in *superior efficiency* and *superior product reliability*, which we discussed in detail in Chapter 4 when we looked at functional-level strategy and the building blocks of competitive advantage. As you will recall from Chapter 4, the following are clearly important:

- Achieving economies of scale and learning effects.
- Adopting lean production and flexible manufacturing technologies.
- Implementing quality improvement methodologies to ensure that the goods or services the company produces are reliable, so that time, materials, and effort are not wasted producing and delivering poor-quality products that have to be scrapped, reworked, or reproduced from scratch
- Streamlining processes to take out unnecessary steps
- Using information systems and technology to automate business process
- Implementing just-in-time inventory control systems
- Designing products that can be produced and delivered at as low a cost as possible
- Taking steps to increase customer retention and reduce customer churn

In addition, to lower costs the firm must be *organized* in such a way that the structure, control systems, incentive systems, and culture of the company all emphasize and reward employee behaviors and actions that are consistent with, or lead to, higher productivity and greater efficiency. As will be explained in detail in Chapter 12, the kinds of organizational arrangements that are favored in such circumstances include a flat structure with very few levels in the management hierarchy, clear lines of accountability and control, measurement and control systems that focus on productivity and cost containment; incentive systems that encourage employees to work in as productive a manner as possible, and that empower them to suggest and pursue initiatives that are consistent with productivity improvements; and a frugal culture that emphasizes the need to control costs. Companies that operate with these organizational arrangements include Amazon and Wal-Mart.

5-6b Differentiation Through Functional-Level Strategy and Organization

As with low costs, to successfully differentiate itself a company must pursue the right actions at the functional level and organize itself appropriately. Pursuing functional-level strategies that enable the company to achieve *superior quality* in terms of both reliability and excellence are important, as is an emphasis upon *innovation* in the product offering, and high levels of *customer responsiveness*. You will recall from Chapters 3 and 4 that superior quality, innovation, and customer responsiveness are three of the four building blocks of competitive advantage, the other being *efficiency*. Remember, too, that the differentiated firm cannot ignore efficiency; by virtue of its strategic choice, the differentiated

company is likely to have a higher cost structure than the low-cost player in its industry. Specific functional-level strategies designed to improve differentiation include:

- Customization of the product offering and marketing mix to different market segments
- Designing product offerings that have high perceived quality in terms of their functions, features, and performance, in addition to being reliable
- A well-developed customer-care function for quickly handling and responding to customer inquiries and problems
- Marketing efforts focused on brand building and perceived differentiation from rivals
- Hiring and employee development strategies designed to ensure that employees act in a manner that is consistent with the image that the company is trying to project to the world

For example, Apple has an excellent customer care function, as demonstrated by its in-store “Genius Bars,” where well-trained employees are available to help customers with inquiries and problems, and provide tutorials to help them get the best value out of their purchases. Apple has also been very successful at building a brand that differentiates it from rivals such as Microsoft (for example, the long-running TV advertisements that featured “Mac,” a very hip guy, and “PC,” a short, overweight man in a shabby gray suit).

As regards organization, creating the right structure, controls, incentives, and culture can all help a company differentiate itself. In a differentiated enterprise, one key issue is to make sure that marketing, product design, customer service, and customer care functions all play a key role. Again, consider Apple; following his return to the company in 1997, Steve Jobs reorganized to give the industrial design group the lead on all new product-development efforts. Under this arrangement, industrial design, headed by Johnny Ive, reported directly to Jobs, and engineering reported to industrial design for purposes of product development. This meant that designers rather than engineers specified the look and feel of a new product, and engineers then had to design according to the parameters imposed by the design group. This is in contrast to almost all other companies in the computer and smartphone business, where engineering typically takes the lead on product development. Jobs felt that this organizational arrangement was necessary to ensure that Apple produced beautiful products that not only worked well, but also looked and felt elegant. Because Apple under Jobs was differentiating by design, design was given a pivotal position in the organization.⁷

Making sure that control systems, incentive systems, and culture are aligned with the strategic thrust is also extremely important for differentiated companies. We will return to and expand upon these themes in Chapter 12.

5-7 COMPETING DIFFERENTLY: BLUE OCEAN STRATEGY

We have already suggested in this chapter that sometimes companies can fundamentally shift the game in their industry by figuring out ways to offer more value through differentiation at a lower cost than their rivals. We referred to this as *value innovation*, a term first coined by Chan Kim and Renee Mauborgne.⁸ Kim and Mauborgne developed their ideas further in the bestselling book *Blue Ocean Strategy*.⁹ Their basic proposition is that many successful companies have built their competitive advantage

by redefining their product offering through value innovation and, in essence, creating a new market space. They describe the process of thinking through value innovation as searching for the blue ocean—which they characterize as a wide-open market space where a company can chart its own course.

One of their examples of a company that found its blue ocean is Southwest Airlines. From its conception, Southwest competed differently than other companies in the U.S. airline industry. Most important, Southwest saw its main competitors not as other airlines but as people who would typically drive or take a bus to travel. For Southwest, the focus was to reduce travel time for its customer set and do so in a way that was cheap, reliable, and convenient, so that they would prefer to fly rather than drive.

The first route that Southwest operated was between Houston and Dallas. To reduce total travel time, it decided to fly into the small, downtown airports in both cities, Hobby in Houston and Love Field in Dallas, rather than the large, intercontinental airports located an hour's drive outside of both cities. The goal was to reduce total travel time by eliminating the need to drive to reach a major airport outside the city before even beginning one's journey. Southwest put as many flights a day on the route as possible to make it convenient, and did everything possible to drive down operating costs so that it could charge low prices and still make a profit.

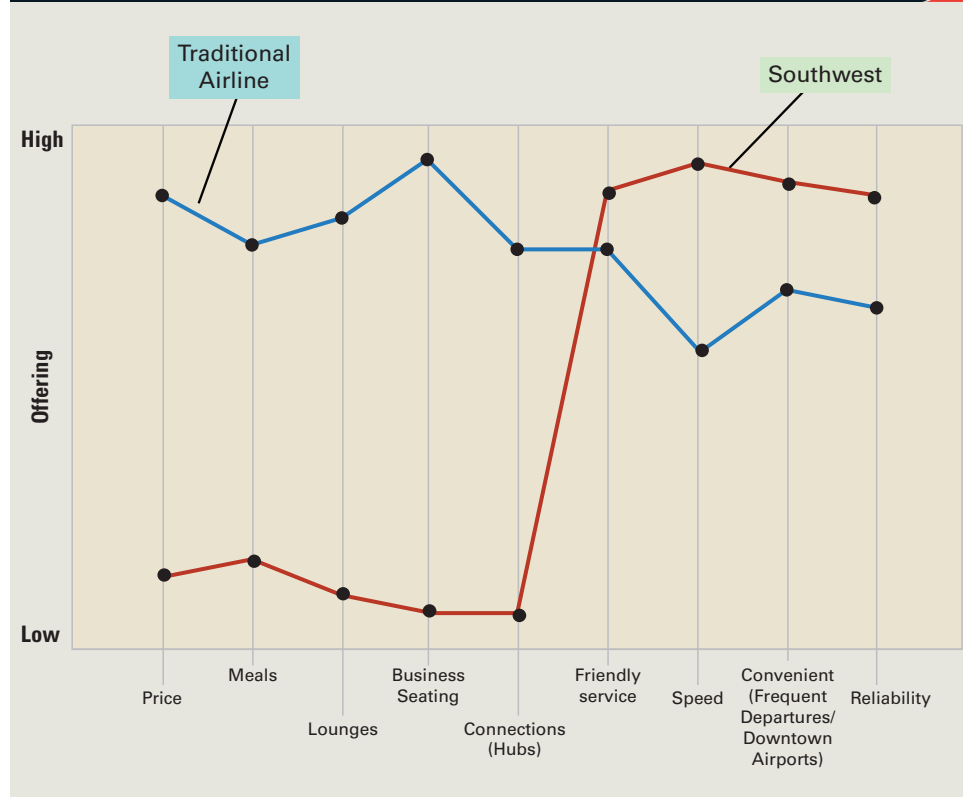
As the company grew and opened more routes, it followed the same basic strategy. Southwest always flew point to point, never routing passengers through hubs. Changing planes in a hub adds to total travel time and can hurt reliability, measured by on-time departures and arrivals, if connections are slow arriving or departing a hub due to adverse events such as bad weather delaying traffic somewhere in an airline's network. Southwest also dispensed with inflight meals, only offers coach-class seating, does not have lounges in airports for business-class passengers, and has standardized on one type of aircraft, the Boeing 737, which helps to raise reliability. The net result is that Southwest delivers more value *to its customer set* and does so at a lower cost than its rivals, enabling it to price lower than them and still make a profit. Southwest is a value innovator.

Kim and Mauborgne use the concept of a *strategy canvas* to map out how value innovators differ from their rivals. The strategy canvas for Southwest shown in Figure 5.6, shows that Southwest charges a low price and does not provide meals or lounges in airports, business-class seating, or connections through hubs (it flies point to point), but does provide friendly, quick, convenient, reliable low-cost service, *which is exactly what its customer set values*.

The whole point of the Southwest example, and other business case histories Kim and Mauborgne review, is to illustrate how many successful enterprises compete differently than their less successful rivals: They carve out a unique market space for themselves through value innovation. When thinking about how a company might redefine its market and craft a new business-level strategy, Kim and Mauborgne suggest that managers ask themselves the following questions:

1. **Eliminate:** Which factors that rivals take for granted in our industry can be eliminated, thereby reducing costs?
2. **Reduce:** Which factors should be reduced well below the standard in our industry, thereby lowering costs?
3. **Raise:** Which factors should be raised above the standard in our industry, thereby increasing value?
4. **Create:** What factors can we create that rivals do not offer, thereby increasing value?

Southwest *eliminated* lounges, business seating, and meals in flight; it *reduced* inflight refreshment to be well below industry standards; and by flying point-to-point it

Figure 5.6 A Strategy Canvas for Southwest Airlines

raised speed (reducing travel time), convenience, and reliability. Southwest also *created* value by flying between smaller, downtown airports whenever possible—something that other airlines did not typically do.

This is a useful framework, and it directs managerial attention to the need to think differently than rivals in order to create an offering and strategic position that are unique. If such efforts are successful, they can help a company build a sustainable advantage.

One great advantage of successful value innovation is that it can catch rivals off guard and make it difficult for them to catch up. For example, when Dell Computer started to sell direct to customers via the Internet, it was very difficult for rivals to respond because they had already invested in a different way of doing business—selling through a physical retail channel. Dell's rivals could not easily adopt the Dell model without alienating their channel, which would have resulted in lost sales. The prior strategic investment of Dell's rivals in distribution channels—which, at the time they were made, seemed reasonable—became a source of inertia that limited their ability to rapidly respond to Dell's innovations. The same holds true in the airline industry, where the prior strategic investments of traditional airlines have made it very difficult for them to respond to the threat posed by Southwest.

In sum, value innovation, because it shifts the basis of competition, can result in a sustained competitive advantage for the innovating company due to the relative inertia of rivals and their inability to respond in a timely manner without breaking prior strategic commitments.

KEY TERMS

business-level
strategy 146

value innovation 151

market segmentation 153

standardization

strategy 154

segmentation

strategy 154

focus strategy 154

generic business-level

strategy 156

broad low-cost

strategy 156

broad differentiation

strategy 156

focus low-cost

strategy 156

focus differentiation

strategy 156

TAKEAWAYS FOR STRATEGIC MANAGERS

1. Business-level strategy refers to the overarching competitive theme of a company in a given market.
2. At the most basic level, a company has a competitive advantage if it can lower costs relative to rivals and/or differentiate its product offering from those of rivals.
3. A low-cost position enables a company to make money at price points where its rivals are losing money.
4. A differentiated company can charge a higher price for its offering, and/or it can use superior value to generate growth in demand.
5. There are often multiple viable market positions along the differentiation–low-cost continuum.
6. Value innovation occurs when a company develops new products, processes, or strategies that enable it to offer more value through differentiation at a lower cost than its rivals.
7. Formulating business-level strategy starts with deciding *who* the company is going to serve, what *needs* or *desires* it is trying to satisfy, and *how* it is going to satisfy those needs and desires.
8. Market segmentation is the process of subdividing a market into clearly identifiable groups of customers that have similar needs, desires, and demand characteristics.
9. A company's approach to market segmentation is an important aspect of its business-level strategy.
10. There are four generic business-level strategies: broad low cost, broad differentiation, focus low cost, and focus differentiation.
11. Business-level strategy is executed through actions taken at the functional level and through organizational arrangements.
12. Many successful companies have built their competitive advantage by redefining their product offering through value innovation and creating a new market space. The process of thinking through value innovation has been described as searching for a “blue ocean”—a wide-open market space where a company can chart its own course.

DISCUSSION QUESTIONS

1. What are the main differences between a low-cost strategy and a differentiation strategy?
2. Why is market segmentation such an important step in the process of formulating a business-level strategy?
3. How can a business-level strategy of (a) low cost and (b) differentiation offer some protection against competitive forces in a company's industry?
4. What is required to transform a business-level strategy from a concept to a reality?
5. What is meant by the term *value innovation*? Can you identify a company not discussed in the text that has established a strong competitive position through value innovation?

CLOSING CASE

Virgin America

Prior to its 2016 acquisition by Alaska Airlines, Virgin America was consistently rated as one of the top U.S. airlines. Founded in 2004, the airline served 20 destinations out of its main hub in San Francisco. Virgin America was known for its leather seats, cocktail-lounge-style lighting, onboard Wi-Fi, in-seat power outlets for electronic devices, full-service meals, and that most scarce of all assets in coach class, legroom. The airline has earned a host of awards since its launch in 2007, including being named the “Best U.S. Airline” in the *Condé Nast* Traveler Readers’ Choice Awards every year from 2008-2014; and “Best Domestic Airline” in the *Travel + Leisure* World’s Best Awards for 7 years in a row. Furthermore, *Consumer Reports* named Virgin America the “Best U.S. Airline” in 2013 and 2014. Industry statistics supported these accolades. In 2014, Virgin was #1 in on-time arrivals in the United States, with 83.5% of aircraft arriving on time. Virgin America also had the lowest level of denied boardings (0.07 per 1,000 passengers), and mishandled baggage (0.87 per 1,000 passengers), and the fewest customer complaints (1.50 per 1,000 passengers).

Virgin America was an offshoot of the Virgin Group, the enterprise started by British billionaire Richard Branson. Branson got his start in the music business with Virgin Records stores (established in 1971) and the Virgin Record record label (established in 1973). In 1984, he leveraged the Virgin brand to enter an entirely new industry, airlines, with Virgin Atlantic. Virgin Atlantic became a major competitor to British Airways on a number of long-haul routes out of London, winning market share through superior customer service, innovative perks for premium travelers, and competitive pricing. Branson has also licensed the right to use the Virgin brand name across a wide

array of businesses, including Virgin Media (a major U.K. cable operator), Virgin Money (a U.K. financial services company), and Virgin Mobile (a wireless brand that exists in many countries). This strategy has made Virgin one of the most recognizable brands in the world. Interestingly, Branson makes money from royalty payments irrespective of whether companies licensing the Virgin brand are profitable or not. Branson himself describes the Virgin brand as representing, “innovation, quality, and a sense of fun.”

For all of its accolades and the power of the Virgin brand, Virgin America has had a hard time making money. One problem is that, as a small airline, Virgin only has a few flights a day on many routes and is unable to offer consumers the choice of multiple departure times, something that many travelers value. For example, on the popular route for tech workers between San Francisco and Austin, Texas, United offers six flights a day and Jet Blue offers two, compared with just one for Virgin America.

Another serious problem is that providing all of the extra frills necessary to deliver a high-quality experience costs money. In its first 5 years of operation, Virgin America accumulated \$440 million in losses before registering a small profit of \$67 million on revenues of \$1.4 billion in 2013. In 2014, Virgin America went public and managed to post a respectable \$150 million in net profits on revenues of close to \$1.5 billion. The company was helped by an improving economy, strong demand, and lower jet fuel costs.

The key competitive issue the company faced was that it was a niche player in a much larger industry where low-cost carriers such as Southwest Airlines and Jet Blue put constant pressure on prices and crowded out routes with multiple flights

daily. Virgin America charged prices that were 10 to 20% above those of its no-frills rivals, but it could not raise prices too far without losing customers and flying with empty seats, which is a recipe for failure in an industry where margins are slim. On the route between New York's Kennedy Airport and Los Angeles during late 2012, for example, Virgin passengers were paying an average of \$305 a ticket compared to an industry average of \$263. Virgin's passenger-load factor on that route was 96% of the industry average during the same period. Virgin CEO David Cush, however, was adamant that the airline "... won't get into a fare war. Our product is good; we've got good loyalty. People will be

willing to pay \$20 or \$30 more." Was he correct? We will never know. In 2016, Virgin was acquired by West Coast rival Alaska Airlines, reportedly because Alaska wanted Virgin's landing slots in San Francisco hub. Although Virgin continued to operate as a division of Alaska for a while, in April 2018 it was fully merged into Alaska's operating structure, and the brand disappeared.

Sources: M. Richtel, "At Virgin America, a fine line between pizzazz and profit," *New York Times*, September 7, 2013; B. Tuttle, "Why an airline that travelers love is failing," *Time*, October 25, 2012; T. Huddleston, "Virgin America goes public," *Fortune*, November 13, 2014; A. Levine-Weinberg, "How Richard Branson built a \$5-billion fortune from scratch," *Motley Fool*, October 19, 2014, www.fool.com.

CASE DISCUSSION QUESTIONS

1. What was Virgin America's segmentation strategy? Who did it serve?
2. With regard to its core segment, what did Virgin America offer its customers?
3. Using the Porter model, which generic business-level strategy was Virgin America pursuing?
4. What actions taken at the functional level enabled Virgin America to implement its strategy?
5. Do you think Virgin America would have been able to survive had it remained independent? (The company was acquired by Alaska Airlines in 2016.)

NOTES

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⁶Porter, *Competitive Advantage and Competitive Strategy*.

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CHAPTER

6

BUSINESS-LEVEL STRATEGY AND THE INDUSTRY ENVIRONMENT

LEARNING OBJECTIVES

- 6.1 Identify the strategies managers can develop to increase profitability in fragmented industries
- 6.2 Discuss the special problems that exist in embryonic and growth industries, and how companies can develop strategies to effectively compete
- 6.3 Understand competitive dynamics in mature industries and discuss the strategies managers can develop to increase profitability even when competition is intense
- 6.4 Outline the different strategies that companies in declining industries can use to support their business models and profitability

OPENING CASE

The Rise of Internet Streaming Services and Decline in the Power of Cable Companies

For more than three decades, customers in most television markets had become increasingly reliant upon cable television operators to access television content, movies, Internet service, and more. Many television markets were controlled by only one or a few cable operators, giving the companies near monopoly power. Furthermore, for much of that period, cable TV was the consumer's primary source for news, network programming, specialized programming such as sports channels and foreign language programming, and movie services such as HBO and Showtime.

However, the emergence of Internet streaming alternatives such as Netflix, Roku, Hulu, YouTube, Amazon Prime Video, and other web-based services had led many customers to begin "cutting the cord" with their cable companies. Cable operators required customers to commit to expensive, lengthy contracts. To make matters worse, they had historically



Piotr Adamowicz/Alamy Stock Photo

provided very poor customer satisfaction. Customers complained of long wait times for customer service, hidden fees, and difficulty in changing or cancelling service. Internet-based streaming services are usually much cheaper (sometimes free), and allow more flexible terms like month-to-month contracts or payment for individual shows. Many have also proven they can develop successful original content that attracts subscribers to their service. As Laura Martin, media analyst with Needham & Co., notes: "There's never been more types of premium video content. And the consumer has never had more screens to watch all that content."¹

Though globally the number of people paying for television content was still increasing and was expected to continue to increase until at least 2023, in markets where pay TV was more mature subscriber numbers were declining. U.S. cable companies such as Comcast, Charter, and AT&T collectively reported subscriber losses of over three million in 2017.² Furthermore, revenues for companies providing television content were decreasing even faster because of the pricing pressure created by the streaming alternatives. Many customers now paid only for less expensive, Internet-only services rather than expensive TV channel bundles.

According to a study by Digital TV Research, global revenues for pay TV peaked in 2016 at \$205 billion, dropped to \$202 billion in 2017, and were forecast to continue dropping, falling to \$183 billion by 2023. The geographic differences in revenue and subscriber patterns are stark; between 2017 and 2023, China is expected to gain nearly \$1 billion in pay TV revenues, and India is expected to gain \$1.6 billion. North American pay TV revenues, on the other hand, are expected to fall by \$22 billion over the same time frame.³

Cable companies attempted to staunch their losses by consolidating through acquisitions, negotiating exclusive contracts with content providers, offering their own online video-on-demand services, and incorporating services like Netflix and Hulu into their offerings in a gamble that customers would value being able to access all of the services without the awkwardness of changing applications and remotes. In the short run, cable companies still have the upper hand because they provide the Internet service that consumers were using to stream video, making it difficult to truly "cut the cord." A 2018 survey by Deloitte, for example, found that 56% of pay TV subscribers say they had kept their service because it was bundled with their Internet access.⁴ In the long run, however, most analysts agreed that much of the power that cable companies had wielded in the past would inevitably shift to consumers and producers of highly differentiated and valued content.

6-1 OVERVIEW

In Chapter 2, we learned that industries go through a life cycle. Some industries are young and dynamic, with rapidly growing demand. Others are mature and relatively stable, whereas still other industries, like newspapers and many categories of bricks-and-mortar retailers, are in decline.

We will see that each stage in the evolution of its industry raises interesting challenges for a business. Managers must adopt the appropriate strategies to deal with these challenges.

For example, as illustrated in the Closing Case on Best Buy, many retailers that counted on having a physical presence in the form of local stores are now under intense pricing pressure from online retailers. Some, like Wal-Mart, Target, and Best Buy, have responded by investing heavily in an online presence. Others, like Circuit City, Borders' bookstores, and Tower Records, succumbed to competitive pressure and disappeared. However, paradoxically, there is often still good money to be made in a declining industry if managers can figure out the right strategy. A niche strategy of focusing on market segments where demand remains strong is a classic way of making money in a declining industry. There are still many categories of products that customers want to experience in person before purchasing, for example, and Best Buy is hoping it can remain the leader in its declining industry by providing an exceptional experience to these customers.

Before we look at the different stages of an industry life cycle, we first consider strategy in a fragmented industry because fragmented industries can offer unique opportunities for enterprises to pursue strategies that result in the consolidation of those industries, often creating significant wealth for the consolidating enterprise and its owners.

6-2 STRATEGY IN A FRAGMENTED INDUSTRY

fragmented industry

An industry composed of a large number of small- and medium-sized companies.

A **fragmented industry** is composed of a large number of small- and medium-sized companies. Examples of fragmented industries include the dry-cleaning, hair salon, restaurant, health club, massage, and legal services industries. There are several reasons that an industry may consist of many small companies rather than a few large ones.⁵

6-2a Reasons for Fragmentation

There are three reasons for fragmentation. First, a lack of scale economies may mean that there are few, if any, cost advantages to large size. There are no obvious scale economies in landscaping and massage services, for example, which helps explain why these industries remain highly fragmented. In some industries, customer needs are so specialized that only a small amount of a product is required. Hence, there is no scope for a large, mass-production operation to satisfy the market. Custom-made jewelry and catering are examples. In some industries, there may even be diseconomies of scale. In the restaurant business, for example, customers often prefer the unique food and style of a popular, local restaurant rather than the standardized offerings of a national chain. This diseconomy of scale places a limit on the ability of large restaurant chains to dominate the market.

Second, brand loyalty in the industry may primarily be local. It may be difficult to build a brand through differentiation that transcends a particular location or region. Many homebuyers, for example, prefer dealing with local real estate agents, whom they

perceive as having better local knowledge than national chains. Similarly, there are no large chains in the massage services industry because differentiation and brand loyalty are primarily driven by differences in the skill sets of individual massage therapists.

Third, the lack of scale economies and national brand loyalty often implies low entry barriers. When this is the case, a steady stream of new entrants may keep the industry fragmented. The massage services industry exemplifies this situation. Due to the absence of scale requirements, the costs of opening a massage services business can be shouldered by a single entrepreneur. The same is true of landscaping services, which helps to keep that industry fragmented.

In industries that have these characteristics, focus strategies tend to work best. Companies may specialize by customer group, customer need, or geographic region. Many small, specialty companies may operate in local or regional markets. All kinds of specialized or custom-made products fall into this category, as do all small, service operations that cater to personalized customer needs.

6-2b Consolidating a Fragmented Industry Through Value Innovation

Business history is full of examples of entrepreneurial organizations that have pursued strategies to create meaningful scale economies and national brands where none previously existed. In the process, they have consolidated industries that were once fragmented, reaping enormous gains for themselves and their shareholders in the process.

For example, until the 1980s, the office-supply business was a highly fragmented industry composed of many small, “mom-and-pop” enterprises that served local markets. The typical office-supply enterprise in those days had a limited selection of products, low inventory turnover, limited operating hours, and a focus on providing personal service to local businesses. Customer service included having a small sales force, which visited businesses and took orders, along with several trucks that delivered merchandise to larger customers. Then along came Staples, started by executives who had cut their teeth in the grocery business; they opened a big-box store with a wide product selection, long operating hours, and a self-service business model. They implemented computer information systems to track product sales and make sure that inventory was replenished just before it was out of stock, which drove up inventory turnover. True, Staples did not initially offer the same level of personal service that established office-supply enterprises did, but the managers of Staples made a bet that small-business customers were more interested in value from a wide product selection, long opening hours, and low prices—and they were right. Put differently, the managers at Staples had a different view of what was important to their customer set than did the established enterprises. Today, Staples, Office Depot, and Office Max dominate the office-supply industry, and most of their small rivals have gone out of businesses.

You may recognize in the Staples story a theme that we discussed in the Chapter 5: Staples is a *value innovator*.⁶ The company’s founders figured out a way to offer more value to their customer set, and to do so at a lower cost. Nor have they been alone in doing so. In the retail sector, for example, Wal-Mart and Target did a similar thing in general merchandise, Lowe’s and Home Depot pulled off the same trick in building materials and home improvement, and Barnes and Noble did it in book retailing. In the restaurant sector, McDonald’s, Taco Bell, Kentucky Fried Chicken, and, more recently, Starbucks, have all followed a similar course. In each case, these enterprises succeeded in consolidating once-fragmented industries.

The lesson is clear: Fragmented industries are wide-open market spaces—blue oceans—just waiting for entrepreneurs to transform them through the pursuit of value

innovation. A key to understanding this process is to recognize that, in each case, the value innovator defines value differently than do established companies, and it finds a way to offer value that lowers costs through the creation of scale economies. In fast food, for example, McDonald's offers reliable, quick, convenient fast food at a low cost. The low cost has two sources—first, the standardization of processes within each store, which boosts labor productivity; second, the attainment of scale economies on the input side due to McDonald's considerable purchasing power (which grew over time as the McDonald's chain grew). McDonald's was a value innovator in its day, and through its choice of strategy it helped to drive consolidation in the fast-food segment of the restaurant industry.

6-2c Chaining and Franchising

In many fragmented industries that have been consolidated through value innovation, the transforming company often starts with a single location, or just a few locations. This was true for Best Buy, which started as a single store (called Sound of Music) in St. Paul, Minnesota, and Starbucks, which had just three stores in Seattle, Washington, when Howard Shultz took over and started to transform the business. The key is to get the strategy right at the first few locations, and then expand as rapidly as possible to build a national brand and realize scale economies before rivals move into the market. If this is done right, the value innovator can build formidable barriers to new entry by establishing strong brand loyalty and enjoying the scale economies that come from large size (often, these scale economies are associated with purchasing power). Enterprises use two strategies to *replicate* their offering once they get it right: chaining and franchising.⁷

chaining

A strategy designed to obtain the advantages of cost leadership by establishing a network of linked merchandising outlets interconnected by information technology that functions as one large company.

Chaining involves opening additional locations that adhere to one basic formula *that the company owns*. Thus, Staples pursued a chaining strategy when it quickly opened additional stores after perfecting its formula at its first location in Boston. Today, Staples has over 1,220 stores worldwide. Starbucks, too, has pursued a chaining strategy, offering the same basic formula in every store that it opens. Its store count now exceeds 27,000 in 76 countries. Best Buy, Wal-Mart, Barnes & Noble, and Home Depot have also all pursued a chaining strategy.

By expanding through chaining, a value innovator can quickly build a national brand. This may be of significant value in a mobile society such as the United States, where people move and travel frequently, and when in a new town or city they look for familiar offerings. At the same time, by rapidly opening locations, and by knitting those locations together through good information systems, the value innovator can realize many of the cost advantages that come from large size. Wal-Mart, for example, uses a hub-and-spoke distribution system monitored real-time through a satellite-based information system that enables it to tightly control the flow of inventory through its stores. This tight control allows it to customize inventory for particular regions based on sales patterns and maximize inventory turnover (a major source of cost savings). In addition, as Wal-Mart grew, it was able to exercise more and more bargaining power over suppliers, driving down the price for the goods that it resold in its stores.

franchising

A strategy in which the franchisor grants to its franchisees the right to use the franchisor's name, reputation, and business model in return for a franchise fee and, often, a percentage of the profits.

Franchising is similar in many respects to chaining, except that in the case of franchising the founding company—the franchisor—licenses the right to open and operate a new location to another enterprise—franchisee—in return for a fee. Typically, franchisees must adhere to strict rules that require them to adopt the same basic business model and operate in a certain way. Thus, a McDonald's franchisee has to have the same basic look, feel, offerings, pricing, and business processes as other restaurants in the system, and must report standardized financial information to McDonald's on a regular basis.

There are advantages to using a franchising strategy. First, normally the franchisee puts up some or all of the capital to establish his or her operation. This helps to finance the growth of the system and can result in more rapid expansion. Second, because franchisees own their operations, and because they often put up capital, they have a strong incentive to make sure that their operations are run as efficiently and effectively as possible—which is good for the franchisor.

Third, franchisees often have a deep knowledge of the local market that enables them to develop new offerings and/or processes suited to their customers' preferences. Typically, the franchisor will give franchisees some latitude to do this, as long as they do not deviate too much from the basic business model. Ideas developed in this way may then be transferred to other locations, improving the performance of the entire system. For example, McDonald's has recently been changing the design and menu of its restaurants in the United States based on ideas first pioneered by a franchisee in France.

The drawbacks of a franchising strategy are threefold. First, it may allow less control than can be achieved through a chaining strategy because, by definition, a franchising strategy delegates some authority to the franchisee. Howard Shultz, for example, decided to expand primarily via a chaining strategy rather than a franchising strategy because he felt that franchising would not give Starbucks the necessary control over customer service in each store. Second, in a franchising system the franchisee captures some of the economic profit from a successful operation, whereas in a chaining strategy it all flows to the company. Third, because franchisees are small relative to the founding enterprise, they may face a higher cost of capital, which raises system costs and lowers profitability. Given these various pros and cons, the choice between chaining and franchising depends on managers evaluating which strategy is best given the circumstances facing the founding enterprise.

6-2d Horizontal Mergers

Another way of consolidating a fragmented industry is to merge with or acquire competitors, combining them into a single, large enterprise that is able to realize scale economies and build a compelling national brand. For example, in the aerospace and defense contracting business there are many small, niche producers that build the components installed into large products such as Boeing jets or military aircraft. Esterline, based in Bellevue, Washington, has been pursuing horizontal mergers and acquisitions, trying to consolidate this tier of suppliers. Esterline started off as a small supplier. Over the last two decades, it has acquired another 30 or so niche companies, building a larger enterprise that now has sales over \$2 billion. Esterline's belief is that, as a larger enterprise offering a full portfolio of defense and avionics products, it can gain an edge over smaller rivals when selling to companies like Boeing and Lockheed, while its larger size enables it to realize scale economies and lowers its cost of capital.

It is worth noting that although mergers and acquisitions can help a company consolidate a fragmented industry, the road to success when pursuing this strategy is littered with failures. Some companies pay too much for the businesses they acquire. Others find out after the acquisition that they have bought a "lemon" that is nowhere as efficient as they thought prior to the acquisition. Still others discover that the gains envisaged for an acquisition are difficult to realize due to a clash between the culture of the acquiring and acquired enterprises. We will consider the benefits, costs, and risks associated with a strategy of horizontal mergers and acquisitions in Chapters 9 and 10 when we look at corporate-level strategy.

6-3 STRATEGIES IN EMBRYONIC AND GROWTH INDUSTRIES

As Chapter 2 discussed, an embryonic industry is one that is just beginning to develop, and a growth industry is one in which first-time demand is rapidly expanding as many new customers enter the market. Choosing the strategies needed to succeed in such industries poses special challenges because new groups of customers with different needs enter the market. Managers must be aware of the way competitive forces in embryonic and growth industries change over time because they frequently need to develop new competencies and refine their business strategy in order to effectively compete in the future.

Most embryonic industries emerge when a technological innovation creates a new product opportunity. For example, in 1975, the personal computer (PC) industry was born after Intel developed the microprocessor technology that allowed companies to build the world's first PCs; this spawned the growth of the PC software industry that took off after Microsoft developed an operating system for IBM.⁸ Similarly, the development of the internet gave rise to the e-commerce and social media industries, and advances in broadband and smartphones gave rise to the music and video streaming industries.

Customer demand for the products of an embryonic industry is initially limited for a variety of reasons, including: (1) the limited performance and poor quality of the first products; (2) customer unfamiliarity with what the new product can do for them; (3) poorly developed distribution channels to get the product to customers; (4) a lack of complementary products that might increase the value of the product for customers; and (5) high production costs because of small volumes of production. For this reason, first movers in an embryonic industry are often at a disadvantage to later entrants; they must bear greater development costs to work out how to produce the technology and make it desirable to customers, and they bear greater “missionary” costs of educating customers about the product's benefits.

Customer demand for the first cars, for example, was limited by their poor performance (they were no faster than a horse, far noisier, and frequently broke down), a lack of important complementary products (such as a network of paved roads and gas stations), and high production costs that made these cars an expensive luxury (before Ford invented the assembly line, cars were built by hand in a craft-based production setting). Similarly, demand for electric cars is currently limited because many customers are unfamiliar with the technology and its implications for service and resale value. Customers also worry about whether there are charging stations along routes they will drive, or worry that charging will take too long. Because of such concerns, early demand for the products of embryonic industries typically comes from a small set of technologically savvy customers willing and able to tolerate, and even enjoy, the imperfections in their new purchase.⁹ Early adopters of electric cars, for example, tend to have higher-than-average incomes and are highly motivated to buy a car that is environmentally friendly.¹⁰

An industry moves from the embryonic stage to the growth stage when a mass market starts to develop for its product. A **mass market** is one in which large numbers of customers enter the market. Mass markets emerge when three things happen: (1) ongoing technological progress makes a product easier to use, and increases its value for the average customer; (2) complementary products are developed that also increase its value; and (3) companies in the industry work to find ways to reduce the costs of producing the new products so they can lower their prices and stimulate high demand.¹¹ For example, the mass market for cars emerged and the demand for cars surged when: (1) technological

mass market

A market into which large numbers of customers enter.

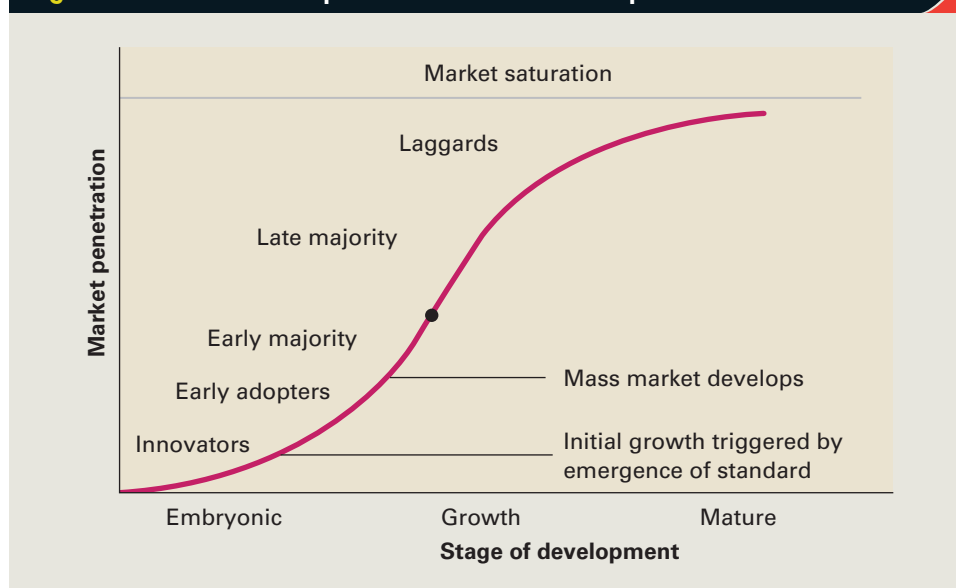
progress increased the performance of cars; (2) a network of paved roads and gas stations was established; and (3) Henry Ford began to mass-produce cars using an assembly-line process, dramatically reducing production costs and enabling him to decrease prices and build consumer demand. Similarly, the mass market for PCs emerged when technological advances made computers easier to use, a supply of complementary software (such as spreadsheet and word-processing programs) was developed, and companies in the industry (such as Dell) began to use mass production to build PCs at low cost.

6-3a The Changing Nature of Market Demand

Managers who understand how the demand for a product is affected by the changing needs of customers can focus on developing new strategies that will protect and strengthen their competitive position, such as building competencies to lower production costs or speed product development. In most product markets, the changing needs of customers lead to the S-shaped growth curve in Figure 6.1.¹² This illustrates how different groups of customers with different needs enter the market over time. The curve is S-shaped because adoption is initially slow when an unfamiliar technology is introduced to the market. Adoption accelerates as the technology becomes better understood and utilized by the mass market, and eventually the market is saturated. The rate of new adoptions then declines as demand is increasingly limited to replacement demand.¹³ For instance, electronic calculators were adopted upon their introduction by a relatively small pool of scientists and engineers. This group had previously used slide rules. Then, the calculator began to penetrate the larger markets of accountants and commercial users, followed by the still-larger market that included students and the general public. After these markets had become saturated, fewer opportunities remained for new adoptions. This curve has major implications for a company's differentiation, cost, and pricing decisions.

The first group of customers to enter the market is referred to as *innovators*. Innovators are often technophiles who are delighted to be the first to purchase and experiment with a product based on a new technology—even if it is imperfect and expensive.

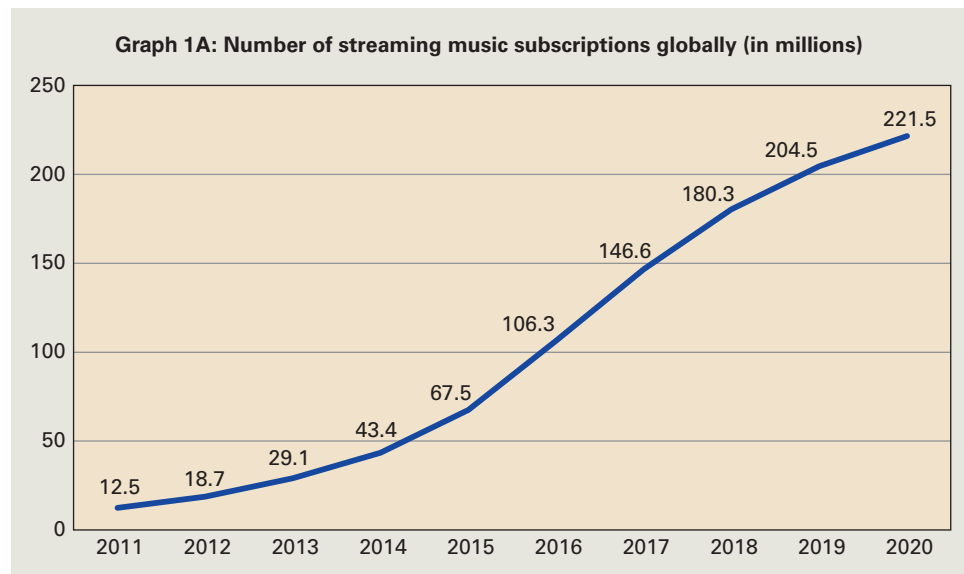
Figure 6.1 Market Development and Customer Groups



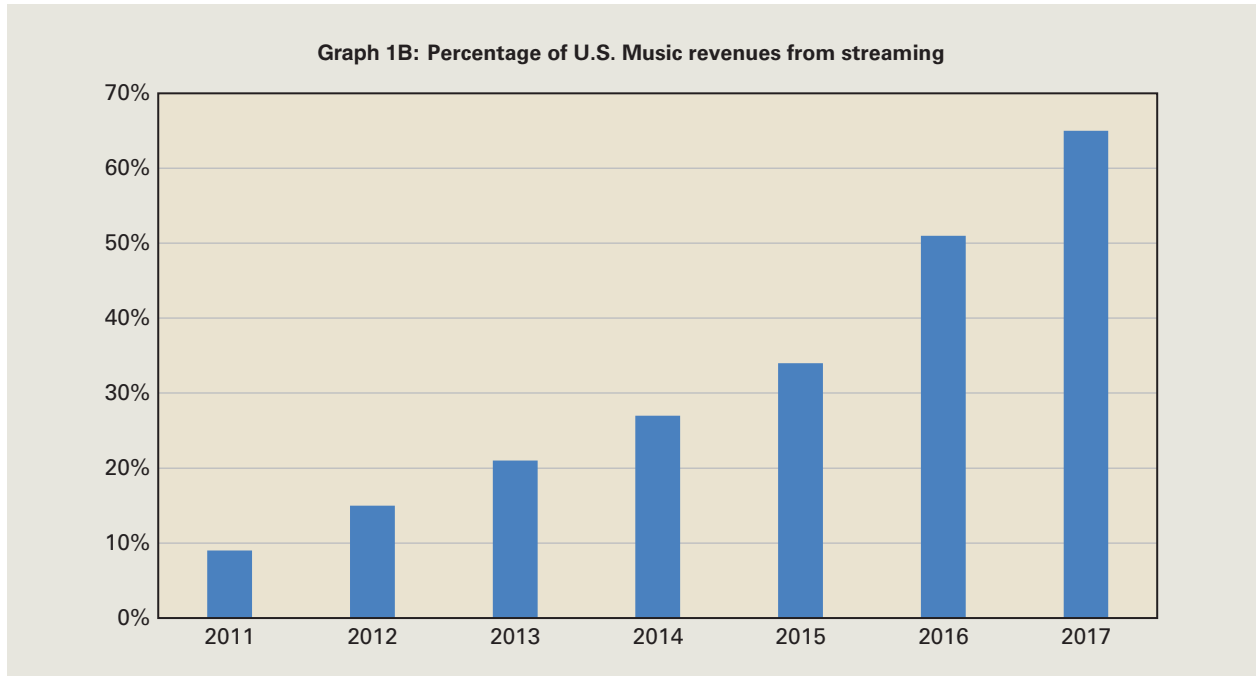
Frequently, innovators have technical talents and interests, which drive them to “own” and develop new technology. They tend to be less risk averse than other customer groups, and often have greater resources to spare. Though they are not always well integrated into social networks, they are influential in new-product adoption because they are the first to bring a new idea into the social system. In the PC market, the first customers were software engineers and computer hobbyists who wanted to write computer code at home.¹⁴

Early adopters are the second group of customers to enter the market; they understand that the technology may have important future applications and are willing to experiment with it to see if they can pioneer new uses for the technology. They are comfortable with technical information, and will adopt products that seem appealing even if none of their peers have purchased those products. Early adopters often envision how the technology may be used in the future, and they try to be the first to profit from its use. Early adopters often have significant social influence and will actively promote new technologies, making them particularly important for the diffusion of new innovations. Jeff Bezos, the founder of Amazon.com, was an early adopter of Web technology. In 1994, before anyone else, he saw that the Web could be used in innovative ways to sell books.

Innovators and early adopters alike enter the market while the industry is in its embryonic stage. The next group of customers, the *early majority*, forms the leading wave or edge of the mass market. Their entry into the market signifies the beginning of the growth stage. Customers in the early majority are practical and generally understand the value of new technology. They weigh the benefits of adopting new products against the costs, and wait to enter the market until they are confident they will benefit. When the early majority decides to enter the market, a large number of new buyers may be expected. For example, see graphs 1A and 1B with data on the music streaming industry. By 2018, the number of music streaming subscriptions globally had already risen to just under 150 million, and was expected to reach over 220 million by 2020. In some markets such as the United States, streaming was even considered to be approaching saturation. As shown in the second graph below, by 2018 music streaming subscriptions accounted for roughly 65% of all music revenues in the United States.



Source: MIDiA research, 2018

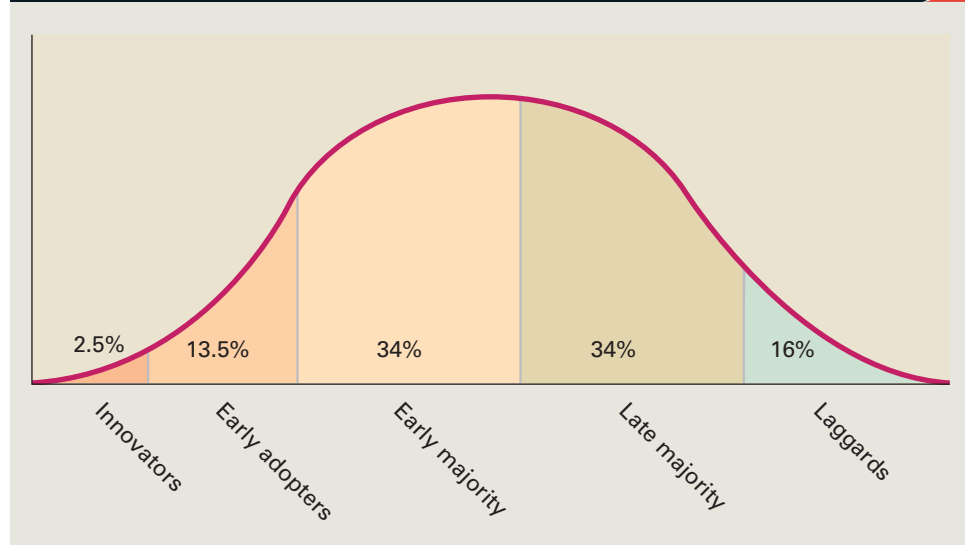


Source: Recording Industry Association of America, 2018

When about 50% of the market has been penetrated, the next group of customers enters the market. This group is characterized as the *late majority*, the customers who purchase a new technology or product only when many of their peers already have done so and it is obvious the technology has great utility and is here to stay. A typical late majority customer group is a somewhat “older” and more conservative set of customers. They are often unfamiliar with the advantages of new technology. The late majority can be a bit nervous about buying new technology but will do so if they see many people adopting it and finding value in it. The late majority did not start to enter the PC market until the mid-1990s, when they saw people around them engaging in email exchanges and browsing the Web, and it became clear that these technologies were here to stay. In the smartphone business, the late majority started to enter the market in 2012, when it became clear that smartphones were becoming the dominant mobile-phone technology.

Laggards, the last group of customers to enter the market, are inherently conservative and unappreciative of the uses of new technology. Laggards frequently refuse to adopt new products even when the benefits are obvious, or unless they are forced to do so by circumstances—for example, due to work-related reasons. People who use typewriters rather than computers to write letters and books are laggards. In the United States, people who do not use smartphones are laggards and given the fast rate of adoption of music streaming, it will not be long before the only people not in the music streaming market are laggards.

In Figure 6.2, the bell-shaped curve represents the total market, and the divisions in the curve show the average percentage of buyers who fall into each of these customer groups. Note that early adopters are a very small percentage of the market;

Figure 6.2 Market Share of Different Customer Segments

Source: Adapted from Rogers, EM. 2010. *Diffusion of Innovations*. New York: Simon and Schuster.

hence, the figure illustrates a vital competitive dynamic—the highest market demand and industry profits arise when the early and late majority groups enter the market. Additionally, research has found that although early pioneering companies succeed in attracting innovators and early adopters, many of these companies often *fail* to attract a significant share of early and late majority customers, and ultimately go out of business.¹⁵

6-3b Strategic Implications: Crossing the Chasm

Why are pioneering companies often unable to create a business model that allows them to be successful over time and remain as market leaders? *Innovators and early adopters have very different customer needs from the early majority*. In an influential book, Geoffrey Moore argues that because of the differences in customer needs between these groups, the business-level strategies required for companies to succeed in the emerging mass market are quite different from those required to succeed in the embryonic market.¹⁶ Pioneering companies that do not change the strategies they use to pursue their business model will therefore lose their competitive advantage to those companies that implement new strategies aimed at best serving the needs of the early and late majority. New strategies are often required to strengthen a company's business model as a market develops over time for the following reasons:

- Innovators and early adopters are technologically sophisticated customers willing to tolerate the limitations of the product. The early majority, however, values ease of use and reliability. Companies competing in an embryonic market typically pay more attention to increasing the performance of a product than to its ease of use and reliability. Those competing in a mass market need to make sure

that the product is reliable and easy to use. Thus, the product development strategies required for success vary as a market develops over time.

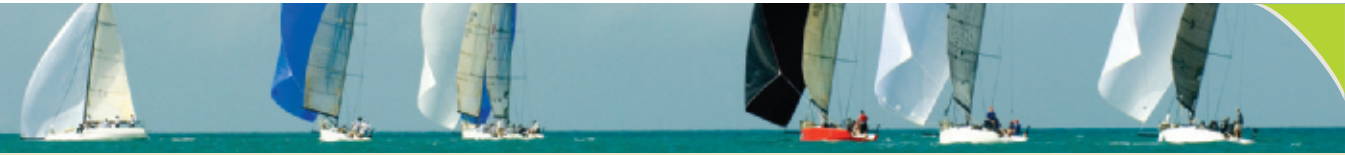
- Innovators and early adopters are typically reached through specialized distribution channels, and products are often sold by word of mouth. They are active consumers of technical information. Reaching the early majority requires mass-market distribution channels and mass-media advertising campaigns that require a different set of marketing and sales strategies.
- Because innovators and the early majority are relatively few in number and are not particularly price sensitive, companies serving them typically pursue a focus model, produce small quantities of a product, and price high. To serve the rapidly growing mass market, large-scale mass production may be critical to ensure that a high-quality product can be reliably produced at a low price point.
- The spread of new technologies is often a social process: people typically find out about new technologies from their friends and colleagues. Mass market customers often will not adopt a product until they see it widely in use and perceive it as ubiquitous.¹⁷ This can create a chicken-and-egg problem: until enough people have adopted the product, the mass market will be reluctant to adopt it.

In sum, the business models and strategies required to compete in an embryonic market populated by early adopters and innovators are very different from those required to compete in a high-growth, mass market populated by the early majority. As a consequence, the transition between the embryonic market and the mass market is not a smooth, seamless one. Rather, it represents a *competitive chasm* or gulf that companies must cross. According to Moore, many companies do not or cannot develop the right business model; they fall into the chasm and go out of business. Thus, although embryonic markets are typically populated by numerous small companies, once the mass market begins to develop, the number of companies sharply decreases.¹⁸ For a detailed example of how this unfolds, see Strategy in Action 6.1, which explains how Microsoft and Research in Motion fell into the chasm in the smartphone market, whereas Apple leaped across it with its iPhone, a product designed for the early majority.

The implication is clear: To cross the chasm successfully, managers must correctly identify the needs of the first wave of early majority users—the leading edge of the mass market. Then they must adjust their business models by developing new strategies to redesign products and create distribution channels and marketing campaigns to satisfy the needs of the early majority. They must have a suitable product available at a reasonable price to sell to the early majority when they begin to enter the market in large numbers. At the same time, industry pioneers must abandon outdated, focused business models directed at the needs of innovators and early adopters. Focusing on an outdated model leads managers to ignore the needs of the early majority—and the need to develop the strategies necessary to pursue a differentiation or cost-leadership business model in order to remain a dominant industry competitor.

6-3c Strategic Implications of Differences in Market Growth Rates

Managers must understand a final, important issue in embryonic and growth industries: Different markets develop at different rates. The speed at which a market develops can be measured by its growth rate, that is, the rate at which customers in that market



6.1 STRATEGY IN ACTION

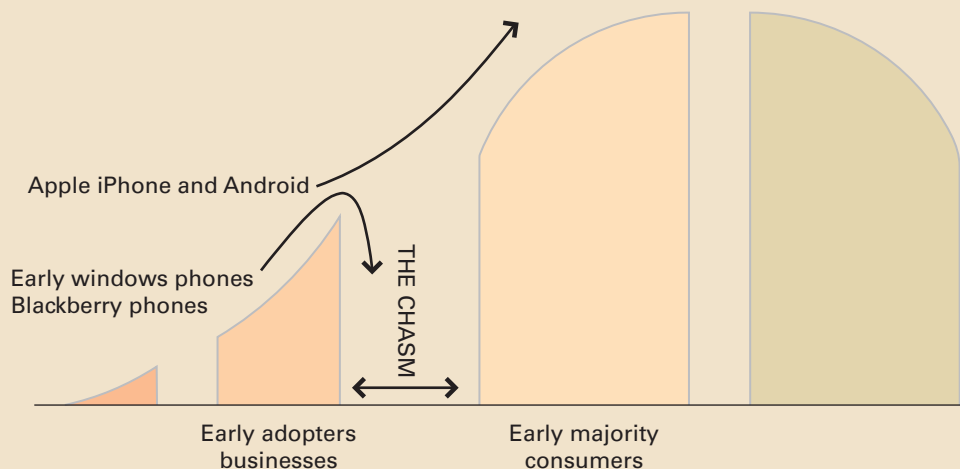
Crossing the Chasm in the Smartphone Market

The first smartphones appeared in the early 2000s. Early market leaders included Research in Motion (RIM), with its Blackberry line of smartphones, and Microsoft, whose Windows Mobile operating system powered a number of early smartphone offerings made by companies such as Motorola. These phones were sold to business users and marketed as business productivity tools. They had small screens and a physical keyboard crammed onto a relatively small device. Although they had the ability to send and receive e-mails, browse the Web, and so on, there was no independent applications market, and consequently the utility of the phones was very limited. Nor were they always easy to use. System administrators were often required to set up basic features such as corporate e-mail access. They were certainly not consumer-friendly devices. Their customers at this time were primarily innovators and early adopters.

The market changed dramatically after the introduction of the Apple iPhone in 2007 (Figure 6.3). First, this

phone was aimed not at power business users, but at a broader consumer market. Second, the phone was easy to use, with a large, touch-activated screen and a virtual keyboard that vanished when not in use. Third, the phone was stylishly designed, with an elegance that appealed to many consumers. Fourth, Apple made it very easy for independent developers to write applications that could run on the phone, and they set up their App Store, which made it easy for developers to market their apps. Very quickly, new applications appeared, adding value to the phone. These included mapping applications, news feeds, stock information, and a wide array of games, several of which soon became big hits. Clearly, the iPhone was a device squarely aimed not at business users but at consumers. The ease of use and utility of the iPhone quickly drew the early majority into the market, and sales surged. Meanwhile, sales of Blackberry devices and Windows Mobile phones spiraled downward.

Figure 6.3 The Chasm in the Smartphone Business



Source: Adapted from Moore, GA. 2009. *Crossing the Chasm: Marketing and selling high tech products to mainstream customers*. New York: Harper Collins.

Both Microsoft and Blackberry were ultimately forced to abandon their existing phone platforms and strategies, and to reorient. Both developed touch-activated screens similar to those on the iPhone, launched app stores, and targeted consumers. However, it may

have been too late for them. By early 2015, both former market leaders had market shares in the single digits, whereas Apple's iPhone and Google's Android (which imitated many of the design and technical features of the iPhone) dominated the market.

Sources: Anonymous, "iPhone tops 1 Millionth Sale," *Information Today* 24 (9), 2007, p. 27; Anonymous, "The Battle for the Smart-phone's Soul," *The Economist*, November 22, 2008, pp. 76–77; L. Dignan, "Android, Apple iOS Flip Consumer, Corporate Market Share," *Between the Lines*, February 13, 2013; IDC: Smartphone OS Market Share, Q1, 2015, www.idc.com.

purchase the industry's product. A number of factors explain the variation in market growth rates for different products, and thus the speed with which a particular market develops. It is important for managers to understand the source of these differences because their choice of strategy can accelerate or retard the rate at which a market grows.¹⁹

The first factor that accelerates customer demand is a new product's *relative advantage*; that is, the degree to which a new product is perceived as being better at satisfying customer needs than the product it supersedes. For example, the early growth in demand for cell phones was partly driven by their economic benefits. Studies showed that because business customers could always be reached by cell phone, they made better use of their time—for example, by not showing up at a meeting that had been cancelled at the last minute—and saved 2 hours per week in time that would otherwise have been wasted. For busy executives—the early adopters—the productivity benefits of owning a cell phone outweighed the costs. Cell phones also rapidly diffused for social reasons, in particular, because they conferred glamour or prestige upon their users (something that also drives demand for today's most advanced smartphones).

A second factor of considerable importance is *complexity*. Products that are viewed by consumers as being complex and difficult to master will diffuse more slowly than products that are easy to master. The early PCs diffused quite slowly because many people saw the archaic command lines needed to operate a PC as being very complex and intimidating. PCs did not become a mass-market device until graphical user interfaces with onscreen icons became widespread, enabling users to open programs and perform functions by pointing and clicking with a mouse. In contrast, the first cell phones were simple to use and quickly adopted.

Another factor driving growth in demand is *compatibility*, the degree to which a new product is perceived as being consistent with the current needs or existing values of potential adopters. Demand for cell phones grew rapidly because their operation was compatible with the prior experience of potential adopters who used traditional, landline phones. A fourth factor is *trialability*, the degree to which potential customers can experiment with a new product during a hands-on trial basis. Many people first used cell phones by borrowing them from colleagues to make calls, and their positive experiences helped accelerate growth rates. In contrast, early PCs were more difficult to experiment with because they were rare and expensive, and because some training was needed in how to use them. These complications led to slower growth rates for PCs. A final factor is *observability*, the degree to which the results of using and enjoying a new product can be seen and appreciated by other people. Originally, the iPhone and Android phones diffused rapidly because it became obvious that their owners were putting them to many different uses.

Thus, managers must devise strategies that educate customers about the value of their new products if they are to grow demand over time. In addition, they need to design their products to overcome barriers to adoption by making them less complex and intimidating, and easy to use, and by showcasing their relative advantage over prior technology. This is exactly what Apple did with the iPhone, which helps explain the rapid diffusion of smartphones after Apple introduced its first iPhone in 2007.

When a market is growing rapidly and social processes are driving the spread of a product, companies can take advantage of viral diffusion by identifying and aggressively courting opinion leaders in a particular market—the customers whose views command respect. For example, when the manufacturers of new, high-tech medical equipment such as magnetic resonance imaging (MRI) scanners market a new product, they try to get well-known doctors at major research and teaching hospitals to use the product first. Companies may give these opinion leaders (the doctors) free machines for research purposes, and work closely with the doctors to further develop the technology. Once these opinion leaders commit to the product and give it their stamp of approval, doctors at other hospitals often follow.

In sum, understanding competitive dynamics in embryonic and growth industries is an important strategic issue. The ways in which different customer groups emerge and the ways in which customer needs change are important determinants of the strategies that need to be pursued to make a business model successful over time. Similarly, understanding the factors that affect a market's growth rate allows managers to tailor their business model to a changing industry environment. (Competition in high-tech industries is discussed further in the Chapter 7.)

6-4 STRATEGY IN MATURE INDUSTRIES

A mature industry is commonly dominated by a small number of large companies. Although a mature industry may also contain many medium-sized companies and a host of small, specialized companies, the large companies often determine the nature of competition in the industry because they can influence the six competitive forces. Indeed, these large companies hold their leading positions because they have developed the most successful business models and strategies in an industry.

By the end of the shakeout stage, companies have learned how important it is to analyze each other's business models and strategies. They also know that if they change their strategies, their actions are likely to stimulate a competitive response from industry rivals. For example, a differentiator that starts to lower its prices because it has adopted a more cost-efficient technology not only threatens other differentiators, but may also threaten cost leaders that see their competitive advantage being eroded. Hence, by the mature stage of the life cycle, companies have learned the meaning of competitive interdependence.

As a result, in mature industries, business-level strategy revolves around understanding how established companies *collectively* attempt to moderate the intensity of industry competition to preserve both company and industry profitability. Interdependent companies can protect their competitive advantage and profitability by adopting strategies and tactics, first, to deter entry into an industry, and second, to reduce the level of rivalry within an industry.

6-4a Strategies to Deter Entry

In mature industries, successful enterprises have normally gained substantial economies of scale and established strong brand loyalty. As we saw in Chapter 2, the economies of scale and brand loyalty enjoyed by incumbents in an industry constitute strong barriers to entry. However, there may be cases in which scale and brand, although significant, are not sufficient to deter entry. In such circumstances companies can pursue other strategies to make new entry less likely. These strategies include product proliferation, limit pricing, technology upgrading, and strategic commitments.²⁰

Product Proliferation One way in which companies try to enter a mature industry is by looking for market segments or niches that are poorly served by incumbent enterprises. This strategy involves entering these segments, gaining experience, scale, and brand in that segment, and then progressively moving upmarket. This is how Japanese automobile companies first entered the U.S. market in the late 1970s and early 1980s. They targeted segments at the bottom end of the market for small, inexpensive, fuel-efficient cars. These segments were not well served by large American manufacturers such as Ford and General Motors (GM). Once companies like Toyota and Honda had gained a strong position in these segments, they started to move upmarket with larger offerings, and ultimately entered the pickup truck and SUV markets, which historically had been the most profitable segments of the automobile industry for American companies.

A **product proliferation strategy** involves incumbent companies attempting to forestall entry by making sure that *every* niche or segment in the marketplace is well served. Had U.S. automobile companies pursued product proliferation in the 1970s and early 1980s, and produced lines of smaller, fuel-efficient cars, it may have been more difficult for Japanese automobile companies to enter the U.S. market. Another example is provided by breakfast cereal companies, which are famous for pursuing a product proliferation strategy. Typically they produce many different types of cereal, so that they can cater to all likely consumer needs. The net result is that the three big breakfast cereal companies—General Mills, Post, and Kellogg—have been able to occupy all of the valuable real estate in the industry (i.e., shelf space in supermarkets) by filling it with a multiplicity of offerings and leaving very little room for new entrants. Moreover, when new entry does occur—as happened when smaller companies selling granola and organic cereals entered the market—the big three have moved rapidly to offer their own versions of these products, effectively foreclosing entry. A product proliferation strategy can thus effectively deter entry because it gives new entrants very little opportunity to find an unoccupied niche in an industry.

product proliferation strategy

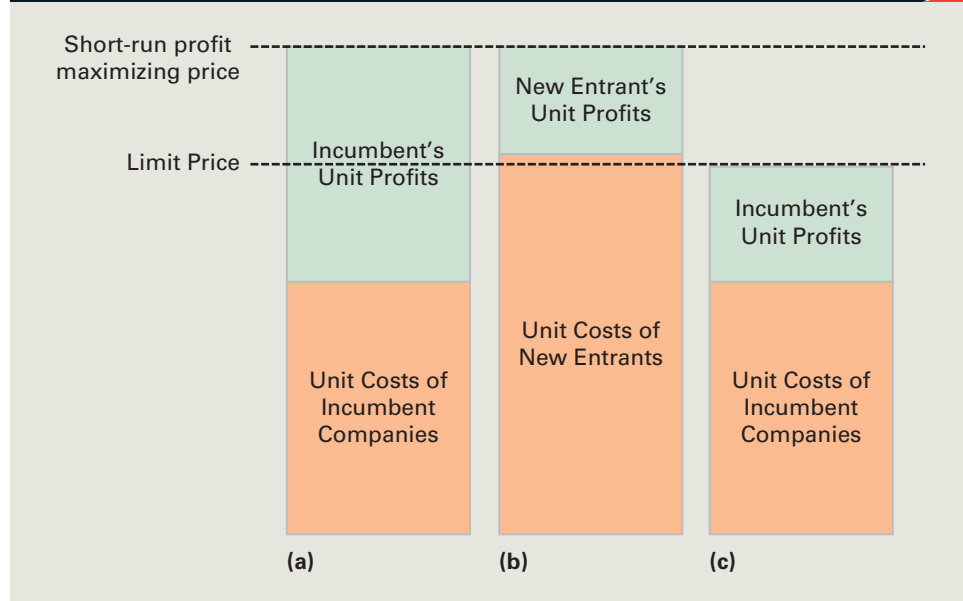
The strategy of “filling the niches” or catering to the needs of customers in all market segments to deter entry by competitors.

Limit Price A limit price strategy may be used to deter entry when incumbent companies in an industry enjoy economies of scale, but the resulting cost advantages are *not* enough to keep potential rivals out of the industry. A **limit price strategy** involves charging a price that is lower than that required to maximize profits in the short run to signal to a potential entrant that the incumbent could price the new entrant out of the market, thereby deterring entry. Though limit pricing may not be sustainable in the long run for the incumbent, new entrants often do not have full information about the incumbent’s costs and thus do not know how long the incumbent can keep prices low.

limit price strategy

Charging a price that is lower than that required to maximize profits in the short run to signal to new entrants that the incumbent has a low-cost structure that the entrant likely cannot match.

Consider Figure 6.4, which shows that incumbent companies have a unit cost structure that is lower than that of potential entrants. However, if incumbents charge the

Figure 6.4 Limit Pricing

price that the market will bear (Figure 6.4a), this will be above the unit cost structure of new entrants (Figure 6.4b), allowing them to enter and still make a profit under the pricing umbrella set by incumbents. In this situation, the best option for incumbents might be to charge a price that is still above their own cost structure but just below the cost structure of any potential new entrants (Figure 6.4c). Now there is no incentive for companies to attempt to enter the market, because at the lower limit price they cannot make a profit. Thus, because it deters entry, the limit price might be thought of as the long-run, profit-maximizing price. For example, in the U.S. cable industry, incumbents such as Time Warner and Comcast often have near-monopolies over the regions they serve. However, when companies attempt to enter their markets, the incumbents often engage in limit pricing to deter entry. Research by Robert Seamans showed that when new entrants came from outside industries—and thus were unlikely to have full information on the incumbent's costs (e.g., telecom companies such as Verizon FIOS)—incumbent cable companies often used limit pricing to deter their entry. On the other hand, when new entrants were city-owned and thus less sensitive to profit margins, incumbents would use large investments in technology upgrading (discussed below) that city-owned operators had difficulty matching.²¹

technology upgrading

Incumbent companies deterring entry by investing in costly technology upgrades that potential entrants have trouble matching.

Technology Upgrading If an incumbent is limited in its pricing strategies or faces potential entrants that may be willing to match its pricing, it can deter entry through investments in **technology upgrading** that the new entrant has difficulty matching. For example, though municipal cable TV entrants may be relatively insensitive to profit margins (as described above), they may have difficulty matching investments that a large incumbent can make in state-of-the-art technologies. Thus, when incumbent cable companies were threatened by potential, city-owned entrants, they invested in upgrading their cable infrastructure to provide the two-way communication needed to provide Internet service, thereby slowing municipal entry.²²

Strategic Commitments Incumbent companies can deter entry by engaging in strategic commitments that send a signal to potential new entrants that entry will be difficult. **Strategic commitments** are investments that signal an incumbent's long-term commitment to a market or market segment.²³ As an entry-detering strategy, strategic commitments involve raising the perceived costs of entering a market, thereby reducing the likelihood of entry. To the extent that such actions are successful, strategic commitments can protect an industry and lead to greater long-run profits for those already in the industry.

strategic commitments

Investments that signal an incumbent's long-term commitment to a market or market segment.

One example of strategic commitment occurs when incumbent companies invest in excess productive capacity. The idea is to signal to potential entrants that if they do enter, the incumbents have the ability to expand output and drive down prices, making the market less profitable for new entrants. It has been argued, for example, that chemical companies may overinvest in productive capacity as a way of signaling their commitment to a particular market and indicating that new entrants will find it difficult to compete.²⁴

Other strategic commitments that might act as an entry deterrent include making significant investments in basic research, product development, or advertising beyond those necessary to maintain a company's competitive advantage over its existing rivals.²⁵ In all cases, for such actions to deter entry, potential rivals must be aware of what incumbents are doing, and the investments must be sufficient to deter entry.

Incumbents might also be able to deter entry if they have a history of responding aggressively to new entry through price cutting, accelerating product development efforts, increasing advertising expenditures, or some combination of these. For example, in the 1990s, when a competitor announced a new software product Microsoft would often attempt to make entry difficult by quickly announcing that it had a similar software product under development that would work well with Windows (the implication being that consumers should wait for the Microsoft product). The term "vaporware" was often used to describe such aggressive product preannouncements. Many observers believe that the practice did succeed on occasion in forestalling entry.²⁶

A history of such actions sends a strong signal to potential rivals that market entry will not be easy and that the incumbents will respond vigorously to any encroachment on their turf. When established companies succeed in signaling this position to potential rivals through past actions, they have established a *credible commitment* to respond to new entry.

Note that, when making strategic commitments, a company must be careful not to fall afoul of antitrust law. For example, it is illegal to engage in predatory pricing, or pricing a good or service below the cost of production with the express intent of driving a rival out of business and monopolizing a market. In the late 1990s, Microsoft violated antitrust laws when it informed PC manufacturers that they had to display Internet Explorer on the PC desktop if they wanted to license the company's Windows operating system. Because Windows was the only viable operating system for PCs at the time, this was basically viewed as strong-arming PC makers. The intent was to give Internet Explorer an edge over rival browsers, particularly one produced by Netscape. The U.S. Justice Department ruled that Microsoft's actions were predatory, and it was forced to pay fines and change its practices.

6-4b Strategies to Manage Rivalry

Beyond seeking to deter entry, companies may wish to develop strategies to manage their competitive interdependence and decrease price rivalry. Unrestricted competition over prices reduces both company and industry profitability. Companies use

several strategies to manage industry rivalry. The most important are price signaling, price leadership, non-price competition, and capacity control.

price signaling

The process whereby companies increase or decrease product prices to convey their intentions to other companies and influence the price of an industry's products.

Price Signaling A company's ability to choose the price option that leads to superior performance is a function of several factors, including the strength of demand for a product and the intensity of competition between rivals. **Price signaling** is a method whereby companies attempt to control rivalry among competitors to allow the *industry* to choose the most favorable pricing option. In this process, companies increase or decrease product prices to convey their intentions to other companies and influence the way other companies price their products. Companies use price signaling to improve industry profitability.

Companies may use price signaling to communicate that they will vigorously respond to hostile, competitive moves that threaten them. For example, they may signal that if one company starts to aggressively cut prices, they will respond in kind. A *tit-for-tat strategy* is a well-known price signaling maneuver in which a company exactly mimics its rivals: If its rivals cut prices, the company follows; if they raise prices, the company follows. By consistently pursuing this strategy over time, a company sends a clear signal to its rivals that it will mirror any pricing moves they make; sooner or later, rivals learn that the company will always pursue a tit-for-tat strategy. Because rivals know that it will match any price reductions and thus reduce profits, price cutting becomes less common in the industry. Moreover, a tit-for-tat strategy also signals to rivals that price increases will be imitated, growing the probability that rivals will initiate price increases to raise profits. Thus, a tit-for-tat strategy can be a useful way of shaping pricing behavior in an industry.²⁷

The airline industry is a good example of the power of price signaling when prices typically rise and fall depending upon the current state of customer demand. If one carrier signals the intention to lower prices, a price war frequently ensues as carriers copy one another's signals. If one carrier feels demand is strong, it tests the waters by signaling an intention to increase prices, and price signaling becomes a strategy to obtain uniform price increases. Nonrefundable tickets or charges for a second bag—a strategy adopted to allow airlines to charge higher prices—originated as a market signal by one company that was quickly copied by all other companies in the industry (it is estimated that extra bag charges have so far allowed airlines to raise over \$1 billion in revenues). Carriers have recognized that they can stabilize their revenues and earn interest on customers' money if they collectively act to force customers to assume the risk of buying airline tickets in advance.

In essence, price signaling allows companies to exchange information that enables them to understand each other's competitive product or market strategy and make coordinated, price-competitive moves.

Price Leadership When one company assumes the responsibility for setting the pricing option that maximizes industry profitability, that company assumes the position of price leader—a second tactic used to reduce price rivalry between companies in a mature industry. Explicit price leadership, when companies jointly set prices, is illegal under antitrust laws. Therefore, the process of **price leadership** is often very subtle. In the car industry, for example, prices are set by imitation. The price set by the weakest company—that is, the company with the highest cost structure—is often used as the basis for competitors' pricing. Thus, in the past, U.S. carmakers set their prices and Japanese carmakers then set their prices in response. The Japanese were happy to do

price leadership

When one company assumes responsibility for determining the pricing strategy that maximizes industry profitability.

this because they have lower costs than U.S. carmakers and still make higher profits without having to compete on price. Pricing is determined by market segment. The prices of different auto models in a particular range indicate the customer segments that the companies are targeting, and the price range the companies believe each segment can tolerate. Each manufacturer prices a model in the segment with reference to the prices charged by its competitors, not with reference to competitors' costs. Price leadership also allows differentiators to charge a premium price.

Although price leadership can stabilize industry relationships by preventing head-to-head competition and raising the level of profitability within an industry, it has its dangers. It allows companies with high cost structures to survive without needing to implement strategies to become more efficient, although in the long term such behavior makes them vulnerable to new entrants that have lower costs because they have developed low-cost production techniques. This happened in the U.S. car industry. After decades of tacit price fixing, and GM as the price leader, U.S. carmakers were threatened by growing, low-cost, overseas competition. In 2009, the U.S. government bailed out Chrysler and GM, loaning them billions of dollars while forcing them to enter and then emerge from, bankruptcy. This dramatically lowered the cost structures of these companies and has made them more competitive today. (This also applies to Ford, which obtained similar benefits while managing to avoid bankruptcy.)

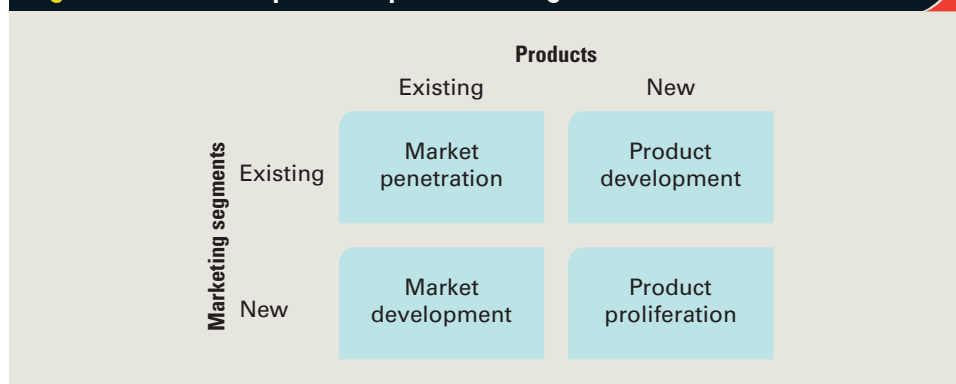
Non-price Competition A third very important aspect of product and market strategy in mature industries is the use of **non-price competition** to manage rivalry within an industry. The use of strategies to try to prevent costly price cutting and price wars does not preclude competition by product differentiation. In many industries, product differentiation strategies are the principal tools companies use to deter potential entrants and manage rivalry.

non-price competition

The use of product differentiation strategies to deter potential entrants and manage rivalry within an industry.

Product differentiation allows industry rivals to compete for market share by offering products with different or superior features, such as smaller, more powerful, or more sophisticated computer chips, as AMD, Intel, and NVIDIA compete to offer, or by applying different marketing techniques, as Procter & Gamble, Colgate, and Unilever do. In Figure 6.5, product and market segment dimensions are used to identify four non-price competitive strategies based on product differentiation: market penetration, product development, market development, and product proliferation. (Note that this model applies to new market *segments*, *not* new markets.)

Figure 6.5 Four Non-price Competitive Strategies



Market Penetration When a company concentrates on expanding market share in its existing product markets, it is engaging in a *market penetration* strategy. Market penetration involves heavy advertising to promote and build product differentiation. For example, Intel has actively pursued penetration with its aggressive marketing campaign of “Intel Inside.” In a mature industry, advertising aims to influence customers’ brand choice and create a brand-name reputation for the company and its products. In this way, a company can increase its market share by attracting its rival’s customers. Because brand-name products often command premium prices, building market share in this situation can be very profitable.

In some mature industries—for example, soap and detergent, disposable diapers, and beer brewing—a market-penetration strategy becomes a long-term strategy. In these industries, all companies engage in intensive advertising as they battle for market share. Each company fears that if it does not advertise it will lose market share to rivals who do. Consequently, in the soap and detergent industry, Procter & Gamble (P&G) spends more than 20% of sales revenues on advertising, with the aim of maintaining, and perhaps building, market share. These huge advertising outlays constitute a barrier to entry for prospective competitors.

product development

The creation of new or improved products to replace existing products.

Product Development **Product development** is the creation of new or improved products to replace existing ones. The wet-shaving industry depends on product replacement to create successive waves of customer demand, which then create new sources of revenue for companies in the industry. Gillette, for example, periodically unveils a new, improved razor such as those that incorporate lubricating shave gel or trimmers to reach hard-to-reach places, to try to boost its market share. Similarly, in the car industry, each major car company replaces its models every 3 to 5 years to encourage customers to trade in old models and purchase new ones.

Product development is crucial for maintaining product differentiation and building market share. For instance, the laundry detergent Tide has gone through more than 50 changes in formulation during the past 40 years to improve its performance. The product is always advertised as Tide, but it is a different product each year. Refining and improving products is a crucial strategy companies use to fine-tune and improve their business models in a mature industry, but this kind of competition can be as vicious as a price war because it is very expensive and can dramatically increase a company’s cost structure. This occurred in the videogame console industry, where intense competition to make the fastest or most powerful console and become the market leader has dramatically increased the cost structure of Sony, Microsoft, and Nintendo, constraining their profitability.

market development

When a company searches for new market segments for its existing products in order to increase sales.

Market Development **Market development** seeks new market segments for a company’s products. A company pursuing this strategy seeks to capitalize on the brand name it has developed in one market segment by locating new market segments in which to compete—as Mattel and Nike do by entering many different segments of the toy and shoe markets, respectively. In this way, a company can leverage the product differentiation advantages of its brand name. Japanese auto manufacturers provide an interesting example of the use of market development. When each manufacturer entered the market, it offered a car model aimed at the economy segment of the auto market, such as the Toyota Corolla and the Honda Accord. These companies upgraded each model over time to target a more expensive market segment. The Honda Accord is a leading contender in the mid-sized car segment, and the Toyota

Corolla fills the small-car segment. By redefining their product offerings, Japanese manufacturers have profitably developed their market segments and successfully attacked their U.S. rivals, wresting market share from them. Although the Japanese once competed primarily as cost leaders, market development has allowed them to become differentiators as well. In fact, as we noted in the previous chapter, Toyota has used market development to become a broad differentiator. Over time, it has used market development to create a vehicle for almost every segment of the car market, a tactic discussed in Strategy in Action 6.2.

Product Proliferation We have already seen how product proliferation can deter entry into an industry. The same strategy can be used to manage rivalry within an industry.



6.2 STRATEGY IN ACTION

Toyota Uses Market Development to Become the Global Leader

The car industry has always been one of the most competitive in the world because of the huge revenues and profits at stake. Given difficult economic conditions in the late-2000s, it is hardly surprising that rivalry has increased as global carmakers struggle to develop new models that better satisfy the needs of particular groups of buyers. Toyota is at the competitive forefront.

Toyota produced its first car 40 years ago—an ugly, boxy vehicle that was, however, cheap. As the quality of its products became apparent, sales increased. Toyota, which was then a focused cost leader, reinvested its profits into improving the styling of its vehicles, and into efforts to continually reduce production costs. Over time, Toyota has taken advantage of its low-cost structure to make an ever-increasing range of reasonably priced vehicles tailored to different segments of the car market. The company's ability to begin with the initial design stage and move to the production stage in 2 to 3 years allowed it to make new models available more rapidly than its competitors, and to capitalize on the development of new market segments.

Toyota has been a leader in positioning its entire range of vehicles to take advantage of new, emerging market segments. In the SUV segment, for example, its first offering was the expensive Toyota Land Cruiser, priced at over \$35,000. Realizing the need for SUVs in lower price ranges, it next introduced the 4Runner,

priced at \$20,000 and designed for the average SUV customer; the RAV4, a small SUV in the low \$20,000 range, followed; then came the Sequoia, a bigger, more powerful version of the 4Runner in the upper \$20,000 range. Finally, drawing on technology from its Lexus division, it introduced the luxury Highlander SUV in the \$30,000 range. Today, it sells six SUV models, each offering a particular combination of price, size, performance, styling, and luxury to appeal to a particular customer group within the SUV segment of the car market. In a similar way, Toyota positions its sedans to appeal to the needs of different sets of customers. For example, the Camry is targeted at the middle of the market to customers who can afford to pay about \$25,000 and want a balance of luxury, performance, safety, and reliability.

Toyota's broad-differentiation business model is geared toward making a range of vehicles that optimizes the amount of value it can create for different groups of customers. At the same time, the number of models it makes is constrained by the need to keep costs under strict control so that its pricing options that will generate maximum revenues and profits. Competition in every car market segment is now intense, so all carmakers must balance the advantages of showcasing more cars to attract customers against the increasing costs that result when their line of models expands to suit different customers' needs.

As noted earlier, product proliferation generally means that large companies in an industry have a product in each market segment (or niche). If a new niche develops, such as SUVs, designer sunglasses, or online shoe stores, the leader gets a first-mover advantage—but soon thereafter, all the other companies catch up. Once again, competition is stabilized, and rivalry within the industry is reduced. Product proliferation thus allows the development of stable industry competition based on product differentiation, not price—that is, non-price competition based on the development of new products. The competitive battle is over a product's perceived uniqueness, quality, features, and performance, not its price. Nike, for example, was founded as a running shoe company, and early in its history it shunned markets for gear for sports such as golf, soccer, basketball, tennis, and skateboarding. However, when its sales declined, Nike realized that using marketing to increase sales in a particular market segment (market penetration) could only grow sales and profits so much. The company thus directed its existing design and marketing competencies to the crafting of new lines of shoes for those market segments and others.

Capacity Control Although non-price competition helps mature industries avoid the cutthroat price cutting that reduces company and industry levels of profitability, price competition does periodically occur when excess capacity exists in an industry. Excess capacity arises when companies collectively produce too much output; to dispose of it, they cut prices. When one company cuts prices, others quickly do the same because they fear that the price cutter will be able to sell its entire inventory and leave them with unwanted goods. The result is a developing price war.

Excess capacity may be caused by a shortfall in demand, as when a recession lowers the demand for cars and causes automakers to offer customers price incentives to purchase new cars. In this situation, companies can do nothing but wait for better times. By and large, however, excess capacity results from companies within an industry simultaneously responding to favorable conditions; they all invest in new plants to take advantage of the predicted upsurge in demand. Paradoxically, each individual company's effort to outperform the others means that, collectively, they create industry overcapacity—which hurts them all. Although demand is rising, the consequence of each company's decision to increase capacity is a surge in industry capacity, which drives down prices. To prevent the accumulation of costly excess capacity, companies must devise strategies that enable them to control—or at least benefit from—capacity-expansion programs. Before we examine these strategies, however, we need to consider in greater detail the factors that cause excess capacity.²⁸

Factors Causing Excess Capacity Excess capacity often derives from technological developments. New, low-cost technology sometimes can create an issue because all companies invest in it simultaneously to prevent being left behind. Excess capacity occurs as the new technology produces more efficiently than the old. In addition, new technology is often introduced in large increments, which generates overcapacity. For instance, an airline that needs more seats on a route must add another plane, thereby adding hundreds of seats even if only 50 are needed. To take another example, a new chemical process may efficiently operate at the rate of only 1,000 gallons per day, whereas the previous process was efficient at 500 gallons per day. If all companies within an industry change technologies, industry capacity may double, and enormous problems can ensue.

Competitive factors within an industry can cause overcapacity. Entry into an industry is one such factor. The economic recession of 2008–2009 caused global overcapacity, and the price of steel plunged; with global recovery, the price has increased. Sometimes the age of a company's physical assets is the source of the problem. For example, in the hotel industry, given the rapidity with which the quality of hotel room furnishings decline, customers are always attracted to new hotels. When new hotel chains are built alongside the old chains, excess capacity can result. Often, companies are simply making simultaneous competitive moves based on industry trends—but these moves lead to head-to-head competition. Most fast-food chains, for instance, establish new outlets whenever demographic data show population increases. However, companies seem to forget that all other chains use the same data—they do not anticipate their rivals' actions. Thus, a certain locality that has few fast-food outlets may suddenly have several new outlets being built at the same time. Whether all the outlets survive depends upon the growth rate of customer demand, but often the least popular outlets close.

Choosing a Capacity-Control Strategy Given the various ways in which capacity can expand, companies clearly need to find means of controlling it. Companies that are always plagued by price cutting and price wars will be unable to recoup their investments in generic strategies. Low profitability caused by overcapacity forces not only the weakest companies but also sometimes major players to exit the industry. In general, companies have two strategic choices: (1) each company must try to preempt its rivals and seize the initiative, or (2) the companies must collectively find indirect means of coordinating with each other so that they are all aware of the mutual effects of their actions.

To *preempt* rivals, a company must forecast a large increase in demand in the product market and then move rapidly to establish large-scale operations that will be able to satisfy the predicted demand. By achieving a first-mover advantage, the company may deter other firms from entering the market because the preemptor will usually be able to move down the experience curve, reduce its costs, and therefore reduce its prices as well—and threaten a price war if necessary.

This strategy is extremely risky, for it involves investing resources before the extent and profitability of the future market are clear. A preemptive strategy is also risky if it does not deter competitors that decide to enter the market. If competitors can develop a stronger generic strategy, or have more resources (as do Google and Microsoft), they can make the preemptor suffer. Thus, for the strategy to succeed, the preemptor must generally be a credible company with enough resources to withstand a possible advertising/price war.

To *coordinate* with rivals as a capacity-control strategy, caution must be exercised because collusion on the timing of new production capacity investments is illegal under antitrust law. However, tacit coordination is practiced in many industries as companies attempt to understand and forecast one another's competitive moves. Generally, companies use market signaling to secure coordination. They make announcements about their future investment decisions in trade journals and newspapers. In addition, they share information about their production levels and their forecasts of demand within an industry to bring supply and demand into equilibrium. Thus, a coordination strategy reduces the risks associated with investment in the industry. This is common in the chemical refining and oil businesses, where new capacity investments frequently cost hundreds of millions of dollars.

6-5 STRATEGIES IN DECLINING INDUSTRIES

Sooner or later, many industries enter into a decline stage in which the size of the total market begins to shrink. Examples are the railroad industry, the tobacco industry, the steel industry, and the newspaper business. Industries decline for many reasons, including technological change, social trends, and demographic shifts. The railroad and steel industries began to decline when technological changes brought viable substitutes for their products. The advent of the internal combustion engine drove the railroad industry into decline, the steel industry fell into decline with the rise of plastics and composite materials, and the newspaper industry is in decline because of the rise of news sites on the Web. As for the tobacco industry, changing social attitudes and warnings about the health effects of smoking have caused the decline.

6-5a The Severity of Decline

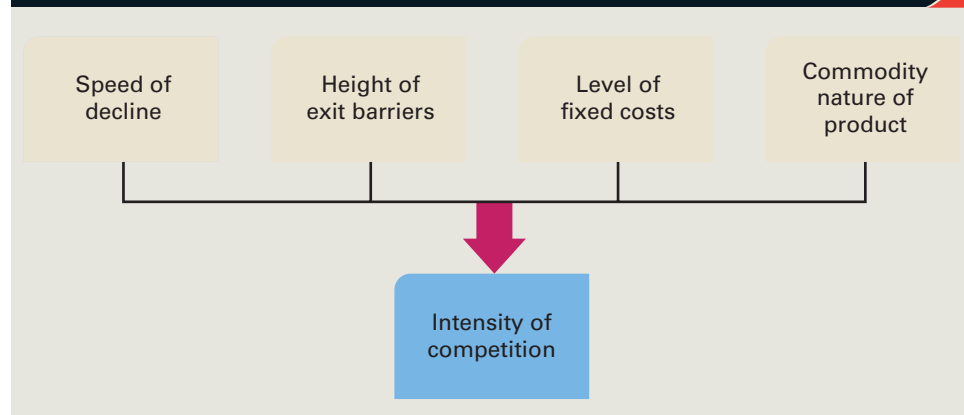
Competition tends to intensify in a declining industry, and profit rates tend to fall. The intensity of competition in a declining industry depends on the four critical factors depicted in Figure 6.6. First, the intensity of competition is greater in industries in which decline is rapid, as opposed to industries such as tobacco in which decline is slow and gradual.

Second, the intensity of competition is greater in declining industries in which exit barriers are high. Recall from Chapter 2 that high exit barriers keep companies locked into an industry, even when demand is falling. The result is excess productive capacity and hence an increased probability of fierce price competition.

Third, and related to the previous point, the intensity of competition is greater in declining industries in which fixed costs are high (as in the steel industry). The reason is that the need to cover such fixed costs as the costs of maintaining productive capacity can drive companies to try to use excess capacity by slashing prices, which can trigger a price war.

Finally, the intensity of competition is greater in declining industries in which the product is perceived as a commodity (as it is in the steel industry) in contrast to industries in which differentiation gives rise to significant brand loyalty, as was true (until very recently) of the declining tobacco industry.

Figure 6.6 Factors that Determine the Intensity of Competition in Declining Industries



Not all segments of an industry typically decline at the same rate. In some segments, demand may remain reasonably strong despite decline elsewhere. The steel industry illustrates this situation. Although bulk steel products such as sheet steel have suffered a general decline, demand has actually risen for specialty steels such as those used in high-speed machine tools. Vacuum tubes provide another example. Although demand for the tubes collapsed when transistors replaced them as a key component in many electronics products, vacuum tubes still had limited applications in radar equipment for years afterward. Consequently, demand in this one segment remained strong despite the general decline in demand for vacuum tubes. The point is that there may be pockets of demand in an industry in which demand is declining more slowly than in the industry as a whole—or where demand is not declining at all. Price competition may be far less intense among companies serving pockets of demand than within the industry as a whole.

6-5b Choosing a Strategy

Companies can adopt four main strategies that to deal with decline: (1) a **leadership strategy**, by which a company seeks to become the dominant player in a declining industry; (2) a **niche strategy**, which focuses on pockets of demand that are declining more slowly than the industry as a whole; (3) a **harvest strategy**, which optimizes cash flow; and (4) a **divestment strategy**, by which a company sells the business to others.²⁹ Figure 6.7 provides a simple framework for guiding strategic choice. Note that the intensity of competition in the declining industry is measured on the vertical axis, and a company's strengths relative to remaining pockets of demand are measured on the horizontal axis.

leadership strategy

When a company develops strategies to become the dominant player in a declining industry.

niche strategy

When a company focuses on pockets of demand that are declining more slowly than the industry as a whole in order to maintain profitability.

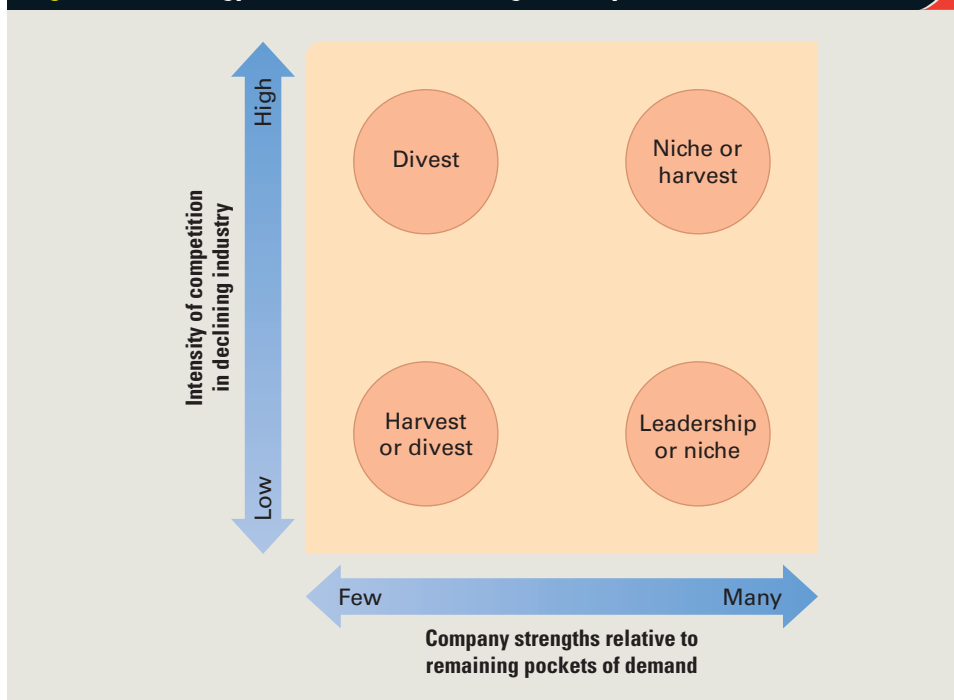
harvest strategy

When a company reduces to a minimum the assets it employs in a business to reduce its cost structure and extract ("milk") maximum profits from its investment.

divestment strategy

When a company exits an industry by selling its business assets to another company.

Figure 6.7 Strategy Selection in a Declining Industry



Leadership Strategy A leadership strategy aims at growing in a declining industry by picking up the market share of companies that are leaving it. This strategy makes most sense when (1) the company has distinctive strengths that allow it to capture market share in a declining industry, and (2) the speed of decline and the intensity of competition in the declining industry are moderate. Philip Morris used this strategy in the tobacco industry. While other cigarette companies were responding to slumping demand by cutting costs or exiting the market, Philip Morris increased its advertising, and subsequently its market share, in the declining industry. It earned enormous profits in the process.

The tactical steps companies might use to achieve a leadership position include using aggressive pricing and marketing to build market share; acquiring established competitors to consolidate the industry; and raising the stakes for other competitors, for example by making new investments in productive capacity. Such competitive tactics signal to rivals that the company is willing and able to stay and compete in the declining industry. These signals may persuade other companies to exit the industry, which would further enhance the competitive position of the industry leader.

Niche Strategy A niche strategy focuses on pockets of demand in the industry in which demand is stable or declining less rapidly than the industry as a whole. This strategy makes sense when the company has unique strengths relative to those niches in which demand remains relatively strong. Consider Naval, a company that manufactures whaling harpoons (and small guns to fire them) and makes adequate profits. This might be considered rather odd because the world community has outlawed whaling. However, Naval survived the terminal decline of the harpoon industry by focusing on the one group of people who are still allowed to hunt whales, although in very limited numbers: North American Inuit, who are permitted to hunt bowhead whales provided that they do so only for food and not for commercial purposes. Naval is the sole supplier of small harpoon whaling guns to Inuit communities, and its monopoly position allows it to earn a healthy return in this small market.

Harvest Strategy As noted earlier, a harvest strategy is the best choice when a company wishes to exit a declining industry and optimize cash flow in the process. This strategy makes the most sense when the company foresees a steep decline and intense future competition, or when it lacks strengths relative to remaining pockets of demand in the industry. A harvest strategy requires the company to halt all new investments in capital equipment, advertising, research and development (R&D), and so forth. The inevitable result is that the company will lose market share, but because it is no longer investing in the business, initially its positive cash flow will increase. Essentially, the company is accepting cash flow in exchange for market share. Ultimately, cash flow will decline, and when that occurs, it makes sense for the company to liquidate the business.

Although this strategy can be very appealing in theory, it can be somewhat difficult to put into practice. Employee morale in a declining business may suffer. Furthermore, if customers realize what the company is doing, they may rapidly defect, and market share may decline much faster than the company expects. Research by Professors Daniel Elfenbein and Anne Marie Knott found that U.S. banks often delayed exiting the market well past the time when it would have been rational to do so based on their profits. Elfenbein and Knott argue that banks appear to exit late in part because of rational demand uncertainty, and in part because of irrational optimism or escalating commitment that results in management overweighting positive signals that profits might rebound.³⁰

Divestment Strategy A divestment strategy rests on the idea that a company can recover most of its investment in an underperforming business by selling it early, before the industry has entered into a steep decline. This strategy is appropriate when the company has few strengths relative to whatever pockets of demand are likely to remain in the industry, and when the competition in the declining industry is likely to be intense. The best option may be to sell to a company that is pursuing a leadership strategy in the industry. The drawback of the divestment strategy is that its success depends upon the ability of the company to spot industry decline before it becomes detrimental, and to sell while the company's assets are still valued by others.

KEY TERMS

fragmented industry	170	limit price strategy	183	price leadership	186	leadership	
chaining	172	technology		non-price		strategy	193
franchising	172	upgrading	184	competition	187	niche strategy	193
mass market	174	strategic		product		harvest strategy	193
product proliferation		commitments	185	development	188	divestment	
strategy	183	price signaling	186	market development	188	strategy	193

TAKEAWAYS FOR STRATEGIC MANAGERS

1. In fragmented industries composed of many small- and medium-sized companies, the principal forms of competitive strategy are chaining, franchising, and horizontal merger.
2. In embryonic and growth industries, strategy is partly determined by market demand. Innovators and early adopters have different needs than the early and the late majority, and a company must have the right strategies in place to cross the chasm and survive. Similarly, managers must understand the factors that affect a market's growth rate so that they can tailor their business model to a changing industry environment.
3. Mature industries are composed of a few large companies whose actions are so highly interdependent that the success of one company's strategy depends upon the responses of its rivals.
4. The principal strategies used by companies in mature industries to deter entry are product proliferation, price cutting, and maintaining excess capacity.
5. The principal strategies used by companies in mature industries to manage rivalry are price signaling, price leadership, non-price competition, and capacity control.
6. In declining industries, in which market demand has leveled off or is decreasing, companies must tailor their price and non-price strategies to the new competitive environment. Companies also need to manage industry capacity to prevent the emergence of capacity-expansion problems.
7. The four main strategies a company can pursue when demand is falling are leadership, niche, harvest, and divestment. The strategic choice is determined by the severity of industry decline and the company's strengths relative to the remaining pockets of demand.

DISCUSSION QUESTIONS

1. Why are industries fragmented? What are the primary ways in which companies can turn a fragmented industry into a consolidated industry?
2. What are the key problems in maintaining a competitive advantage in embryonic and growth industry environments? What are the dangers associated with being the leader in an industry?
3. What investment strategies should be made by: (a) differentiators in a strong competitive position, and (b) differentiators in a weak competitive position, while managing a company's growth through the life cycle?
4. Discuss how companies can use: (a) product differentiation, and (b) capacity control to manage rivalry and increase an industry's profitability.
5. What strategies might these enterprises use to strengthen their business models (a) a small pizzeria operating in a crowded college market, and (b) a detergent manufacturer seeking to unveil new products in an established market?

CLOSING CASE

Can Best Buy Survive the Rise of E-commerce?

Best Buy Co., Inc., is the world's largest retailer of consumer electronics, computers, mobile phones, and related products. In the United States, it operates under the brands of Best Buy, Magnolia Audio Video, Pacific Sales, and Geek Squad. In Canada, it owns the chain of stores Future Shop; in China, it operates the Five Star stores. In 2014, Best Buy was one of the top twenty retail brands in America.

The rise of e-commerce had been hard on consumer electronics stores. Many notable rivals such as Circuit City and CompUSA did not survive the pressure online shopping put on prices and margins, and they liquidated their stores. In early 2015, even long-time electronics industry veteran Radio Shack announced it too would file bankruptcy and close its doors. Best Buy was the sole surviving multinational electronics retail chain.

Globally, the consumer electronics market was still experiencing a 5% compound annual growth rate between 2011 and 2015, for total sales of \$1.01 trillion. This growth was expected to continue through at least 2020 according to a study by Marketline.³¹ Most of that growth, however, was occurring in Asia's growth economies where expanding middle classes were ramping up spending on electronics. In the United States, consumer electronics spending was flat. Making things tougher for Best Buy was the fact that an increasing percentage of consumers

preferred to make electronics purchases online—roughly 31% according to a February 2017 survey.³²

The online sales channel was a difficult one in which to compete. There was intense pressure on prices, almost no customer loyalty, and big, general-purpose competitors such as Amazon, Target, and Wal-Mart (see Table 6.1), along with large computer manufacturers that sold in direct-to-customer channels.

Best Buy had been working hard to build its Web presence, and its online sales had growth to exceed \$6 billion—roughly 20% of total sales—in 2017. However, Best Buy was still primarily a bricks-and-mortar retail chain that depended heavily on new product introductions in categories in which people wanted to physically compare products. When a new smartphone was introduced, for example, people often wanted to test it before committing to a purchase. Unfortunately for Best Buy, in many product categories people were increasingly relying on online reviews to make their purchase decisions. They could browse among various vendors to find the best price. This led to extreme price competition that made it difficult for retailers with a strong physical presence to compete, because that physical presence typically resulted in a high-cost structure.

To combat online heavyweights like Amazon, Wal-Mart, and Target (and the growing threat from office-supply stores like Staples and Office Depot),

Table 6.1 Major U.S. Consumer Electronics Retailers, 2017 sales (in \$ billions)

Amazon.com	34.02	Hewlett Packard	21.71
Best Buy	33.83	CDW Corporation	15.13
Walmart	30.71	Lenovo	13.29
Apple Computer retail stores	27	GameStop	7.77
Dell	24.05	Target	6.99

Source: Statista, 2018.

Best Buy implemented a price-matching policy: If customers found a better price online, Best Buy would match it. This put intense pressure on margins, so the company engaged in several cost-cutting measures, including shuttering many stores and cutting 40,000 jobs between 2010 and 2014. It also implemented a program whereby online purchases would be shipped directly from local stores, which helped to match Amazon's speedy delivery times while simultaneously reducing inventory costs.

At the same time, Best Buy worked hard to differentiate its stores from the general-purpose competitors. Best Buy salespeople underwent extensive training to ensure that they could provide knowledgeable assistance to customers, and its Geek Squad service provided advanced technical support and home installation services. Best Buy also avoided paying commissions to individual salespeople in order to prevent the use of aggressive sales tactics.

To attract shoppers, Best Buy created programs that would make their stores a destination for consumers to experience electronics products in ways that were more complex or immersive. For example, in 2014, it created "Connected Home" sections in 400 stores, where customers could experience ways of automating their homes with products like programmable lights

and thermostats, and home surveillance systems that would enable them to keep an eye on the family pet. Customers found it difficult to shop for such products online; it was a product category that was still not well understood, and customers were often confused about the different components or features they might want to use. As described by Josh Will, senior vice president and general merchandise manager for cellphones, connected home products, and mobile stores, "We want to show them what's possible. That's very difficult to do in a digital-only environment."

To survive, Best Buy would have to be both lean and differentiated. By 2018, it looked like its efforts were paying off. Though the company had suffered losses in 2012 and 2013, it posted over a billion dollars in profits in 2017, resulting in a 2.4% net profit margin. Though the company had taken a beating with the rise of online commerce, many analysts were betting that it would weather the storm, become a tougher competitor, and remain the winner in an increasingly difficult industry.

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CASE DISCUSSION QUESTIONS

1. How does the ability to purchase online change consumer's behaviors?
2. What kind of firm do you think will perform best in consumer electronics: a) physical bricks-and-mortar stores only, b) online only, c) stores that have both physical and online presence? Why did you choose the answer you did?
3. How do you think online shopping changes the cost structure of retailers?
4. What would you recommend for Best Buy to do?

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CHAPTER

7

STRATEGY AND TECHNOLOGY

OPENING CASE

Tencent and WeChat

Tencent was founded in 1998 by Ma Huateng, Zhang Zhidong, Xu Chenye, Chen Yidan and Zeng Liqing. Though the company was incorporated in the Cayman Islands, it was physically located in Shenzhen, China. Its first product was a messaging service called OICQ, released in 1999, and then renamed QQ after being threatened with a lawsuit by AOL who already had a messaging product called ICQ. Tencent grew rapidly by investing in a range of information technology and media products – most notably video games and e-commerce businesses. Between 2013 and 2018, Tencent bought stakes in 277 tech companies making it one of the world's largest and most active technology investors.¹ It launched China's first online-only bank, WeBank, created a gaming platform called WeGame, offered a mobile payment system WeChat Pay, operated a film production company and music streaming service, an internet browser, a search engine, and more. By mid-year 2018 it had a market capitalization of \$450 billion, putting its valuation at about half that of Amazon (\$874B) and just slightly behind Alibaba Group (\$479B).



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LEARNING OBJECTIVES

- 7.1 Understand the tendency toward standardization in many high-technology markets
- 7.2 Describe the strategies that firms can use to establish their technology as the standard in a market
- 7.3 Explain the cost structure of many high-technology firms, and articulate the strategic implications of this structure
- 7.4 Explain the nature of technological paradigm shifts and their implications for enterprise strategy

One of Tencent's better known products is WeChat, a multipurpose messaging, social media, and mobile payment application launched in 2011. It has grown to become one of the world's largest standalone mobile applications with over one billion monthly active users. WeChat is primarily used as a social networking site like Facebook or Instagram, but it also provides news, access to e-commerce sites, a portal for government agencies, a form of payment (WeChat Pay), and serves as an identity card. Unlike U.S.-based applications that tend to specialize in individual functions, WeChat has aggressively expanded the range of services it can bring to its large and growing installed base of users.² The program is used for everything from connecting with friends, booking train tickets, ordering food, and applying for government services.

Though the application has close ties to the Chinese government and is known for being monitored and censored, privacy concerns have not prevented the application from becoming the most ubiquitously used smartphone program in China.³ According to data from eMarketer, WeChat's penetration rate as of 2018 was a staggering 83% of all smartphone users in China and accounted for nearly 30% of smartphone users' mobile app usage. In fact, some analysts noted that for many in China, WeChat was their entire smartphone experience, and thus those consumers had no loyalty to any particular smartphone device or operating system so long as it had WeChat. As described by Ben Thompson,

"The fundamental issue is this: unlike the rest of the world, in China the most important layer of the smartphone stack is *not* the phone's operating system. Rather, it is WeChat...every aspect of a typical Chinese person's life, not just online but also off is conducted through a single app (and, to the extent other apps are used, they are often games promoted through WeChat).

There is *nothing* in any other country that is comparable, particularly the Facebook properties (Facebook, Messenger, and WhatsApp) to which WeChat is commonly compared. All of those are about communication or wasting time: WeChat is that, but it is also for reading news, for hailing taxis, for paying for lunch (try and pay with cash for lunch, and you'll look like a luddite), for accessing government resources, for business. For all intents and purposes WeChat *is* your phone, and to a far greater extent in China than anywhere else, your phone is everything."⁴

Government barriers help to ensure that Tencent's biggest rivals are other Chinese firms like Alibaba and Baidu, but the big question is what will happen when WeChat starts to seriously target non-Chinese users. Though WeChat was estimated to have only 100 million users outside of China by the end of 2017, analysts predicted that the firm would soon become a threat to Silicon Valley. First, the scale of the Chinese market meant that WeChat's dominance there gave it access to an impressive capital base that it could invest in R&D and promoting adoption outside of China. To get a sense of that scale, consider the competition in mobile payment systems: By mid-year 2018 Tencent's WeChat Pay and Alibaba's Alipay had 600 million and 400 million active users respectively. These numbers dwarfed the leading U.S.-based mobile payment systems, PayPal (with 210 million users) and Apple Pay (with 127 million users). According to David Chao, co-founder of DCM Ventures, "China is at least three or four years ahead on mobile payments," and, "That's igniting a whole new economy."⁵

Second, Tencent's scale and breadth also helped it to attract the best talent in fields such as software engineering and artificial intelligence (AI). In 2016, Tencent opened an AI lab with a vision to "Make AI Everywhere", and it began to invest heavily in

developing machine learning, speech recognition, and natural language processing capabilities that would enable it to deploy AI applications across its businesses. The company also opened an AI lab in Bellevue Washington (near Microsoft's home base of Redmond Washington) so that it could tap the Seattle area talent.⁶ As noted by Connie Chan, a general partner at the venture capital firm Andreessen Horowitz, "The market opportunity in China is so large, these companies can go toe-to-toe on salary with Google."⁷

WeChat's ubiquitous presence in people's lives also meant that Tencent was gathering massive amounts of data it could leverage in its machine learning algorithms. Because of Tencent's capital, talent, and data many analysts in high tech industries speculated that it was not just a question of *whether* Tencent would become a threat to stalwarts like Google and Amazon, but *when*.

7-1 OVERVIEW

In industries where standards and compatibility are important strategic levers, a technology that gains an initial advantage can sometimes rise to achieve a nearly insurmountable position. Such industries can thus become "winner-take-all" markets. Being successful in such industries can require very different strategies than those used in more traditional industries. Firms may aggressively subsidize adoption of their preferred technology (including sometimes giving away products for free) in order to win the standards battle.

In this chapter, we will take a close look at the nature of competition and strategy in high-technology industries. Technology refers to the body of scientific knowledge used in the production of goods or services. High-technology (high-tech) industries are those in which the underlying scientific knowledge that companies in the industry use is rapidly advancing, and, by implication, so are the attributes of the products and services that result from its application. The computer industry is often thought of as the quintessential example of a high-technology industry. Other industries often considered high-tech are telecommunications, where new technologies based on wireless and the Internet have proliferated in recent years; consumer electronics, where the digital technology underlying products from high-definition DVD players to video-game terminals and digital cameras is advancing rapidly; pharmaceuticals, where new technologies based on cell biology, recombinant DNA, and genomics are revolutionizing the process of drug discovery; power generation, where new technologies based on fuel cells and cogeneration may change the economics of the industry; and aerospace, where the combination of new composite materials, electronics, and more efficient jet engines is giving birth to a new era of superefficient commercial jet aircraft such as Boeing's 787.

This chapter focuses on high-technology industries for a number of reasons. First, technology is accounting for an ever-larger share of economic activity. Estimates suggest that in the last decade, nearly 25% of growth in domestic product was accounted for by information technology industries.⁸ This figure actually underestimates the true impact of technology on the economy, because it ignores the other high-technology areas we just mentioned. Moreover, as technology advances, many low-technology

industries are becoming more high-tech. For example, the development of biotechnology and genetic engineering transformed the production of seed corn, long considered a low-tech business, into a high-technology business. Retailing was once considered a low-tech business, but the shift to online retailing, led by companies like Amazon.com, has changed this. In addition, high-tech products are making their way into a wide range of businesses; today, most automobiles contain more computing power than the multimillion-dollar mainframe computers used in the *Apollo* space program, and the competitive advantage of physical stores such as Wal-Mart is based on their use of information technology. The circle of high-technology industries is both large and expanding, and technology is revolutionizing aspects of the product or production system even in industries not typically considered high-tech.

Although high-tech industries may produce very different products, when developing a business model and strategies that will lead to a competitive advantage and superior profitability and profit growth, they often face a similar situation. For example, “winner-take-all” format wars are common in many high-tech industries such as the consumer electronics and computer industries. In mobile payments, for example, it is possible that a new payment system will emerge that could displace Visa, MasterCard, and American Express as the dominant firms for managing payment transactions worldwide. This could result in a tremendous windfall for the firm(s) controlling the new standard (and a tremendous loss for Visa, MasterCard, and American Express). Firms are thus carefully forging alliances and backing standards they believe will best position them to capture the billions of dollars in transactions fees that are at stake. This chapter examines the competitive features found in many high-tech industries and the kinds of strategies that companies must adopt to build business models that will allow them to achieve superior profitability and profit growth.

7-2 TECHNICAL STANDARDS AND FORMAT WARS

technical standards

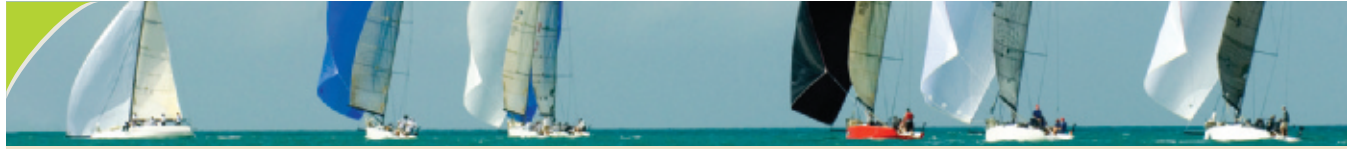
A set of technical specifications that producers adhere to when making a product or component.

Especially in high-tech industries, ownership of **technical standards**—a set of technical specifications that producers adhere to when making the product, or a component of it—can be an important source of competitive advantage.⁹ Indeed, in many cases product differentiation is based on a technical standard. Often, only one standard will dominate a market, so many battles in high-tech industries involve companies that compete to set the standard. For example, for the last three decades, Microsoft has controlled the market as the dominant operating system for personal computers (PCs), sometimes exceeding a 90% market share. Notably, however, Microsoft held less than 1% of the smartphone and tablet operating system markets in 2018, suggesting turbulent times ahead for the firm (see Strategy in Action 7.1).

format wars

Battles to control the source of differentiation, and thus the value that such differentiation can create for the customer.

Battles to set and control technical standards in a market are referred to as **format wars**—essentially, battles to control the source of differentiation, and thus the value that such differentiation can create for the customer. Because differentiated products often command premium prices and are often expensive to develop, the competitive stakes are enormous. The profitability and survival of a company may depend on the outcome of the battle.



7.1 STRATEGY IN ACTION

“Segment Zero”—A Serious Threat to Microsoft?

From 1980 to 2013, Microsoft’s Windows was entrenched as the dominant PC operating system, giving it enormous influence over many aspects of the computer hardware and software industries. Although competing operating systems had been introduced during that time (e.g., Unix, Geoworks, NeXTSTEP, Linux, and the Mac OS), Microsoft’s share of the PC operating system market held stable at roughly 85% throughout most of that period. By 2018, however, Microsoft’s position in the computing industry was under greater threat than it had ever been. A high-stakes race for dominance over the next generation of computing was well under way, and Microsoft was not in the front pack.

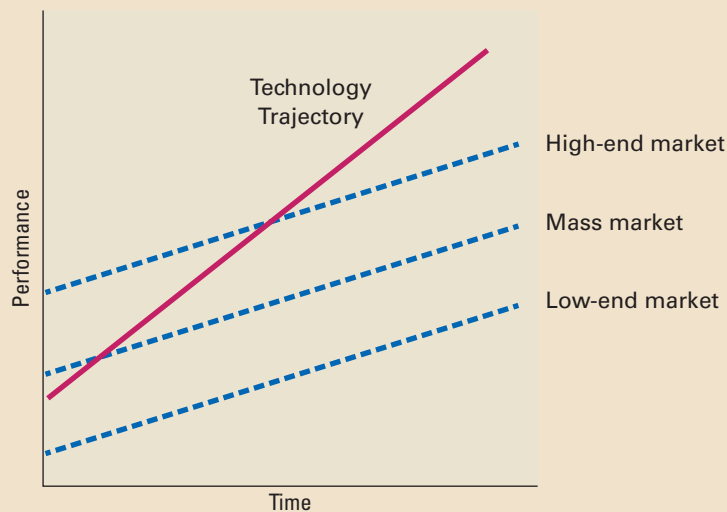
“Segment Zero”

As Andy Grove, former CEO of Intel, noted in 1998, in many industries—including microprocessors, software, motorcycles, and electric vehicles—technologies improve faster than customer demands of those technologies increase. Firms often add features such as speed

and power to products more quickly than customers’ capacity to absorb them. Why would firms provide higher performance than that required by the bulk of their customers? The answer appears to lie in the market segmentation and pricing objectives of a technology’s providers. As competition in an industry drives prices and margins lower, firms often try to shift sales into progressively higher tiers of the market. In these tiers, high-performance and feature-rich products can command higher margins. Although customers may also expect to have better-performing products over time, their ability to fully utilize such performance improvements is slowed by the need to learn how to use new features and adapt their work and lifestyles accordingly. Thus, both the trajectory of technology improvement and the trajectory of customer demands are upward sloping, but the trajectory for technology improvement is steeper.

In Figure 7.1, the technology trajectory begins at a point where it provides performance close to that

Figure 7.1 Trajectories of Technology Improvement and Customer Requirements



(continued)

demand by the mass market, but over time it increases faster than the expectations of the mass market as the firm targets the high-end market. As the price of the technology rises, the mass market may feel it is overpaying for technological features it does not value. In Figure 7.1 the low-end market is not being served; it either pays far more for technology that it does not need, or it goes without. It is this market that Andy Grove, former CEO of Intel, refers to as segment zero.

For Intel, segment zero was the market for low-end personal computers (those less than \$1,000). Although segment zero may seem unattractive in terms of margins, if it is neglected, it can become the breeding ground for companies that provide lower-end versions of the technology. As Grove notes, “The overlooked, underserved, and seemingly unprofitable end of the market can provide fertile ground for massive competitive change.”

As the firms serving low-end markets with simpler technologies ride up their own trajectories (which are also steeper than the slope of the trajectories of customer expectations), they can eventually reach a performance level that meets the demands of the mass market while offering a much lower price than the premium technology (see Figure 7.2). At this point, firms offering

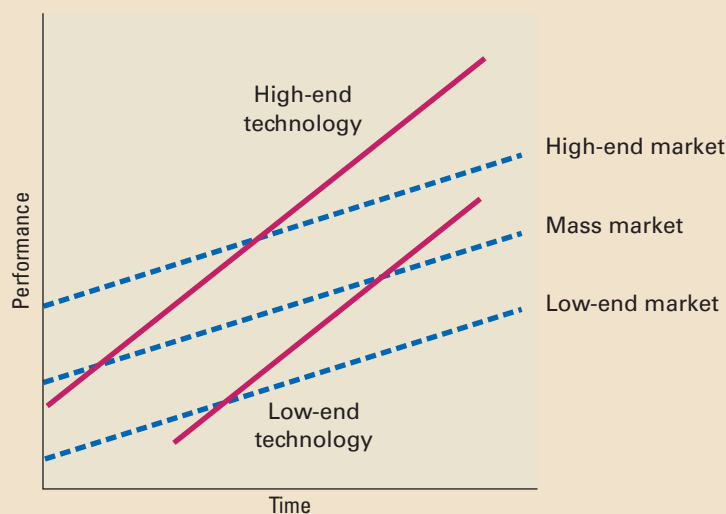
premium technology may suddenly find they are losing the bulk of their sales revenue to industry contenders that do not look so low-end anymore. For example, by 1998, the combination of rising microprocessor power and decreasing prices enabled PCs priced under \$1,000 to capture 20% of the market.

The Threat to Microsoft

So where was the segment zero that could threaten Microsoft? Look in your pocket. In 2018, Apple’s iPhone operating system (iOS) and Google’s Android collectively controlled over 99% of the worldwide market for smartphones. The iOS and Android interfaces offered a double whammy of beautiful aesthetics and remarkable ease of use. The applications business model used for the phones was also extremely attractive to both developers and customers, and quickly resulted in enormous libraries of applications that ranged from ridiculous to indispensable.

From a traditional economics perspective, the phone operating system market should not be that attractive to Microsoft—people do not spend as much on the applications, and the carriers have too much bargaining power, among other reasons. However, those smartphone operating systems soon became tablet operating systems, and tablets were rapidly

Figure 7.2 Low-End Technology’s Trajectory Intersects Mass-Market Trajectory



becoming fully functional computers. Suddenly, all of the mindshare that Apple and Google had achieved in smartphone operating systems was transforming into mindshare in PC operating systems. Despite years of masterminding the computing industry, Microsoft's

dominant position was at risk of evaporating. The outcome is still uncertain—in 2018, Microsoft still had an impressive arsenal of capital, talent, and relationships in its armory, but for the first time, it was fighting the battle from a disadvantaged position.

Sources: Adapted from M. A. Schilling, "Segment Zero: A Serious Threat to Microsoft?" Conceptual Note, New York University, 2013; A. S. Grove, "Managing Segment Zero," *Leader to Leader* 11 (1999); L. Dignan, "Android, Apple iOS Flip Consumer, Corporate Market Share," *Between the Lines*, February 13, 2013; J. Edwards, "The iPhone 6 Had Better Be Amazing and cheap, Because Apple Is Losing the War to Android," *Business Insider*, May 31, 2014; M. Hachman, "Android, iOS Gobble Up Even More Global Smartphone Share," *PC World*, August 14, 2014. IDC 2018

7-2a Examples of Standards

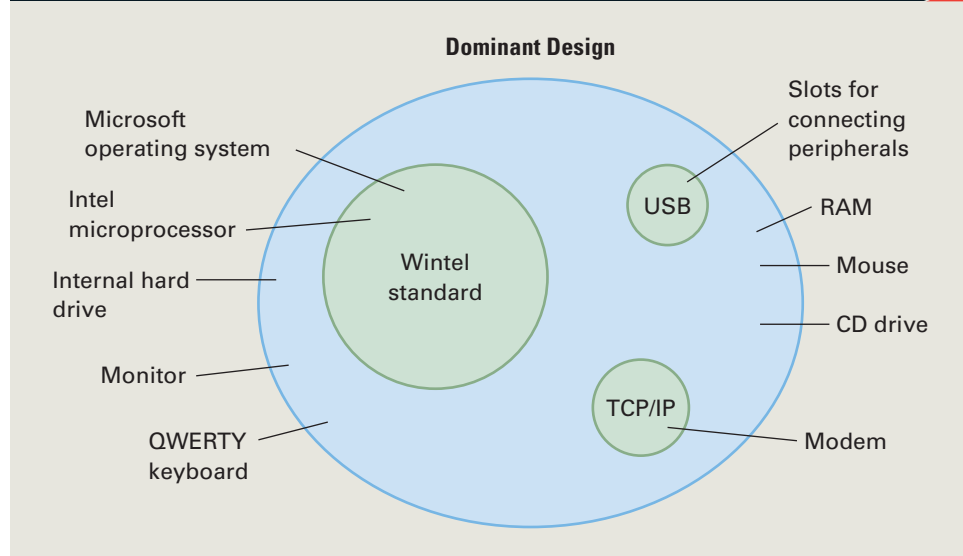
A familiar example of a standard is the layout of a computer keyboard. No matter what keyboard you purchase, the letters are all arranged in the same pattern.¹⁰ The reason is quite obvious. Imagine if each computer maker changed the ways keys were arranged—if some had QWERTY on the top row of keys (which is indeed the format used, known as the QWERTY format), some had YUHGFD, and some had ACFRDS. If you learned to type on one layout, it would be irritating and time consuming to relearn on a YUHGFD layout. The standard QWERTY format makes it easy for people to move from computer to computer because the input medium, the keyboard, is standardized.

Another example of a technical standard can be seen in the dimensions of containers used to transport goods on trucks, railcars, and ships. All have the same basic dimensions of height, length, and width, and all make use of the same locking mechanisms to secure them to a surface or to bolt together. Having a standard ensures that containers can easily be moved from one mode of transportation to another—from trucks, to railcars, to ships, and back to railcars. If containers lacked standard dimensions and locking mechanisms, it would become much more difficult to deliver containers around the world. Shippers would need to make sure that they had the right kind of container to go on the ships, trucks, and railcars scheduled to carry a particular container around the world—a very complicated process.

Consider, finally, PCs. Most share a common set of features: an Intel or Intel-compatible microprocessor, random access memory (RAM), an operating system, an internal hard drive, a DVD drive, a keyboard, a monitor, a mouse, a modem, and so on. We call this set of features the dominant design for personal computers. **Dominant design** refers to a common set of features or design characteristics. Embedded in this design are several technical standards (see Figure 7.3). For example, there is the Wintel technical standard based on an Intel microprocessor and a Microsoft operating system. Microsoft and Intel "own" that standard, which is central to the PC. Developers of software applications, component parts, and peripherals such as printers adhere to this standard when developing their products because this guarantees that they will work well with a PC based on the Wintel standard. Another technical standard for connecting peripherals to the PC is the universal serial bus (or USB), established by an industry-standards-setting board. No one owns it; the standard is in the public domain. A third technical standard is for communication

dominant design

Common set of features or design characteristics.

Figure 7.3 Technical Standards for Personal Computers

between a PC and the Internet via a modem. Known as TCP/IP, this standard was also set by an industry association and is in the public domain. Thus, as with many other products, the PC is actually based on several technical standards. It is also important to note that when a company owns a standard, as Microsoft and Intel do with the Wintel standard, it may be a source of competitive advantage and high profitability.

7-2b Benefits of Standards

Standards emerge because there are economic benefits associated with them. First, a technical standard helps to guarantee compatibility between products and their complements. For example, containers are used with railcars, trucks, and ships, and PCs are used with software applications. Compatibility has the tangible economic benefit of reducing the costs associated with making sure that products work well with each other.

Second, a standard can help reduce confusion in the minds of consumers. For example, when Blu-ray was first launched it was competing against HD-DVD to be the dominant video standard. Players based on the different standards were incompatible; a disc designed to run on a Blu-ray player would not run on a HD-DVD player, and vice versa. The companies feared that selling these incompatible versions of the same technology would produce confusion in the minds of consumers, who would not know which version to purchase and might decide to wait and see which technology would dominate the marketplace. With lack of demand, both technologies might fail to gain traction in the marketplace and be unsuccessful. After Toshiba conceded the defeat of the HD-DVD standard, Blu-ray sales grew rapidly.

Third, a standard can help reduce production costs. Once a standard emerges, products that are based on the standard design can be mass produced, enabling the

manufacturers to realize substantial economies of scale while lowering their cost structures. The fact that nearly all computers use the USB standard for connecting peripheral devices means that devices can be mass produced. A manufacturer of computer speakers, for example, can mass produce speakers for all computers adhering to the USB standard and thus realize substantial scale economies. If there were several competing and incompatible standards, each of which required unique speaker types, production runs for speakers would be shorter, and unit costs would be higher.

Fourth, standards can help reduce the risks associated with supplying complementary products, and thus increase the supply for those complements. For instance, writing software applications to run on PCs is a risky proposition, requiring the investment of considerable sums of money for developing the software before a single unit is sold. Imagine what would occur if there were ten different operating systems in use for PCs, each with only 10% of the market, rather than the current situation, where over 80% of the world's PCs adhere to the Wintel standard. Software developers would need to write ten different versions of the same software application, each for a much smaller market segment. This would change the economics of software development, increase its risks, and reduce potential profitability. Moreover, because of their higher cost structure and fewer economies of scale, the price of software programs would increase.

Thus, although many people complain about the consequences of Microsoft's near-monopoly of PC operating systems, that dominance does have at least one good effect: It substantially reduces the risks facing the makers of complementary products and the costs of those products. In fact, standards lead to both low-cost and differentiation advantages for individual companies and can help raise the level of industry profitability.

7-2c Establishment of Standards

Standards emerge in an industry in three primary ways. First, when the benefits of establishing a standard are recognized, companies in an industry might lobby the government to mandate an industry standard. In the United States, for example, the Federal Communications Commission (FCC), after detailed discussions with broadcasters and consumer electronics companies, mandated a single technical standard for digital television broadcasts (DTV) and required analog television broadcasts to be terminated in 2009. The FCC took this step because it believed that without government action to set the standard, the DTV rollout would be very slow. Given a standard set by the government, consumer electronics companies have greater confidence that a market will emerge, and this should encourage them to develop DTV products.

Second, technical standards are often set by cooperation among businesses, without government help, and often through the medium of an industry association, as the example of the DVD forum illustrates. Companies cooperate in this way when they decide that competition to create a standard might be harmful because of the uncertainty that it would create in the minds of consumers or the risk it would pose to manufacturers and distributors.

Government- or association-set standards fall into the **public domain**, meaning that any company can freely incorporate the knowledge and technology upon which the standard is based into its products. For example, no one owns the QWERTY format,

public domain

Government- or association-set standards of knowledge or technology that any company can freely incorporate into its product.

and therefore no company can profit from it directly. Similarly, the language that underlies the presentation of text and graphics on the Web, hypertext markup language (HTML), is in the public domain; it is free for all to use. The same is true for TCP/IP, the communications standard used for transmitting data on the Internet.

Often, however, the industry standard is selected competitively by the purchasing patterns of customers in the marketplace—that is, by market demand. In this case, the strategy and business model a company has developed for promoting its technological standard are of critical importance because ownership of an industry standard that is protected from imitation by patents and copyrights is a valuable asset—a source of sustained competitive advantage and superior profitability. Microsoft and Intel, for example, both owe their competitive advantage to their ownership of a specific technological standard or format. As noted earlier, format wars occur when two or more companies compete to get their designs adopted as the industry standard. Format wars are common in high-tech industries where standards are important. The Wintel standard became the dominant standard for PCs only after Microsoft and Intel won format wars against Apple’s proprietary system, and later against IBM’s OS/2 operating system. There is an ongoing standards battle within the smartphone business, as Apple and Google battle for dominance in the smartphone operating system market (see Strategy in Action 7.1).

7-2d Network Effects, Positive Feedback, and Lockout

network effects

The network of complementary products as a primary determinant of the demand for an industry’s product.

There has been a growing realization that when standards are set by competition between companies promoting different formats, network effects are a primary determinant of how standards are established.¹¹ **Network effects** arise in industries where the size of the “network” of compatible products is a primary determinant of demand for an industry’s product. For example, the demand for automobiles early in the 20th century was an increasing function of the network of paved roads and gas stations. Similarly, the demand for early telephones was an increasing function of the multitude of numbers that could be called; that is, of the size of the telephone network (the telephone network being the complementary product). When the first telephone service was introduced in New York City, only 100 numbers could be dialed. The network was very small because of the limited number of wires and telephone switches, which made the telephone a relatively useless piece of equipment. But, as an increasing number of people acquired telephones and the network of wires and switches expanded, the telephone connection gained value. This led to an upsurge in demand for telephone lines, which further increased the value of owning a telephone, setting up a positive feedback loop.

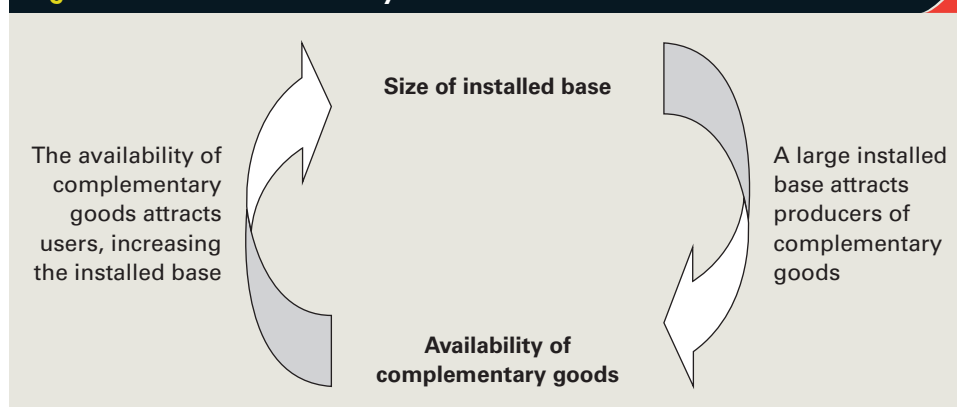
To understand why network effects are important in the establishment of standards, consider the classic example of a format war: the battle between Sony and Matsushita to establish their respective technologies for videocassette recorders (VCRs) as the standard in the marketplace. Sony was first to market with its Betamax technology, followed by JVC with its VHS technology. Both companies sold VCR recorder-players, and movie studios issued films prerecorded on VCR tapes for rental to consumers. Initially, all tapes were issued in Betamax format to play on Sony’s machine. Sony did not license its Betamax technology, preferring to make all player-recorders itself. Because Japan’s Ministry of International Trade and Industry (MITI) appeared poised to select Sony’s Betamax as a standard for Japan, JVC decided to liberally license its format and turned to Matsushita (now Panasonic) for support. Matsushita was the largest Japanese electronics manufacturer at that time. JVC and Matsushita realized that to make the VHS format players

valuable to consumers, they would need to encourage movie studios to issue movies for rental in VHS format. The only way to do that, they reasoned, was to increase the installed base of VHS players as rapidly as possible. They believed that the greater the installed base of VHS players, the greater the incentive for movie studios to issue films in VHS format for rental. As more prerecorded VHS tapes were made available for rental, VHS players became more valuable to consumers and demand for them increased. JVC and Matsushita wanted to exploit a positive feedback loop.

JVC and Matsushita chose a licensing strategy under which any consumer electronics company could manufacture VHS-format players under license. This strategy worked. A large number of companies signed on to manufacture VHS players, and soon far more VHS players were available for purchase in stores than Betamax players. As sales of VHS players grew, movie studios issued more films for rental in VHS format, and this stoked demand. Before long, it was clear to anyone who entered a video rental store that there were more VHS tapes available for rent than Betamax tapes. This served to reinforce the positive feedback loop, and ultimately Sony's Betamax technology was shut out of the market. The pivotal difference between the two companies was strategy: JVC and Matsushita chose a licensing strategy; Sony did not. As a result, JVC's VHS technology became the de facto standard for VCRs.

Network effects can be divided into *direct* (or “same-side”) *network effects*, such as in the case of QWERTY, where the greater the use of QWERTY the more it benefits users of QWERTY, and *indirect* (or “cross-side”) *network effects*, where much of the value of network benefits come from one side's ability to attract the other. The VHS story illustrates such indirect network effects: the larger the installed base of VHS players, the more movie producers were motivated to record movies in the VHS format. The more movies there were available in the VHS format, the more potential buyers were attracted to the VHS player format. The video game industry also exhibits indirect network effects: The greater the installed base of a video game console, the more developers want to produce games for that console. The more games available for a particular console, the more likely users are to buy that console. The two sides create a self-reinforcing cycle (see Figure 7.4). Platforms that create indirect network effects by mediating such complementary relationships – like videogame consoles do for third-party games and end consumers, or universities do for recruiters and students—are often called “multisided platforms.”

Figure 7.4 Positive Feedback Cycle from Indirect Network Effects



The general principle that underlies this example is that when two or more companies compete to get technology adopted as an industry standard, and when network effects and positive feedback loops are important, *the company whose strategy best exploits positive feedback loops wins the format war*. This is a very important strategic principle in many high-technology industries, particularly computer hardware, software, telecommunications, and consumer electronics.

Network externalities and positive feedback loops are also important in a number of industries that would not typically be considered particularly high tech, including newspapers (where the number of readers attracts advertisers), online retail (the sites with the most customers attract the most vendors and the sites with the greatest product variety attracts the most customers), and lodging sharing or ride sharing platforms. For example, consider Uber or DiDi Chuxing ride sharing services. Drivers only want to work for services that have many riders because otherwise they will spend too much time idle and will not make enough income. Riders only want to ride with services that have many drivers because a service with few drivers will have very long waits for rides. Thus, services with many drivers attract more riders, and services with many riders attract more drivers. The indirect network effects cause the services to become more valuable as they grow, and can lead to one service becoming dominant in a geographical region.

One of the ways a firm can exploit a positive feedback loop is to use strategies that accelerate the growth or one or both sides of the feedback loop. Dolby provides a great example. When Ray Dolby invented a technology for reducing the background hiss in professional tape recording, he adopted a licensing model that charged a very modest fee. He knew his technology was valuable, but he also understood that charging a high fee would encourage manufacturers to develop their own noise-reduction technology. He also decided to license the technology for use on prerecorded tapes for free, collecting licensing fees on the players only. This set up a powerful, positive feedback loop: Growing sales of prerecorded tapes encoded with Dolby technology created a demand for tape players that contained Dolby technology, and as the installed base of tape players with Dolby technology grew, the proportion of prerecorded tapes that were encoded with Dolby technology surged—further boosting demand for players incorporating Dolby technology. By the mid-1970s, virtually all prerecorded tapes were encoded with Dolby noise-reduction technology.

There is another important consideration for exploiting positive feedback cycles: Switching costs. A dominant computer platform tends to stay dominant for a long time because there are high switching costs. Changing operating systems, for example, requires customers to learn new ways of navigating around the computer, and they may have incompatibility problems with their existing files. There are also switching costs for manufacturers of hardware and software. For the producer of a software application, for example, to redesign their program to work on a different operating system requires considerable effort and investment. Switching costs thus bind both customers and complementary goods producers to a particular standard, making it harder for a competing standard to overtake a dominant standard.

Some systems, however, have network externalities yet low switching costs. This can make it harder to sustain a dominant position. For example, while consumers prefer an online retailer with many vendors, they can switch to another online retailer quickly and with little or no cost. It might be somewhat more complicated for product suppliers to switch retailers, but the costs are usually not prohibitive. A new retailer that offers great features or better prices can thus enter the market and attract

customers and suppliers relatively easily. More generally, the lack of high switching costs means a dominant position is less sticky and more prone to being overturned. The preceding implies that one way that firms can leverage positive feedback cycles is to create switching costs that bind customers or suppliers to the firm's platform. For example, consider the ride sharing industry. As of 2018, drivers of most ride sharing platforms can drive for multiple ride sharing platforms, and customers routinely have multiple ride sharing applications on their phones. This enables both riders and drivers to choose which ride they take at any given moment based on timing and price. If, however, ride sharing companies that were dominant in a region created loyalty incentives for drivers and riders, or made drivers sign exclusivity agreements, they could make a dominant position stickier, and potentially locking out competitors.

This is illustrated well by Microsoft's long held dominance in the personal computer operating system industry. Consumers choose PCs not for their operating system but for the applications that run on the operating system. A new operating system initially has a very small installed base, so few developers are willing to take the risks involved in writing word-processing programs, spreadsheets, games, and other applications for a new operating system. If a new operating system has very few applications available, consumers who make the switch would have to bear the switching costs associated with giving up some of their applications, which they might be unwilling to do. Moreover, even if applications were available for the new operating system, consumers would have to bear the costs of purchasing those applications—another source of switching costs. In addition, as noted previously, they would have to bear the costs associated with learning to use the new operating system, yet another source of switching costs. Thus, many consumers are unwilling to switch even if they perceive that an alternative operating system performs better than Windows, and companies promoting alternative operating systems have largely been locked out of the market.

However, consumers will bear switching costs if the benefits of adopting the new technology outweigh the costs of switching. For example, in the late 1980s and early 1990s, millions of people switched from analog record players to digital CD players despite the fact that switching costs were significant: Consumers had to purchase the new player technology, and many people purchased CD versions of favorite musical recordings that they already owned. Nevertheless, people made the switch because, for many, the perceived benefit—the incredibly better sound quality associated with CDs—outweighed the costs of switching.

As this switching process continued, a positive feedback loop developed. The installed base of CD players grew, leading to an increase in the number of musical recordings issued on CD as opposed to, or in addition to, vinyl records. The installed base of CD players got so big that mainstream music companies began to issue recordings only in CD format. Once this occurred, even those who did not want to switch to the new technology were required to do so if they wished to purchase new music recordings. The industry standard had shifted: new technology had locked in as the standard, and the old technology was locked out.

Extrapolating from this example, it can be argued that despite its dominance, the Wintel standard for PCs could one day be superseded if a competitor finds a way of providing sufficient benefits that enough consumers are willing to bear the switching costs associated with moving to a new operating system. Indeed, there are signs that Apple and Google are chipping away at the dominance of the Wintel standard, primarily by using elegant design and ease of use as tools to get people to bear the costs of switching from Wintel computers.

7-3 STRATEGIES FOR WINNING A FORMAT WAR

From the perspective of a company pioneering a new technological standard in a marketplace where network effects and positive feedback loops operate, the key question becomes: “What strategy should we pursue to establish our format as the dominant one?”

The various strategies that companies should adopt in order to win format wars are centered upon *finding ways to make network effects work in their favor and against their competitors*. Winning a format war requires a company to build the installed base for its standard as rapidly as possible, thereby leveraging the positive feedback loop, inducing consumers to bear switching costs and ultimately locking the market to its technology. It requires the company to jump-start and then accelerate demand for its technological standard or format such that it becomes established as quickly as possible as the industry standard, thereby locking out competing formats. A number of key strategies and tactics can be adopted to try to achieve this.¹²

7-3a Ensure a Supply of Complements

It is important for a company to make sure that there is an adequate supply of complements for its product. For example, no one will purchase the Sony PlayStation 4 unless there is an adequate supply of games to run on that machine. Companies typically take two steps to ensure an adequate supply of complements.

First, they may diversify into the production of complements and seed the market with sufficient supply to help jump-start demand for their format. Before Sony produced the original PlayStation in the early 1990s, for example, it established its own in-house unit to produce videogames for the console. When it launched PlayStation, Sony also simultaneously released 16 games to run on the it, giving consumers a reason to purchase the format. Tesla is similarly constructing its own network of super-charging stations at which customers can charge its electric vehicles for free.

Second, companies may create incentives or make it easy for independent companies to produce complements. Sony also licensed the right to produce games to a number of independent game developers, charged the developers a lower royalty rate than they had to pay to competitors such as Nintendo and Sega, and provided them with software tools that made it easier for them to develop games (Apple and Google do the same thing with their smartphone operating systems). Thus, the launch of the Sony PlayStation was accompanied by the simultaneous launch of approximately 30 games, which quickly helped to stimulate demand for the machine.

7-3b Leverage Killer Applications

killer applications

Applications or uses of a new technology or product that are so compelling that customers adopt them in droves, killing competing formats.

Killer applications are applications or uses of a new technology or product that are so compelling that they persuade customers to adopt the new format or technology in droves, thereby “killing” demand for competing formats. Killer applications often help to jump-start demand for the new standard. For example, the killer applications that induced consumers to sign up for online services such as AOL in the 1990s were e-mail, chat rooms, and Web browsers. Some of the killer applications that drove consumers

to adopt smartphones despite their considerably higher price tag compared to feature phones include texting and mapping applications.

Ideally, the company promoting a technological standard will also want to develop its own killer applications—that is, develop the appropriate complementary products so that they can limit the compatibility of the killer application to their own platform. However, sometimes companies are also able to leverage applications that others develop. For example, the early sales of the IBM PC following its 1981 introduction were primarily driven by IBM's decision to license two important software programs for the PC: VisiCalc (a spreadsheet program) and EasyWriter (a word-processing program), both developed by independent companies. IBM saw that they were driving rapid adoption of rival personal computers, such as the Apple II, so it quickly licensed software, produced versions that would run on the IBM PC, and sold these programs as complements to the IBM PC, a very successful strategy.

In video games, console producers such as Microsoft, Nintendo, and Sony often help to transform a game into a killer application by endorsing it and promoting it. For example, PlayStation designates the best games for each console generation with the award “Platinum: The Best of PlayStation.” Nintendo similarly has a “Nintendo Selects” endorsement, and Microsoft has a “Microsoft Xbox 360 Classics” endorsement. These endorsements signal potential customers about the quality of the game and help to generate “buzz” about the game and the console. Endorsing a complement in this way can help to turn the complement into a blockbuster, which in turn fuels more sales of the platform.¹³

7-3c Aggressive Pricing and Marketing

A common tactic used to jump-start demand is to adopt a **razor and blade strategy**: pricing the product (razor) low to stimulate demand and increase the installed base, and then trying to make high profits on the sale of complements (razor blades), which are priced relatively high. This strategy owes its name to Gillette, the company that pioneered this strategy to sell its razors and blades. Many other companies have followed this strategy—for example, Hewlett-Packard typically sells its printers at cost but makes significant profits on the subsequent sales of replacement cartridges. In this case, the printer is the “razor” and is priced low to stimulate demand and induce consumers to switch from their existing printer, while the cartridges are the “blades,” which are priced high to make profits. The inkjet printer represents a proprietary technological format because only HP cartridges can be used with HP printers; cartridges designed for competing inkjet printers such as those sold by Canon will not work in HP printers. A similar strategy is used in the videogame industry: manufacturers price videogame consoles at cost to induce consumers to adopt their technology, while they make profits on royalties from the sales of games that run on the system.

Aggressive marketing is also a key factor in jump-starting demand to get an early lead in an installed base. Substantial upfront marketing and point-of-sales promotion techniques are often used to try to attract potential early adopters who will bear the switching costs associated with adopting the format. If these efforts are successful, they can be the start of a positive feedback loop. Again, the Sony PlayStation provides a good example. Sony co-linked the introduction of the PlayStation with nationwide television advertising aimed at its primary demographic (18- to 34-year-olds) and

razor and blade strategy

Pricing the product low in order to stimulate demand, and pricing complements high.

in-store displays that allowed potential buyers to play games on the machine before making a purchase.

7-3d Cooperate with Competitors

Companies have been close to simultaneously introducing competing and incompatible technological standards a number of times. A good example is the compact disc. Initially four companies—Sony, Philips, JVC, and Telefunken—were developing CD players using different variations of the underlying laser technology. If this situation had persisted, they might have introduced incompatible technologies into the marketplace; a CD made for a Philips CD player would not play on a Sony CD player. Understanding that the nearly simultaneous introduction of such incompatible technologies can create significant confusion among consumers, and often lead them to delay their purchases, Sony and Philips decided to join forces and cooperate on developing the technology. Sony contributed its error-correction technology, and Philips contributed its laser technology. The result of this cooperation was that momentum among other players in the industry shifted toward the Sony–Philips alliances; JVC and Telefunken were left with little support. Most important, recording labels announced that they would support the Sony–Philips format but not the Telefunken or JVC format.

Telefunken and JVC subsequently abandoned their efforts to develop CD technology. The cooperation between Sony and Philips was important because it reduced confusion in the industry and allowed a single format to rise to the fore, which accelerated adoption of the technology. The cooperation was a win-win situation for both Philips and Sony, which eliminated competitors and enabled them to share in the success of the format.

7-3e License the Format

Licensing the format to other enterprises so that they too can produce products based on the format is another strategy often adopted. The company that pioneered the format gains from the licensing fees that return to it, as well as from the enlarged supply of the product, which can stimulate demand and help accelerate market adoption. As illustrated previously, this was the strategy that JVC and Matsushita adopted with the VHS format for the VCR, and the strategy that Dolby used with its noise reduction technology.

The correct strategy to pursue in a particular scenario requires that the company consider all of these different strategies and tactics and pursue those that seem most appropriate given the competitive circumstances prevailing in the industry and the likely strategy of rivals. Although there is no single best combination of strategies and tactics, the company must keep the goal of rapidly increasing the installed base of products based on its standard at the forefront of its endeavors. By helping to jump-start demand for its format, a company can induce consumers to bear the switching costs associated with adopting its technology and leverage any positive feedback process that might exist. It is also important not to pursue strategies that have the opposite effect. For example, pricing high to capture profits from early adopters, who tend not to be as price sensitive as later adopters, can have the unfortunate effect of slowing demand growth and allowing a more aggressive competitor to pick up share and establish its format as the industry standard.

7-4 COSTS IN HIGH-TECHNOLOGY INDUSTRIES

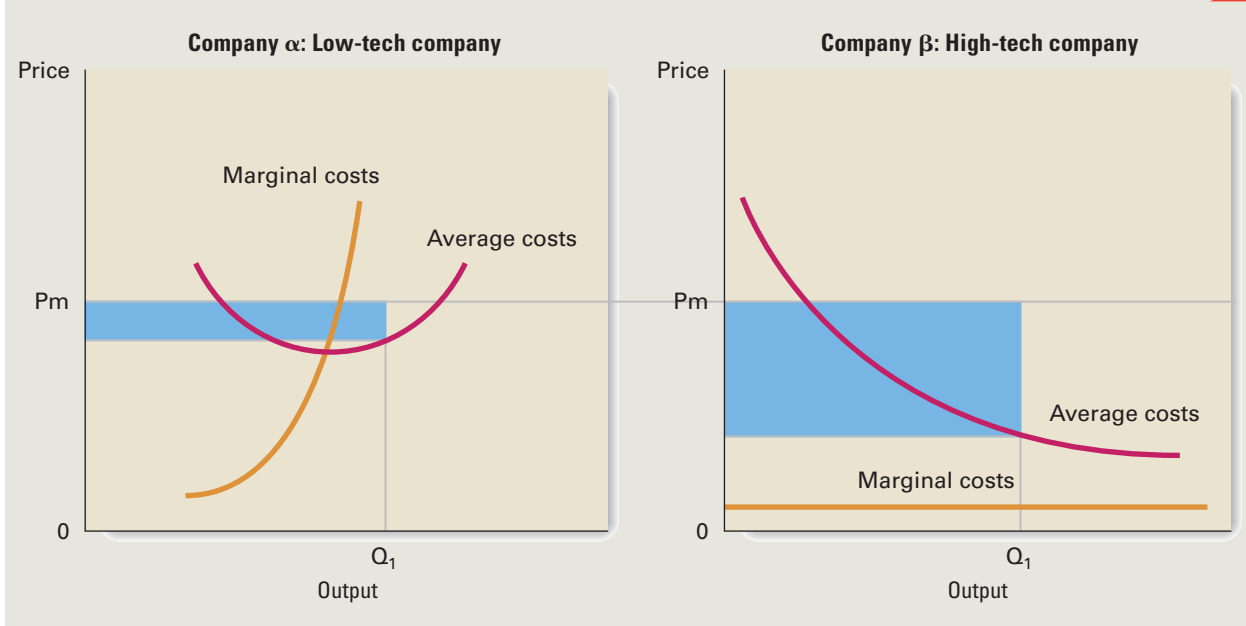
In many high-tech industries, the *fixed costs* of developing the product are very high, but the costs of producing one extra unit (the *marginal costs*) of the product are very low. This is most obvious in the case of software. For example, it reportedly cost Microsoft \$5 billion to develop Windows Vista, but the cost of producing one more copy of Windows Vista is virtually zero. Once the Windows Vista program was complete, Microsoft duplicated its master disks and sent the copies to PC manufacturers, such as Dell Computer, which then installed a copy of Windows Vista onto every PC sold. Microsoft's cost was, effectively, zero, and yet the company receives a significant licensing fee for each copy of Windows Vista installed on a PC.¹⁴

Many other high-technology products have similar cost economics: very high fixed costs and very low marginal costs. Most software products share these features, although if the software is sold through stores, the costs of packaging and distribution will raise the marginal costs, and if it is sold by a sales force direct to end-users, this too will raise the marginal costs. Many consumer electronics products have the same basic economics. The fixed costs of developing a DVD player or a videogame console can be very expensive, but the costs of producing an incremental unit are very low. Similarly, the fixed costs of developing a new drug can be typically estimated to be at least \$1.6 billion (and potentially much more if one factors in the cost of all the failed drug development efforts),¹⁵ but the marginal cost of producing each additional pill is at most a few cents.

7-4a Comparative Cost Economics

To grasp why this cost structure is strategically important, a company must understand that, in many industries, marginal costs rise as a company tries to expand output (economists call this the *law of diminishing returns*). To produce more of a good, a company must hire more labor and invest in more plant and machinery. At the margin, the additional resources used are not as productive, so this leads to increasing marginal costs. However, the law of diminishing returns often does not apply in many high-tech settings such as the production of software or sending data through a digital telecommunications network.

Consider two companies, α and β (see Figure 7.5). Company α is a conventional producer and faces diminishing returns, so as it tries to expand output, its marginal costs rise. Company β is a high-tech producer, and its marginal costs do not rise at all as output is increased. Note that in Figure 7.5, company β 's marginal cost curve is drawn as a straight line near to the horizontal axis, implying that marginal costs are close to zero and do not vary with output, whereas company α 's marginal costs rise as output is expanded, illustrating diminishing returns. Company β 's flat, low marginal cost curve means that its average cost curve will continuously fall over all ranges of output as it spreads its fixed costs out over greater volume. In contrast, the rising marginal costs encountered by company α mean that its average cost curve is the U-shaped curve familiar from basic economics texts. For simplicity, assume that both companies sell their product at the same price, P_m , and both sell exactly the same quantity of output, $0 - Q_1$. Figure 7.5 shows that, at an output of Q_1 , company β has much lower

Figure 7.5 Cost Structures in High-Technology Industries

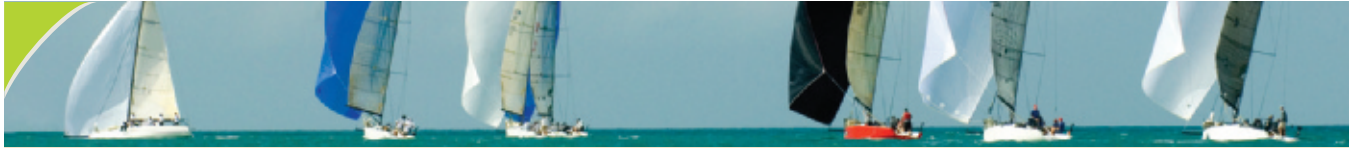
average costs than company α and as a consequence is making far more profit (profit is the shaded area in Figure 7.5).

7-4b Strategic Significance

If a company can shift from a cost structure where it encounters increasing marginal costs to one where fixed costs may be high but marginal costs are much lower, its profitability may increase. In the consumer electronics industry, such a shift has been playing out for two decades. Musical recordings were once based on analog technology where marginal costs rose as output expanded due to diminishing returns (as in the case of company α in Figure 7.5). In the 1980s and 1990s, digital systems such as CD players replaced analog systems. Digital systems are software based, and this implies much lower marginal costs of producing one more copy of a recording. As a result, music companies were able to lower prices, expand demand, and see their profitability increase (their production system has more in common with company β in Figure 7.5).

This process, however, was still unfolding. The latest technology for copying musical recordings is based on distribution over the Internet (e.g., by downloading songs onto a smartphone). Here, the marginal costs of making one more copy of a recording are lower still. In fact, they are close to zero, and do not increase with output. The only problem is that the low costs of copying and distributing music recordings can lead to widespread illegal file sharing, which ultimately leads to a very large decline in overall revenues in recorded music. According to the International Federation of the Phonographic Industry, worldwide revenues for CDs,

vinyl, cassettes, and digital downloads dropped from about \$25 billion in 1999 to about \$15 billion in 2010. Fortunately increases in music streaming revenues was beginning to reverse that loss, and global recorded music revenues for 2017 were estimated at just over \$17 billion.¹⁶ We discuss copyright issues in more detail shortly when we consider intellectual property rights. The same shift is now beginning to affect other industries. Some companies are building their strategies around trying to exploit and profit from this shift. For an example, Strategy in Action 7.2 looks at SonoSite.



7.2 STRATEGY IN ACTION

Lowering the Cost of Ultrasound Equipment Through Digitalization

The ultrasound unit has been an important piece of diagnostic equipment in hospitals for some time. Ultrasound units use the physics of sound to produce images of soft tissues in the human body. Ultrasounds can produce detailed, three-dimensional, color images of organs and, by using contrast agents, track the flow of fluids through them. A cardiologist, for example, can use an ultrasound in combination with contrast agents injected into the bloodstream to track the flow of blood through a beating heart. In addition to the visual diagnosis, ultrasound also produces an array of quantitative diagnostic information of great value to physicians.

Modern ultrasound units are sophisticated instruments that cost about \$250,000 to \$300,000 each for a topline model. They are bulky instruments, weighing approximately 300 pounds, wheeled around hospitals on carts.

A few years ago, a group of researchers at ATL, one of the leading ultrasound companies, proposed an idea for reducing the size and cost of a basic machine. They theorized that it might be possible to replace up to 80% of the solid circuits in an ultrasound unit with software, and in the process significantly shrink the size and reduce the weight of machines, thereby producing portable ultrasound units. Moreover, by digitalizing much of the ultrasound (replacing hardware with software), they could considerably decrease the marginal

costs of making additional units, and would thus be able to make a better profit at much lower price points.

The researchers reasoned that a portable, inexpensive ultrasound unit would find market opportunities in totally new niches. For example, a smaller ultrasound unit could be placed in an ambulance or carried into battle by an army medic, or purchased by family physicians for use in their offices. Although they realized that it would be some time, perhaps decades, before such a unit could attain the image quality and diagnostic sophistication of top-of-the-line machines, they saw the opportunity in terms of creating market niches that previously could not be served by ultrasound companies because of the high costs and bulk of the product.

The researchers later became part of a project team within ATL, and thereafter became an entirely new company, SonoSite. In late-1999, SonoSite introduced its first portable product, which weighed just 6 pounds and cost about \$25,000. SonoSite targeted niches that full-sized ultrasound products could not reach: ambulatory care and foreign markets that could not afford the more expensive equipment. In 2010, the company sold over \$275 million of product. In 2011, Fujifilm Holdings bought SonoSite for \$995 million to expand its range of medical imaging products and help it overtake the dominant portable ultrasound equipment producer, General Electric.

Source: Interviews by C. W. L. Hill.

When a high-tech company faces high fixed costs and low marginal costs, its strategy should emphasize the low-cost structure option: deliberately drive down prices in order to increase volume. Figure 7.5 shows that the high-tech company's average costs fall rapidly as output expands. This implies that prices can be reduced to stimulate demand, and as long as prices fall less rapidly than average costs, per-unit profit margins will expand as prices fall. This is a consequence of low marginal costs that do not rise with output. This strategy of pricing low to drive volume and reap wider profit margins is central to the business model of some very successful high-tech companies, including Microsoft.

7-5 CAPTURING FIRST-MOVER ADVANTAGES

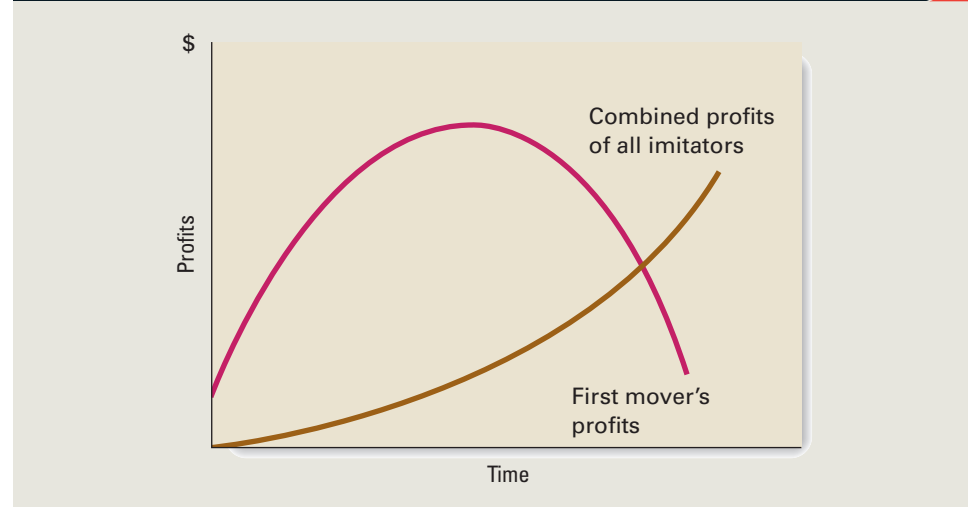
first mover

A firm that pioneers a particular product category or feature by being first to offer it to market.

In high-technology industries, companies often compete by striving to be the first to develop revolutionary new products, that is, to be a **first mover**. By definition, the first mover that creates a revolutionary product is in a monopoly position. If the new product satisfies unmet consumer needs and demand is high, the first mover can capture significant revenues and profits. Such revenues and profits signal to potential rivals that imitating the first mover makes money. Figure 7.6 implies that in the absence of strong barriers to imitation, imitators will rush into the market created by the first mover, competing away the first mover's monopoly profits and leaving all participants in the market with a much lower level of returns.

Despite imitation, some first movers have the ability to capitalize on and reap substantial first-mover advantages—the advantages of pioneering new technologies and products that lead to an enduring competitive advantage. Intel introduced the world's first microprocessor in 1971. Today, it still dominates the microprocessor segment of the semiconductor industry. Xerox introduced the world's first photocopier and for a long time enjoyed a leading position in the industry. Cisco introduced the first Internet

Figure 7.6 The Impact of Imitation on Profits of a First Mover



protocol network router in 1986, and still leads the market for that equipment today. Microsoft introduced the world's first software application for a personal computer in 1979, Microsoft BASIC, and it remains a dominant force in PC software.

Some first movers can reap substantial advantages from their pioneering activities that lead to an enduring competitive advantage. They can, in other words, limit or slow the rate of imitation.

But there are plenty of counterexamples suggesting that first-mover advantages might not be easy to capture and, in fact, that there might be **first-mover disadvantages**—the competitive disadvantages associated with being first. For example, Apple was the first company to introduce a handheld computer, the Apple Newton, but the product failed; a second mover, Palm, succeeded where Apple had failed. In the market for commercial jet aircraft, DeHavilland was first to market with the Comet, but it was the second mover, Boeing, with its 707 jetliner, that went on to dominate the market.

first-mover disadvantages

Competitive disadvantages associated with being first to market.

Clearly, being a first mover does not by itself guarantee success. As we shall see, the difference between innovating companies that capture first-mover advantages and those that fall victim to first-mover disadvantages in part incites the strategy that the first mover pursues. Before considering the strategy issue, however, we need to take a closer look at the nature of first-mover advantages and disadvantages.¹⁷

7-5a First-Mover Advantages

There are five primary sources of first-mover advantages.¹⁸ First, the first mover has an opportunity to exploit network effects and positive feedback loops, locking consumers into its technology. In the VCR industry, Sony could have exploited network effects by licensing its technology, but instead the company ceded its first-mover advantage to the second mover, Matsushita.

Second, the first mover may be able to establish significant brand loyalty, which is expensive for later entrants to break down. Indeed, if the company is successful in this endeavor, its name may become closely associated with the entire class of products, including those produced by rivals. People still talk of “Xeroxing” when making a photocopy, or “FedExing” when they will be sending a package by overnight mail.

Third, the first mover may be able to increase sales volume ahead of rivals and thus reap cost advantages associated with the realization of scale economies and learning effects (see Chapter 4). Once the first mover has these cost advantages, it can respond to new entrants by cutting prices to retain its market share and still earn significant profits.

Fourth, the first mover may be able to create switching costs for its customers that subsequently make it difficult for rivals to enter the market and take customers away from the first mover. Wireless service providers, for example, will give new customers a “free” cell phone, but customers must sign a contract agreeing to pay for the phone if they terminate the service contract within a specified time period such as 1 or 2 years. Because the real cost of a cell phone may run anywhere from \$100 to \$800, this represents a significant switching cost that later entrants must overcome.

Finally, the first mover may be able to accumulate valuable knowledge related to customer needs, distribution channels, product technology, process technology, and so on. Knowledge so accumulated can give it an advantage that later entrants might find difficult or expensive to match. Sharp, for example, was the first mover in the commercial manufacture of active matrix liquid crystal displays used in laptop computers.

The process for manufacturing these displays is very difficult, with a high rejection rate for flawed displays. Sharp accumulated such an advantage with regard to production processes that it was very difficult for later entrants to match it on product quality, and therefore on costs.

7-5b First-Mover Disadvantages

Balanced against these first-mover advantages are a number of disadvantages.¹⁹ First, the first mover has to bear significant pioneering costs that later entrants do not. The first mover must pioneer the technology, develop distribution channels, and educate customers about the nature of the product. This can be expensive and time consuming. Later entrants, by way of contrast, might be able to free-ride on the first mover's investments in pioneering the market and customer education. That is, they do not have to bear the pioneering costs of the first mover. Generic drug makers, for example, spend very little on research and development (R&D) compared to the costs borne by the developer of an original drug because they can replicate the finished chemical or biological product (that is, they do not have to explore many alternative paths to a solution), and they can bypass most of the clinical testing process.²⁰

Related to this, first movers are more prone to make mistakes because there are so many uncertainties in a new market. Later entrants may learn from the mistakes made by first movers, improve on the product or the way in which it is sold, and come to market with a superior offering that captures significant market share from the first mover. For example, one reason that the Apple Newton failed was that the software in the handheld computer failed to recognize human handwriting. The second mover in this market, Palm, learned from Apple's error. When it introduced the PalmPilot, it used software that recognized letters written in a particular way, graffiti style, and then persuaded customers to learn this method of inputting data into the handheld computer.

Third, first movers run the risk of building the wrong resources and capabilities because they focus on a customer set that is not characteristic of the mass market. This is the "crossing the chasm" problem that we discussed in the previous chapter. You will recall that the customers in the early market—those we categorized as innovators and early adopters—have different characteristics from the first wave of the mass market, the early majority. The first mover runs the risk of directing its resources and capabilities to the needs of innovators and early adopters, and not being able to switch when the early majority enters the market. As a result, first movers run a greater risk of plunging into the chasm that separates the early market from the mass market.

Finally, the first mover may invest in inferior or obsolete technology. This can happen when its product innovation is based on underlying technology that is rapidly advancing. Basing its product on an early version of a technology may lock a company into a resource that rapidly becomes obsolete. In contrast, later entrants may be able to leapfrog the first mover and introduce products that are based on later versions of the underlying technology. This happened in France during the 1980s when, at the urging of the government, France Telecom introduced the world's first consumer online service, Minitel. France Telecom distributed free terminals to consumers, which connected to the phone line and could be used to browse phone directories. Other simple services were soon added, and before long the French could shop, bank, make travel arrangements, and check weather and news "online"—years before the Web was invented. The problem was that by the standards of the Web, Minitel was very crude and

inflexible, and France Telecom, as the first mover, suffered. The French were very slow to adopt personal computers and the Internet primarily because Minitel had such a presence. In 1998, only one-fifth of French households had a computer, compared with two-fifths in the United States, and only 2% of households were connected to the Internet, compared to over 30% in the United States. As the result of a government decision, France Telecom, and the entire nation of France, was slow to adopt a revolutionary new online medium—the Web—because they were the first to invest in a more primitive version of the technology.²¹

7-5c Strategies for Exploiting First-Mover Advantages

First movers must strategize and determine how to exploit their lead and capitalize on first-mover advantages to build a sustainable, long-term competitive advantage while simultaneously reducing the risks associated with first-mover disadvantages. There are three basic strategies available: (1) develop and market the innovation; (2) develop and market the innovation jointly with other companies through a strategic alliance or joint venture; and (3) license the innovation to others and allow them to develop the market.

The optimal choice of strategy depends on the answers to three questions:

1. Does the innovating company have the complementary assets to exploit its innovation and capture first-mover advantages?
2. How difficult is it for imitators to copy the company's innovation? In other words, what is the height of barriers to imitation?
3. Are there capable competitors that could rapidly imitate the innovation?

Complementary Assets Complementary assets are required to exploit a new innovation and gain a competitive advantage.²² Among the most important complementary assets are competitive production and distribution capabilities that can handle rapid growth in customer demand while maintaining high product and service quality. State-of-the-art manufacturing facilities, for example, enable the first mover to quickly move down the experience curve without encountering production bottlenecks or problems with the quality of the product. The inability to satisfy demand because of these problems, however, creates the opportunity for imitators to enter the marketplace. For example, in 1998, Immunex was the first company to introduce a revolutionary biological treatment for rheumatoid arthritis. Sales for this product, Enbrel, very rapidly increased, reaching \$750 million in 2001. However, Immunex had not invested in sufficient manufacturing capacity. In mid-2000, it announced that it lacked the capacity to satisfy demand and that bringing additional capacity on line would take at least 2 years. This manufacturing bottleneck gave the second mover in the market, Johnson & Johnson, the opportunity to rapidly expand demand for its product, which by early 2002 was outselling Enbrel. Immunex's first-mover advantage had been partly eroded because it lacked an important complementary asset, the manufacturing capability required to satisfy demand.

Complementary assets also include marketing knowhow, an adequate sales force, access to distribution systems, and an after-sales service and support network. All of these assets can help an innovator build brand loyalty and more rapidly achieve market penetration.²³ In turn, the resulting increases in volume facilitate more rapid movement down the experience curve and the attainment of a sustainable, cost-based

advantage due to scale economies and learning effects. EMI, the first mover in the market for computed tomography (CT) scanners, ultimately lost out to established medical equipment companies such as GE Medical Systems because it lacked the marketing knowhow, sales force, and distribution systems required to effectively compete in the world's largest market for medical equipment, the United States.

Developing complementary assets can be very expensive, and companies often need large infusions of capital for this purpose. That is why first movers often lose out to late movers that are large, successful companies in other industries with the resources to quickly develop a presence in the new industry. For example, though online grocery ordering and delivery was pioneered by startup firms, Amazon's entry into this market with its Amazon Fresh service threatened to displace the smaller companies due to Amazon's far greater brand awareness, distribution capabilities, and bargaining power with suppliers.

Height of Barriers to Imitation Recall from Chapter 3 that barriers to imitation are factors that prevent rivals from imitating a company's distinctive competencies and innovations. Although any innovation can be copied, the higher the barriers are, the longer it takes for rivals to imitate the innovation, and the more time the first mover has to build an enduring competitive advantage.

Barriers to imitation give an innovator time to establish a competitive advantage and build more enduring barriers to entry in the newly created market. Patents, for example, are among the most widely used barriers to imitation. By protecting its photocopier technology with a thicket of patents, Xerox was able to delay any significant imitation of its product for 17 years. However, patents are often easy to "invent around." For example, one study found that this happened to 60% of patented innovations within 4 years.²⁴ If patent protection is weak, a company might try to slow imitation by developing new products and processes in secret. The most famous example of this approach is Coca-Cola, which has kept the formula for Coke a secret for generations. But Coca-Cola's success in this regard is an exception. A study of 100 companies has estimated that rivals learn about a company's decision to develop a major new product or process and its related proprietary information within 12 to 18 months of the original development decision.²⁵

Capable Competitors Capable competitors are companies that can move quickly to imitate the pioneering company. Competitors' capability to imitate a pioneer's innovation depends primarily on two factors: (1) R&D skills; and (2) access to complementary assets. In general, the greater the number of capable competitors with access to the R&D skills and complementary assets needed to imitate an innovation, the more rapid imitation is likely to be.

In this context, R&D skills refer to the ability of rivals to reverse-engineer an innovation to find out how it works and quickly develop a comparable product. As an example, consider the CT scanner. GE bought one of the first CT scanners produced by EMI, and its technical experts reverse-engineered the machine. Despite the product's technological complexity, GE developed its own version, which allowed it to quickly imitate EMI and replace it as the major supplier of CT scanners.

Complementary assets—the access that rivals have to marketing, sales knowhow, and manufacturing capabilities—are key determinants of the rate of imitation. If would-be imitators lack critical complementary assets, not only will they have to imitate the innovation, but they may also need to imitate the innovator's complementary

assets. This is expensive, as AT&T discovered when it tried to enter the PC business in 1984. AT&T lacked the marketing assets (sales force and distribution systems) necessary to support personal computer products. The lack of these assets and the time it takes to build the assets partly explains why: Four years after it entered the market, AT&T had lost \$2.5 billion and still had not emerged as a viable contender. It subsequently exited this business.

Three Innovation Strategies The way in which these three factors—complementary assets, height of barriers to imitation, and the capability of competitors—influence the choice of innovation strategy is summarized in Table 7.1. The competitive strategy of developing and marketing the innovation alone makes most sense when: (1) the innovator has the complementary assets necessary to develop the innovation, (2) the barriers to imitating a new innovation are high, and (3) the capability of competitors is limited. Complementary assets allow rapid development and promotion of the innovation. High barriers to imitation give the innovator time to establish a competitive advantage and build enduring barriers to entry through brand loyalty or experience-based cost advantages. The fewer capable competitors there are, the less likely it is that any one of them will succeed in circumventing barriers to imitation and quickly imitating the innovation.

The competitive strategy of developing and marketing the innovation jointly with other companies through a strategic alliance or joint venture makes most sense when: (1) the innovator lacks complementary assets, (2) barriers to imitation are high, and (3) there are several capable competitors. In such circumstances, it makes sense to enter into an alliance with a company that already has the complementary assets—in other words, with a capable competitor. Theoretically, such an alliance should prove to be mutually beneficial, and each partner can share in high profits that neither could earn on its own. Moreover, such a strategy has the benefit of coopting a potential rival. For example, had EMI teamed with a capable competitor to develop the market for CT scanners, such as GE Medical Systems, instead of going it alone, the company might have been able to build a more enduring competitive advantage and also coopt a powerful rival into its camp.

The third strategy, licensing, makes most sense when: (1) the innovating company lacks the complementary assets, (2) barriers to imitation are low, and (3) there are many capable competitors. The combination of low barriers to imitation and many capable competitors makes rapid imitation almost certain. The innovator's lack of complementary assets further suggests that an imitator will soon capture the innovator's competitive advantage. Given these factors, because rapid diffusion of the innovator's technology through imitation is inevitable, the innovator can at least share in

Table 7.1 Strategies for Profiting from Innovation

Strategy	Does the Innovator Have the Required Complementary Assets?	Likely Height of Barriers to Imitation	Existence of Capable Competitors
Going it alone	Yes	High	Very few
Entering into an alliance	No	High	Moderate number
Licensing the innovation	No	Low	Many

some benefits of this diffusion by licensing out its technology.²⁶ Moreover, by setting a relatively modest licensing fee, the innovator may be able to reduce the incentive that potential rivals have to develop their own competing, and possibly superior, technology. As described previously, Dolby adopted this strategy to get its technology established as the standard for noise reduction in the music and film businesses.

7-6 TECHNOLOGICAL PARADIGM SHIFTS

technological paradigm shift

Shifts in new technologies that revolutionize the structure of the industry, dramatically alter the nature of competition, and require companies to adopt new strategies in order to survive.

Technological paradigm shifts occur when new technologies revolutionize the structure of the industry, dramatically alter the nature of competition, and require companies to adopt new strategies in order to survive. A good example of a paradigm shift is the evolution of photography from chemical to digital printing processes. For over half a century, the large, incumbent enterprises in the photographic industry such as Kodak and Fujifilm generated most of their revenues from selling and processing film using traditional silver halide technology. The rise of digital photography was a huge disruptive threat to their business models. Digital cameras do not use film, the mainstay of Kodak's and Fuji's business. In addition, these cameras are more like specialized computers than conventional cameras, and are therefore based on scientific knowledge in which Kodak and Fuji have little expertise. Although both Kodak and Fuji have heavily invested in the development of digital cameras, they faced intense competition from companies such as Sony, Canon, and Hewlett-Packard, which developed their own digital cameras; from software developers such as Adobe and Microsoft, which make software for manipulating digital images; and from printer companies such as Hewlett-Packard and Canon, which make printers that consumers use to print high-quality pictures from home. As time passed, these companies also faced disruption. As the quality of cameras integrated into smartphones improved, a large portion of the market that would have previously purchased digital cameras and printed pictures at home now took pictures on their smartphone and shared them electronically – foregoing most printing altogether.

Kodak and Fuji are hardly the only large incumbents to be felled by a technological paradigm shift in their industry. Keuffel & Esser was once the preeminent maker of slide rules in the world, and then calculators rendered the slide rule obsolete. Smith Corona, one of the best-known makers of typewriters was a household name until word processing programs turned typewriters into a novelty item. Tower Records had 200 stores and over \$1 billion in revenues at its peak but closed its doors in 2006 due to the shift to digital music distribution.²⁷ The number of full-time travel agents in the United States reached its peak of 124,000 in 2000; the shift to online travel booking dropped that number to just under 83,000 by 2016 and that number is expected to continue to fall.²⁸

Examples such as these raise four questions:

1. When do paradigm shifts occur, and how do they unfold?
2. Why do so many incumbents go into decline following a paradigm shift?
3. What strategies can incumbents adopt to increase the probability that they will survive a paradigm shift and emerge on the other side of the market abyss created by the arrival of new technology as a profitable enterprise?

4. What strategies can new entrants into a market adopt to profit from a paradigm shift?

We shall answer each of these questions in the remainder of this chapter.

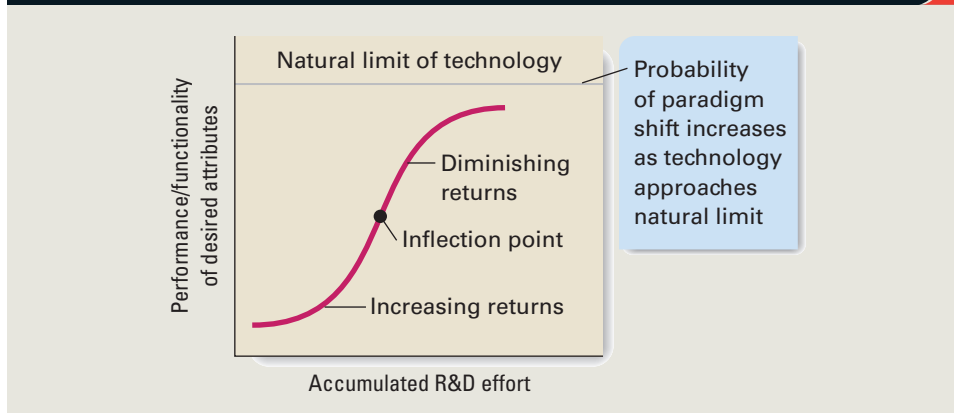
7-6a Paradigm Shifts and the Decline of Established Companies

Paradigm shifts appear to be more likely to occur in an industry when one, or both, of the following conditions are in place.²⁹ First, the established technology in the industry is mature, and is approaching or at its “natural limit.” Second, a new “disruptive technology” has entered the marketplace and is taking root in niches that are poorly served by incumbent companies using established technology.

Natural Limits to Technology Richard Foster has formalized the relationship between the performance of a technology and time in terms of what he calls the technology S-curve (see Figure 7.7).³⁰ This curve shows the relationship over time of cumulative investments in R&D and the performance (or functionality) of a given technology. Early in its evolution, R&D investments in a new technology tend to yield rapid improvements in performance as basic engineering problems are solved. After a time, diminishing returns to cumulative R&D begin to set in, the rate of improvement in performance slows, and the technology starts to approach its natural limit, where further advances are not possible. For example, one can argue that there was more improvement in the first 50 years of the commercial aerospace business following the pioneering flight by the Wright Brothers than there has been in the second 50 years. Indeed, the venerable Boeing 747 is based on a 1960’s design. In commercial aerospace, therefore, we are now in the region of diminishing returns and may be approaching the natural limit to improvements in the technology of commercial aerospace.

Similarly, it can be argued that we are approaching the natural limit to technology in the performance of silicon-based semiconductor chips. Over the past three decades, the performance of semiconductor chips has increased dramatically; companies can now manufacture a larger amount of transistors in a single, small silicon chip.

Figure 7.7 The Technology S-Curve

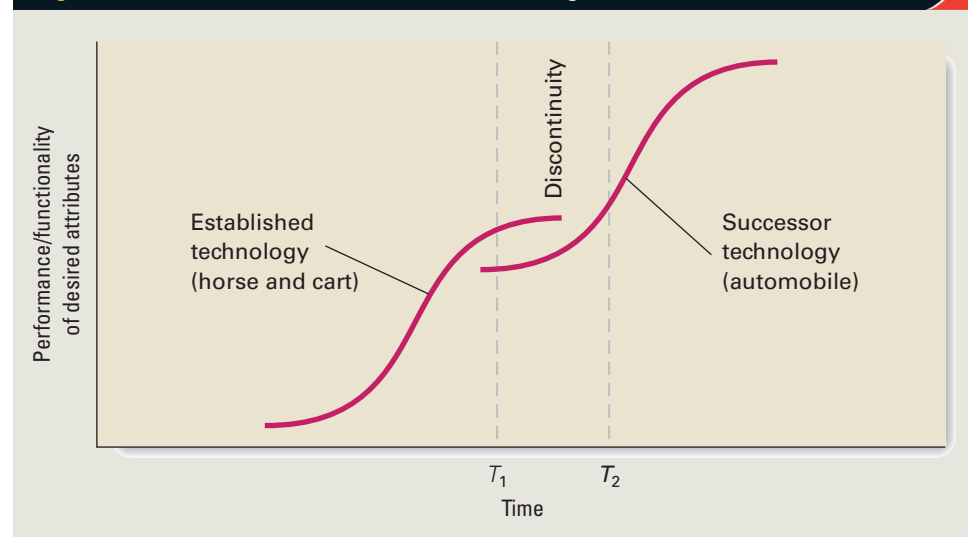


This process helped to increase the power of computers, lower their cost, and shrink their size. But we are starting to approach limits to the ability to shrink the width of lines on a chip and therefore pack ever more transistors onto a single chip. The limit is imposed by the natural laws of physics. Light waves are used to etch lines onto a chip, and one cannot etch a line that is smaller than the wavelength of light being used. Semiconductor companies are already using light beams with very small wavelengths, such as extreme ultraviolet, to etch lines onto a chip, but there are limits to how far this technology can be pushed, and many believe that we will reach those limits within the decade. Does this mean that our ability to make smaller, faster, cheaper computers is coming to an end? Probably not. It is more likely that we will find another technology to replace silicon-based computing and enable us to continue building smaller, faster, cheaper computers.

What does all of this have to do with paradigm shifts? According to Foster, when a technology approaches its natural limit, research attention turns to possible alternative technologies, and sooner or later one of those alternatives might be commercialized and replace the established technology. That is, the probability that a paradigm shift will occur increases. Thus, sometime in the next decade or two, another paradigm shift might shake up the foundations of the computer industry as an alternative technology replaces silicon-based computing. If history is any guide, if and when this happens, many incumbents in today's computer industry will go into decline, and new enterprises will rise to dominance.

Foster pushes this point a little further, noting that, initially, the contenders for the replacement technology are not as effective as the established technology in producing the attributes and features that consumers demand in a product. For example, in the early years of the 20th century, automobiles were just beginning to be produced. They were valued for their ability to move people from place to place, but so was the horse and cart (the established technology). When automobiles originally appeared, the horse and cart was still quite a bit better than the automobile (see Figure 7.8). After all, the first cars were slow, noisy, and prone to

Figure 7.8 Established and Successor Technologies



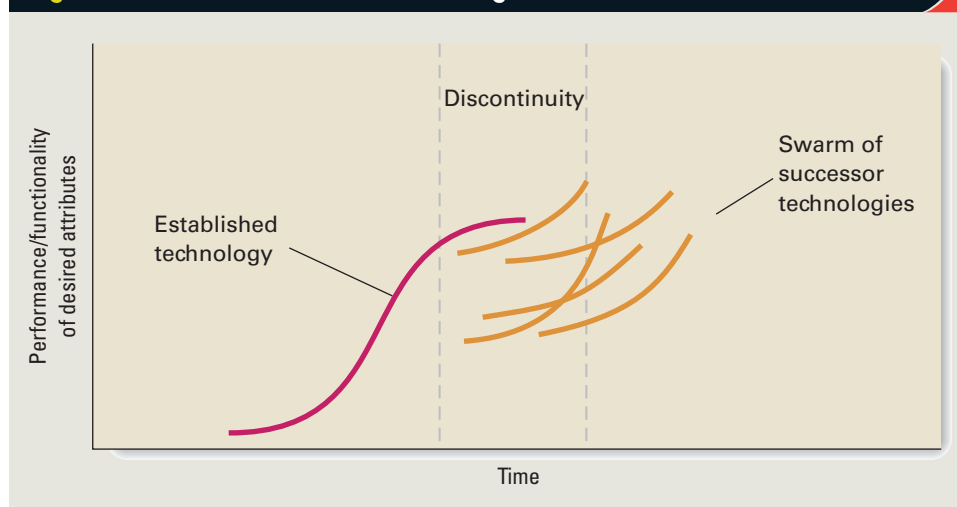
break down. Moreover, they needed a network of paved roads and gas stations to be really useful, and that network didn't yet exist. For most applications, the horse and cart was still the preferred mode of transportation—in part because it was cheaper.

However, this comparison ignored the fact that in the early 20th century, automobile technology was at the very start of its S-curve and about to experience dramatic improvements in performance as major engineering problems were solved (and those paved roads and gas stations were built). In contrast, after 3,000 years of continuous improvement and refinement, the horse and cart was almost definitely at the end of its technological S-curve. The result was that the rapidly improving automobile soon replaced the horse and cart as the preferred mode of transportation. At time T_1 in Figure 7.8, the horse and cart was still superior to the automobile. By time T_2 , the automobile had surpassed the horse and cart.

Foster notes that because successor technology is initially less efficient than established technology, established companies and their customers often make the mistake of dismissing it, only to be surprised by its rapid performance improvement. Many people are betting that this is the process unfolding in the electric vehicle industry. Although electric vehicles still have technical disadvantages to internal combustion vehicles (e.g., limited range, time spent recharging), and cost significantly more than comparable internal combustion vehicles, it is possible that dramatic improvements in battery technology could simultaneously address technical disadvantages while reducing the costs of the vehicles.

A final point is that often there is not a single potential successor technology but a swarm of potential successor technologies, only one of which might ultimately rise to the fore (see Figure 7.9). When this is the case, established companies are put at a disadvantage. Even if they recognize that a paradigm shift is imminent, companies may not have the resources to invest in all the potential replacement technologies. If they invest in the wrong one—which is easy to do, given the uncertainty that surrounds the entire process—they may be locked out of subsequent development.

Figure 7.9 Swarm of Successor Technologies



Disruptive Technology Clayton Christensen has built on Foster's insights and his own research to develop a theory of disruptive technology that has become very influential in high-technology circles.³¹ Christensen uses the term *disruptive technology* to refer to a new technology that originates away from the mainstream of a market and then, as its functionality improves over time, invades the main market. Such technologies are disruptive because they revolutionize industry structure and competition, often causing the decline of established companies. They cause a technological paradigm shift.

Christensen's greatest insight is that established companies are often aware of the new technology but do not invest in it because they listen to their customers, and their customers do not want it. Of course, this arises because the new technology is early in its development and only at the beginning of the S-curve for that technology. Once the performance of the new technology improves, customers will want it, but by this time it is new entrants, as opposed to established companies, that have accumulated the required knowledge to bring the new technology into the mass market.

In addition to listening too closely to their customers, Christensen also identifies a number of other factors that make it very difficult for established companies to adopt a new disruptive technology. He notes that many established companies decline to invest in new disruptive technologies because initially they serve such small market niches that it seems unlikely there would be an impact on the company's revenues and profits. As the new technology starts to improve in functionality and invade the main market, their investment can often be hindered by the difficult implementation of a new business model required to exploit the new technology.

Both of these points can be illustrated by reference to one more example: the rise of online discount stockbrokers during the 1990s such as Ameritrade and E*TRADE, which made use of a new technology—the Internet—to allow individual investors to trade stocks for a very low commission fee, whereas full-service stockbrokers such as Merrill Lynch, which required that orders be placed through a stockbroker who earned a commission for performing the transaction, did not.

Christensen also notes that a new network of suppliers and distributors typically grows alongside the new entrants. Not only do established companies initially ignore disruptive technology, so do their suppliers and distributors. This creates an opportunity for new suppliers and distributors to enter the market to serve the new entrants. As the new entrants grow, so does the associated network. Ultimately, Christensen suggests, the new entrants and their network may replace not only established enterprises, but also the entire network of suppliers and distributors associated with established companies. Taken to its logical extreme, this view suggests that disruptive technologies may result in the demise of the entire network of enterprises associated with established companies in an industry.

The established companies in an industry that is being rocked by a technological paradigm shift often must cope with internal inertia forces that limit their ability to adapt, but the new entrants do not and thus have an advantage. New entrants do not have to deal with an established, conservative customer set and an obsolete business model. Instead, they can focus on optimizing the new technology, improving its performance, and riding the wave of disruptive technology into new market segments until they invade the main market and challenge the established companies. By then, they may be well equipped to surpass the established companies.

7-6b Strategic Implications for Established Companies

Although Christensen has uncovered an important tendency, it is by no means written in stone that all established companies are doomed to fail when faced with disruptive technologies, as we have seen with IBM and Merrill Lynch. Established companies must meet the challenges created by the emergence of disruptive technologies.³²

First, having access to the knowledge about how disruptive technologies can revolutionize markets is a valuable strategic asset. Many of the established companies that Christensen examined failed because they took a myopic view of the new technology and asked their customers the wrong question. Instead of asking: “Are you interested in this new technology?” they should have recognized that the new technology was likely to improve rapidly over time and instead have asked: “Would you be interested in this new technology if it improves its functionality over time?” If established enterprises had done this, they may have made very different strategic decisions.

Second, it is clearly important for established enterprises to invest in newly emerging technologies that may ultimately become disruptive technologies. Companies have to hedge their bets about new technology. As we have noted, at any time, there may be a swarm of emerging technologies, any one of which might ultimately become a disruptive technology. Large, established companies that are generating significant cash flows can, and often should, establish and fund central R&D operations to invest in and develop such technologies. In addition, they may wish to acquire emerging companies that are pioneering potentially disruptive technologies, or enter into alliances with others to jointly develop the technology. The strategy of acquiring companies that are developing potentially disruptive technology is one that Cisco Systems, a dominant provider of Internet network equipment, is famous for pursuing. At the heart of this strategy must be recognition on behalf of the incumbent enterprise that it is better for the company to develop disruptive technology, and then cannibalize its established sales base, than to have the sales base taken away by new entrants.

However, Christensen makes a very important point: Even when established companies undertake R&D investments in potentially disruptive technologies, they often fail to commercialize those technologies because of internal forces that suppress change. For example, managers who are currently generating the most cash in one part of the business may claim that they need the greatest R&D investment to maintain their market position, and may lobby top management to delay investment in a new technology. This can be a powerful argument when, early in the S-curve, the long-term prospects of a new technology are very unclear. The consequence, however, may be that the company fails to build competence in the new technology, and suffers accordingly.

In addition, Christensen argues that the commercialization of new disruptive technology often requires a radically different value chain with a completely different cost structure—a new business model. For example, it may require a different manufacturing system, a different distribution system, and different pricing options, and may involve very different gross margins and operating margins. Christensen argues that it is almost impossible for two distinct business models to coexist within the same organization. When companies try to implement both models, the already established model will almost inevitably suffocate the model associated with the disruptive technology.

The solution to this problem is to create an autonomous operating division devoted solely to the new technology. For example, during the early 1980s, HP built a very successful laserjet printer business. Then inkjet technology was invented. Some employees at HP believed that inkjet printers would cannibalize sales of laserjet printers, and consequently argued that HP should not produce inkjet printers. Fortunately for HP, senior management saw inkjet technology for what it was: a potential disruptive technology. Instead of choosing to not invest in inkjet technology, HP allocated significant R&D funds toward its commercialization. Furthermore, when the technology was ready for market introduction, HP established an autonomous inkjet division at a different geographical location, including manufacturing, marketing, and distribution departments. HP senior managers accepted that the inkjet division might take sales away from the laserjet division and decided that it was better for an HP division to cannibalize the sales of another HP division, than allow those sales to be cannibalized by another company. Happily for HP, inkjets cannibalize sales of laserjets only on the margin, and both laserjet and inkjet printers have profitable market niches. This felicitous outcome, however, does not detract from the message of this example: If a company is developing a potentially disruptive technology, the chances for success will be enhanced if it is placed in a stand-alone product division and given its own mandate.

7-6c Strategic Implications for New Entrants

Christensen's work also holds implications for new entrants. The new entrants, or attackers, have several advantages over established enterprises. Pressures to continue the existing, out-of-date business model do not hamstring new entrants, which do not need to worry about product cannibalization issues. They need not worry about their established customer base or about relationships with established suppliers and distributors. Instead, they can focus all their energies on the opportunities offered by the new disruptive technology, move along the S-curve of technology improvement, and rapidly grow with the market for that technology. This does not mean that the new entrants do not have problems to solve. They may be constrained by a lack of capital or must manage the organizational problems associated with rapid growth; most important, they may need to find a way to take their technology from a small, out-of-the-way niche into the mass market.

Perhaps one of the most important issues facing new entrants is choosing whether to partner with an established company or go it alone in an attempt to develop and profit from a new disruptive technology. Although a new entrant may enjoy all the advantages of the attacker, it may lack the resources required to fully exploit them. In such a case, the company might want to consider forming a strategic alliance with a larger, established company to gain access to those resources. The main issues here are the same as those discussed earlier when examining the three strategies that a company can pursue to capture first-mover advantages: go it alone, enter into a strategic alliance, or license its technology.

KEY TERMS

technical standards 202	network effects 208	first mover 218	technological paradigm
format wars 202	killer applications 212	first-mover	shift 224
dominant design 205	razor and blade	disadvantages 219	
public domain 207	strategy 213		

TAKEAWAYS FOR STRATEGIC MANAGERS

1. Technical standards are important in many high-tech industries. They guarantee compatibility, reduce confusion in the minds of customers, allow for mass production and lower costs, and reduce the risks associated with supplying complementary products.
2. Network effects and positive feedback loops often determine which standard will dominate a market.
3. Owning a standard can be a source of sustained competitive advantage.
4. Establishing a proprietary standard as the industry standard may require the company to win a format war against a competing and incompatible standard. Strategies for doing this include producing complementary products, leveraging killer applications, using aggressive pricing and marketing, licensing the technology, and cooperating with competitors.
5. Many high-tech products are characterized by high fixed costs of development but very low or zero marginal costs of producing one extra unit of output. These cost economics create a presumption in favor of strategies that emphasize aggressive pricing to increase volume and drive down average total costs.
6. It is very important for a first mover to develop a strategy to capitalize on first-mover advantages. A company can choose from three strategies: develop and market the technology itself, do so jointly with another company, or license the technology to existing companies. The choice depends on the complementary assets required to capture a first-mover advantage, the height of barriers to imitation, and the capability of competitors.
7. Technological paradigm shifts occur when new technologies emerge that revolutionize the structure of the industry, dramatically alter the nature of competition, and require companies to adopt new strategies in order to succeed.
8. Technological paradigm shifts are more likely to occur when progress in improving the established technology is slowing because of diminishing returns and when a new disruptive technology is taking root in a market niche.
9. Established companies can deal with paradigm shifts by investing in technology or setting up a stand-alone division to exploit technology.

DISCUSSION QUESTIONS

1. What is different about high-tech industries? Were all industries once high-tech?
2. Why are standards so important in high-tech industries? What are the competitive implications of this?
3. You work for a small company that has the leading position in an embryonic market. Your boss believes that the company's future is ensured because it has a 60% share of the market, the lowest cost structure in the industry, and the most reliable and highest-valued product. Write a memo to your boss outlining why the assumptions posed might be incorrect.
4. You are working for a small company that has developed an electric scooter that is lower cost, lighter, and has longer battery range

than most existing electric scooters on the market. What strategies might your company pursue to try to increase your company's success?

5. Reread the Strategy in Action 7.1 on Microsoft's "segment zero" threat. Do you think one operating system for smartphones or tablets will become dominant? If so, which one and why?

CLOSING CASE

Blu-ray versus HD-DVD and Streaming: Standards Battles in Video

In 2003, Sony officially launched its Blu-ray disc, an optical disc data-storage format that could offer high-definition video, with hopes of replacing the DVD format. Sony's technology had the backing of a consortium that included Philips, Panasonic, Pioneer, Sharp, Samsung, Hitachi, and others. Toshiba, on the other hand, was not eager to let Sony dominate the market with its Blu-ray technology; Sony and Philips had controlled the original standard for compact discs (CDs), and every producer of CDs, CD players, and CD recorders had been required to pay licensing fees to Sony and Philips—an extremely lucrative arrangement for the partners. Toshiba thus formed a consortium, the DVD Forum, which developed a competing, high-definition DVD standard, HD-DVD, making it the "official" successor to the DVD format.

Both new formats were intended to deliver a theaterlike experience at home, with brilliantly clear video and surround-sound audio, on high-end LCD and plasma televisions. The formats, however, would be incompatible. Consumers, retailers, and movie producers all groaned at the prospect of a format war similar to the battle that had taken place between Sony's Betamax and JVC's VHS video standard three decades earlier. That war had left many bloodied—consumers who bought Betamax players, for example, found that very few movies were ultimately made available in the format, and retailers got stuck with unwanted inventory in Betamax players and movies. The threat of another format war caused many retailers and consumers to

delay their purchases of the next-generation players while they waited to see if the market would pick a winner. Fearing a lengthy, costly battle, consumer electronics producers began working on players that would be compatible with both standards, even though that would significantly increase their cost.

Initially, the HD-DVD standard had a head start. Blu-ray players were considered to be too expensive and buggy, and there were few movie titles available in the standard. Toshiba, on the other hand, already had the cooperation of several major Hollywood studios for its format, including Time Warner's Warner Brothers, Viacom's Paramount Pictures and Dreamworks Animation, and NBC Universal's Universal Pictures. Sony had only its own Sony Pictures Entertainment, Disney, News Corporation's 20th Century Fox, and Lions Gate Entertainment.

Both companies also used videogame consoles to promote their standards. Sony incorporated the Blu-ray format into its PlayStation 3, dramatically raising the cost of the devices. Though it sold the consoles at a very low price relative to cost, the consoles were still significantly more expensive than traditional videogame consoles, causing PlayStation 3 to sell only about half as many total units as PlayStation 2 had sold (85.23 million versus 157.68 million, respectively). Sony was willing, however, to concede some ground in the PlayStation battle to win the Blu-ray war. Toshiba's HD-DVD was offered as an optional, add-on drive for Microsoft's Xbox 360.

However, on the eve of the Consumer Electronics Show in Las Vegas in early January 2008, Warner Brothers announced that it would no longer support the HD-DVD standard. This set off a chain reaction among content providers and retailers. By late February, New Line Cinema, Universal Studios, and Paramount announced that they would be releasing movies on the Blu-ray format, and Best Buy, Wal-Mart, Circuit City, Future Shop, Blockbuster, and Netflix all announced that they would exclusively stock Blu-ray DVDs. The blow was unexpected—and devastating—for Toshiba. On February 19, 2008, Toshiba's CEO, Atsutoshi Nishida, conceded defeat by publicly announcing that Toshiba would no longer produce HD-DVD players, recorders, or components. By late 2009, Toshiba had released its own Blu-ray disc player.

Sony's Blu-ray victory, however, was not the landslide that it expected. On September 12, 2008, a consortium of tech heavyweights (including Intel and Hewlett-Packard) announced that they would collaborate with Hollywood to create standards that would make downloading movies fast and easy. If consumers were able to download high-quality movies off the Internet, it would become increasingly difficult to persuade them to spend \$300 or more on a Blu-ray player. Carmi Levi, senior vice president at consulting firm AR Communications, predicted that "Blu-ray is probably going to be the last physical [product] where you walk into a store, get a movie in a box, and bring it home."

By 2012, about one-third of U.S. households had a device that could play a Blu-ray movie (including PlayStation 3); at the same point in the DVD format's life, over half of U.S. households had a device

for playing DVDs. Video streaming revenues had reached \$5.7 billion in the United States by 2014 and were expected to reach \$14 billion by 2018. Physical DVD and Blu-ray sales, on the other hand, were expected to drop from \$12.2 billion in 2013 to \$8.7 billion by 2018. Though the availability of Blu-ray format streamed content was increasing, many people preferred to stream content in standard (versus high definition) format because it was faster, reducing the buffering time necessary for watching content. In fact, one study found that nearly one-quarter of U.S. households did not have adequate bandwidth to stream high-definition content, and another study found that even in households that could stream high-definition content, many viewers still chose standard definition viewing. On May 1, 2014, Sony issued a warning to investors that it expected to take a hit on earnings because Blu-ray sales were contracting faster than it had expected.

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CASE DISCUSSION QUESTIONS

1. What were Blu-Ray's advantages in the competition with HD-DVD? Could Toshiba have done anything differently to ensure the HD-DVD standard's success?
2. Why do you think Warner Brothers' announcement set off a chain reaction?
3. Could Sony have anticipated that streaming would dampen the revenues of Blu-Ray?

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CHAPTER

8

STRATEGY IN THE GLOBAL ENVIRONMENT

LEARNING OBJECTIVES

- 8.1 Understand the process of globalization and how it impacts a company's strategy
- 8.2 Discuss the motives for expanding internationally
- 8.3 Review the different strategies that companies use to compete in the global marketplace
- 8.4 Explain the pros and cons of different modes for entering foreign markets

OPENING CASE

Ford's Global Strategy

When Ford CEO Alan Mulally arrived at the company back in 2006 after a long career at Boeing, he was shocked to learn that the company produced one Ford Focus for Europe and a totally different one for the United States. "Can you imagine having one Boeing 737 for Europe and one 737 for the United States?" he said at the time. Due to this product strategy, Ford was unable to buy common parts for the vehicles, could not share development costs, and could not use its European Focus plants to make cars for the United States, or vice versa. In a business where economies of scale are important, the result was high costs. Nor were these problems limited to the Ford Focus. The strategy of designing and building different cars for different regions was the standard approach at Ford.



Bloomberg/Getty Images

Ford's long-standing strategy of regional models was based on the assumption that consumers in different regions had different tastes and preferences, which required considerable local customization. Americans, it was argued, loved their trucks and SUVs, while Europeans preferred smaller, fuel-efficient cars. Notwithstanding such differences, Mulally still could not understand why small car models like the Focus, or the Escape SUV, which were sold in different regions, were not built on the same platform and did not share common parts. In truth, the strategy probably had more to do with the autonomy of different regions within Ford's organization, a fact that was deeply embedded in Ford's history as one of the oldest multinational corporations.

When the global financial crisis rocked the world's automobile industry in 2008–2009 and precipitated the steepest drop in sales since the Great Depression, Mulally decided that Ford had to change its entrenched practices in order to get its costs under control. Moreover, he felt that there was no way that Ford would be able to compete effectively in the large, developing markets of China and India unless it leveraged its global scale to produce low-cost cars. The result was the "One Ford" strategy, which aims to create a handful of car platforms that Ford can use everywhere in the world.

Under this strategy, new models share a common design, are built on a common platform, use the same parts, and will be built in identical factories around the world. In 2006, Ford had 15 platforms; today, it has just 8. In 2007, Ford was producing 3.9 vehicle models per platform. By 2019, it was building 5.7 vehicle models per platform. By pursuing this strategy, Ford has been able to share the costs of design and tooling, attaining much greater scale economies in the production of component parts. These changes have taken about one-third out of the \$1 billion cost of developing a new car model and have significantly reduced the company's annual budget for component parts. Moreover, because the different factories producing these cars are identical in all respects, useful knowledge acquired through experience in one factory can quickly be transferred to other factories, resulting in systemwide cost savings.

According to Ford, this global strategy has brought down costs sufficiently to enable the company to attain greater profit margins in developed markets and good margins at lower price points in hypercompetitive, developing nations such as China, now the world's largest car market, where Ford currently trails global rivals such as General Motors and Volkswagen.

Sources: M. Ramsey, "For SUV Marks New World Car Strategy," *The Wall Street Journal*, November 16, 2011; Glenn Brooks, "Ford's future models and platforms", *Just Auto*, June 30, 2016; Michael Martinez, "Ford decreases global platform to 8," *Detroit News*, January 13, 2015; "Global Manufacturing Strategy Gives Ford Competitive Advantage," Ford Motor Company website, http://media.ford.com/article_display.cfm?article_id=13633.

8-1 OVERVIEW

One striking development during the last four decades has been the globalization of markets. As a result of declining barriers to cross-border trade and investment, along with the rapid economic development of countries like Brazil, Russia, India, and China, segmented national markets have increasingly merged into much larger global markets. In this chapter, we discuss the implications of this phase shift in the global competitive environment for strategic management.

The chapter begins with a discussion of ongoing changes in the global competitive environment. Next, it discusses the various ways in which global expansion can increase a company's profitability and profit growth. We then discuss the advantages and disadvantages of the different strategies companies can pursue to gain a competitive advantage in the global marketplace. This is followed by a discussion of two related strategic issues: (1) how managers decide which foreign markets to enter, when to enter them, and on what scale; and (2) what kind of vehicle or method a company should use to expand globally and enter a foreign country.

The strategic changes at Ford during the last decade give us a preview of some issues explored in this chapter. Historically Ford produced different models for different regional or national markets. While this made sense in a world where different markets were segmented from each other by high barriers to cross-border trade and investment, by the twenty-first century the strategy was putting Ford at a competitive disadvantage. In response, the company moved toward its One Ford strategy, in which it builds its models on top of a limited number of global platforms, effectively selling very similar cars around the world. This enables the company to achieve much greater economies of scale, lower its costs of goods sold, and compete more effectively on price. Historically, Ford's strategy was geared toward *localization*, but over the last decade it has moved sharply toward what we call a *global standardization* strategy. As we shall see, the choice between localization and global standardization is an important strategic issue confronting many companies that sell goods and services across borders.

8-2 GLOBAL AND NATIONAL ENVIRONMENTS

Fifty years ago, most national markets were isolated from one another by significant barriers to international trade and investment. In those days, managers could focus on analyzing only those national markets in which their company competed. They did not need to pay much attention to entry by global competitors, for there were few and entry was difficult. Nor did they need to pay much attention to entering foreign markets because that was often prohibitively expensive. Over the last half century, much of this has changed. Barriers to international trade and investment have tumbled; huge global markets for goods and services have been created; and companies from different nations are entering each other's home markets on an unprecedented scale, increasing the intensity of competition. Rivalry can no longer be understood merely in terms of what happens within the boundaries of a nation; managers now need to consider how globalization is impacting the environment in which their company

competes, and what strategies their company should adopt to exploit the unfolding opportunities and counter competitive threats. In this section, we look at the changes ushered in by falling barriers to international trade and investment, and we discuss a model for analyzing the competitive situation in different nations.

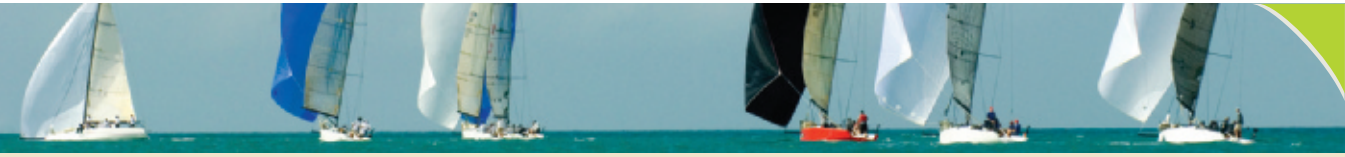
8-2a The Globalization of Production and Markets

The past half-century has seen a dramatic lowering of barriers to international trade and investment. For example, the average tariff rate on manufactured goods traded between advanced nations has fallen from around 40 to under 4%. For some goods, such as information technology, tariff rates have approached zero. Similarly, in nation after nation, regulations prohibiting foreign companies from entering domestic markets and establishing production facilities, or acquiring domestic companies, have been removed. As a result, there has been a surge in both the volume of international trade and the value of foreign direct investment. The volume of world merchandise trade has been growing faster than the world economy since the 1950s. For example, between 2000 and 2017, the volume of world trade more than doubled, while global industrial production increased by around 50%.¹ As for foreign direct investment, between 1990 and 2016, the total flow of foreign direct investment from all countries increased from \$250 billion to \$1.59 trillion as companies invested in each other's markets.² These trends have led to the globalization of production and the globalization of markets.³

The globalization of production has been increasing as companies take advantage of lower barriers to international trade and investment to disperse important functions of their production processes around the globe. Doing so enables them to exploit national differences in the cost and quality of factors of production such as labor, energy, land, and capital, which allows companies to lower their cost structures and boost profits. For example, foreign companies build nearly 65% by value of Boeing's 787 commercial jet aircraft. Three Japanese companies build 35% of the 787, and another 20% is allocated to companies located in Italy, Singapore, and the United Kingdom.⁴ Part of Boeing's rationale for outsourcing so much production to foreign suppliers is that these suppliers are the best in the world at performing their particular activity. Therefore, the result of having foreign suppliers build specific parts is a better final product and higher profitability for Boeing. Apple has had a similar experience. Strategy in Action 8.1 describes how it configures its global supply chain in order to gain a competitive advantage in the smartphone business.

As for the globalization of markets, it has been argued that the world's economic system is moving from one in which national markets are distinct entities, isolated from each other by trade barriers and barriers of distance, time, and culture, toward a system in which national markets are merging into one huge, global marketplace. Increasingly, customers around the world demand and use the same basic product offerings. Consequently, in many industries, it is no longer meaningful to talk about the German market, the U.S. market, or the Chinese market; there is only the global market. The global acceptance of Coca-Cola, Citigroup credit cards, Starbucks, McDonald's hamburgers, Samsung and Apple smartphones, IKEA furniture, and Microsoft's Windows operating system are examples of this trend.⁵

The trend toward the globalization of production and markets has several important implications for competition within an industry. First, industry boundaries do not stop at national borders. Because many industries are becoming global in scope, competitors and potential future competitors exist not only in a company's



8.1 STRATEGY IN ACTION

Making the Apple iPhone

In its early days, Apple usually didn't look beyond its own backyard to manufacture its devices. A few years after Apple started to make the Macintosh computer back in 1983, Steve Jobs bragged that it was "a machine that was made in America." As late as the early 2000s, Apple still manufactured many of its computers at the company's iMac plant in Elk Grove, California. Jobs often said that he was as proud of Apple's manufacturing plants as he was of its devices.

By 2004, however, Apple had largely turned to foreign manufacturing. The shift to offshore manufacturing reached its peak with the iconic iPhone, which Apple first introduced in 2007. All iPhones contain hundreds of parts, an estimated 90% of which are manufactured abroad. Advanced semiconductors come from Germany and Taiwan, memory from Korea and Japan, display panels and circuitry from Korea and Taiwan, chip sets from Europe, and rare metals from Africa and Asia. Apple's major subcontractor, the Taiwanese multinational firm Foxconn, performs final assembly in China.

Apple still employs some 43,000 people in the United States, and it has kept important activities at home, including product design, software engineering, and marketing. Furthermore, Apple claims that its business supports another 254,000 jobs in the United States in engineering, manufacturing, and transportation. For example, the glass for the iPhone is manufactured at Corning's U.S. plants in Kentucky and New York. But an additional 700,000 people are involved in the engineering, building, and final assembly of its products *outside* of the United States, and most of them work at subcontractors like Foxconn.

When explaining its decision to assemble the iPhone in China, Apple cites a number of factors. While it is true that labor costs are much lower in China, Apple executives point out that labor costs only account for a very small proportion of the total value of its products and are not the main driver of location decisions. Far more important,

according to Apple, is the ability of its Chinese subcontractors to respond very quickly to requests from Apple to scale production up and down. In a famous illustration of this capability back in 2007, Steve Jobs demanded that a glass screen replace the plastic screen on his prototype iPhone. Jobs didn't like the look and feel of plastic screens, which at the time were standard in the industry, nor did he like the way they scratched easily. This last-minute change in the design of the iPhone put Apple's market introduction date at risk. Apple had selected Corning to manufacture large panes of strengthened glass, but finding a manufacturer that could cut those panes into millions of iPhone screens wasn't easy. Then a bid arrived from a Chinese factory. When the Apple team visited the factory, they found that the plant's owners were already constructing a new wing and installing equipment to cut the glass. "This is in case you give us the contract," the manager said. The plant also had a warehouse full of glass samples for Apple, and a team of engineers available to work with Apple. They had built onsite dormitories so that the factory could run three shifts seven days a week in order to meet Apple's demanding production schedule. The Chinese company won the bid.

Another critical advantage of China for Apple was that it was much easier to hire engineers there. Apple calculated that about 8,700 industrial engineers were needed to oversee and guide the 200,000 assembly-line workers involved in manufacturing the iPhone. The company had estimated that it would take as long as nine months to find that many engineers in the United States. In China it took 15 days. Also important is the clustering together of factories in China. Many of the factories providing components for the iPhone are located close to Foxconn's assembly plant. As one executive noted, "The entire supply chain is in China. You need a thousand rubber gaskets? That's the factory next door. You need a million screws? That factory is a block away. You need a screw made a little bit different? That will take three hours."

Sources: Gu Huini, "Human Costs Are Built into iPad in China," *New York Times*, January 26, 2012; C. Duhigg and K. Bradsher, "How U.S. Lost Out on iPhone Work," *New York Times*, January 22, 2012; "Apple Takes Credit for Over Half a Million U.S. Jobs," Apple Intelligence, March 2, 2012, <http://9to5mac.com/2012/03/02/apple-takes-credit-for-514000-u-s-jobs/#more-142766>.

home market but also in international markets. Managers who analyze only their home market can be caught unprepared by the entry of efficient foreign competitors. The globalization of markets and production implies that companies around the globe are finding their home markets under attack from foreign competitors. For example, in Japan, American financial institutions such as J.P. Morgan have been making inroads against Japanese financial service institutions. In the United States, South Korea's Samsung has been battling Apple for a share of the smartphone market. In the European Union, the once-dominant Dutch company Philips has seen its market share in the customer electronics industry diminished by Japan's Panasonic and Sony, and Samsung of South Korea.

Second, the shift from national to global markets has intensified competitive rivalry in many industries. National markets that once were consolidated oligopolies, dominated by three or four companies and subjected to relatively little foreign competition, have been transformed into segments of fragmented, global industries in which many companies battle each other for market share in many countries. This rivalry has threatened to drive down profitability and made it more critical for companies to maximize their efficiency, quality, customer responsiveness, and innovative ability. The painful restructuring and downsizing that has been occurring at companies such as the once-dominant photographic company Kodak is as much a response to the increased intensity of global competition as it is to any other factor. However, not all global industries are fragmented. Many remain consolidated oligopolies, except that now they are consolidated, global (rather than national) oligopolies. In the videogame industry, for example, three companies are battling for global dominance: Microsoft from the United States, and Nintendo and Sony from Japan. In the market for smartphones, Apple is in a global battle with Samsung from South Korea and Huawei Technologies from China.

Finally, although globalization has increased both the threat of entry and the intensity of rivalry within many formerly protected national markets, it has also created enormous opportunities for companies based in those markets. The steady decline in barriers to crossborder trade and investment has opened up many once-protected national markets to companies based outside these nations. Thus, for example, Western European, Japanese, and U.S. companies have accelerated their investment in the nations of Eastern Europe, Latin America, and Southeast Asia as they try to take advantage of growth opportunities in those areas.

All this being said, it should be noted that, since 2016, there have been some notable countertrends to the march toward globalization. First, in June 2016, the United Kingdom voted to exit from the European Union (EU), the world's largest and in many ways most successful trading block. The EU has removed barriers to cross-border trade and investment between its 28-member countries, and it has been strongly in support of lowering those barriers globally. The so-called "Brexit" seems to signify a shift away from what has been a consensus that greater globalization is a good thing.

Then, in November 2016, Donald Trump—who articulated explicitly protectionist views—was elected to the presidency of the United States. Since assuming office, Trump has withdrawn the United States from the proposed Trans Pacific Partnership, which would have lowered tariff barriers between 12 Pacific Rim nations (excluding China), initiated renegotiations for the North American Free Trade Agreement (NAFTA) between Canada, Mexico, and the United States, and slapped tariffs on imports of solar panels, washing machines, steel, and aluminum into the United States. This is striking development. Since the end of World War II, America has been a

leader on the international stage pushing for lower barriers to cross border trade and investment. Now, under Trump, it seems to be taking the opposite tack. Although this policy switch is still unfolding at the time of writing, there is no doubt that if this counter trend continues it will significantly alter the environment within which international businesses have been operating for the last quarter-century, and it may require many enterprises to shift their global strategy.

8-2b National Competitive Advantage

Despite the globalization of production and markets, many of the most successful companies in certain industries are still clustered in a small number of countries. For example, many of the world's most successful biotechnology and computer companies are based in the United States, and many of the most successful consumer electronics companies are based in Japan, Taiwan, South Korea, and China. Germany is the base for many successful chemical and engineering companies. These facts suggest that the nation-state within which a company is based may have an important bearing on the competitive position of that company in the global marketplace.

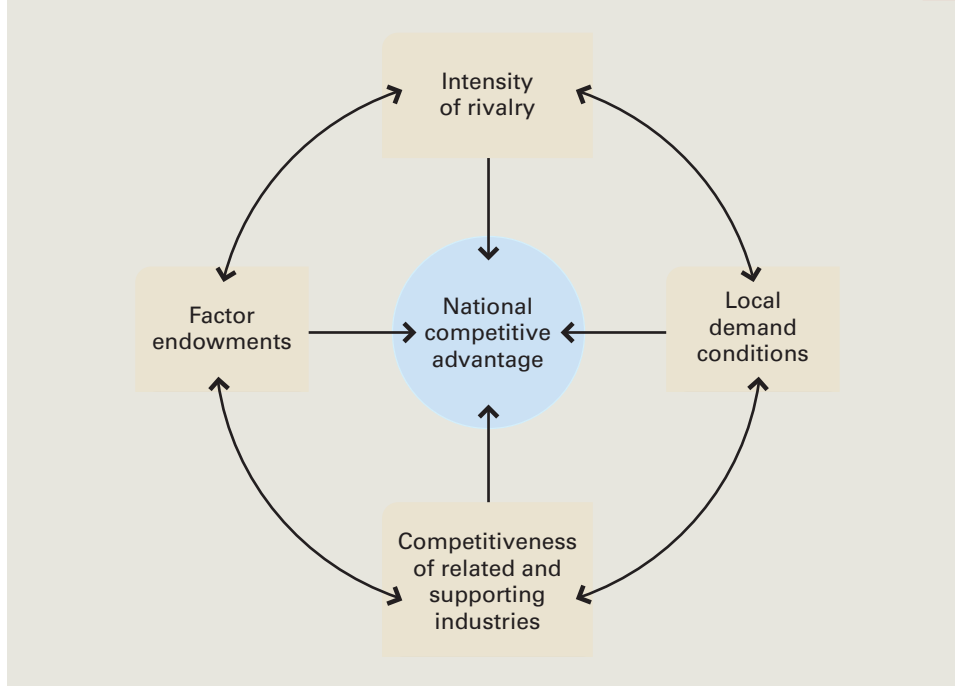
In a study of national competitive advantage, Michael Porter identified four attributes of a national or country-specific environment that have an important impact on the global competitiveness of companies located within that nation:⁶

- *Factor endowments*: A nation's position in factors of production such as skilled labor or the infrastructure necessary to compete in a given industry
- *Local demand conditions*: The nature of home demand for the industry's product or service
- *Related and supporting industries*: The presence or absence in a nation of supplier industries and related industries that are internationally competitive
- *Firm strategy, structure, and rivalry*: The conditions in the nation governing how companies are created, organized, and managed, and the nature of domestic rivalry

Porter speaks of these four attributes as constituting the “diamond,” arguing that companies from a given nation are most likely to succeed in industries or strategic groups in which the four attributes are favorable (see Figure 8.1). He also argues that the diamond's attributes form a mutually reinforcing system in which the effect of one attribute is dependent on the state of others.

Factor Endowments Factor endowments—the cost and quality of factors of production—are a prime determinant of the competitive advantage that certain countries might have in certain industries. Factors of production include basic factors such as land, labor, capital, and raw materials, and advanced factors such as technological knowhow, managerial sophistication, and physical infrastructure (roads, railways, and ports). The competitive advantage that the United States enjoys in biotechnology might be explained by the presence of certain advanced factors of production—for example, technological knowhow—in combination with some basic factors, such as a pool of relatively low-cost venture capital that can be used to fund risky start-ups in industries such as biotechnology.

Local Demand Conditions Home demand plays an important role in providing the impetus for “upgrading” competitive advantage. Companies are typically most

Figure 8.1 National Competitive Advantage

Source: Adapted from M. E. Porter, "The Competitive Advantage of Nations," *Harvard Business Review*, March–April 1990, p. 77.

sensitive to the needs of their closest customers. Thus, the characteristics of home demand are particularly important in shaping the attributes of domestically made products and creating pressures for innovation and quality. A nation's companies gain competitive advantage if their domestic customers are sophisticated and demanding, and if they pressure local companies to meet high standards of product quality and produce innovative products. Japan's sophisticated, knowledgeable buyers of cameras helped stimulate the Japanese camera industry to improve product quality and introduce innovative models. A similar example can be found in the cellphone equipment industry, where sophisticated, demanding local customers in Scandinavia helped push Nokia of Finland and Ericsson of Sweden to invest in cellular phone technology long before demand for cellular phones increased in other developed nations. As a result, Nokia and Ericsson, together with Motorola, became significant players in the global cellular telephone equipment industry.

Competitiveness of Related and Supporting Industries The third broad attribute of national advantage in an industry is the presence of internationally competitive suppliers or related industries. The benefits of investment in advanced factors of production by related and supporting businesses can spill over into a given industry and help it to achieve a strong competitive position internationally. Swedish strength in fabricated steel products such as ball bearings and cutting tools has drawn on strengths in Sweden's specialty-steel industry. Switzerland's success in pharmaceuticals is closely related to its previous international success in the technologically related dye industry.

One consequence of this process is that successful industries within a country tend to be grouped into clusters of related industries. Indeed, this is one of the most pervasive findings of Porter's study. One such cluster is the German textile and apparel sector, which includes high-quality cotton, wool, synthetic fibers, sewing-machine needles, and a wide range of textile machinery.

Intensity of Rivalry The fourth broad attribute of national competitive advantage in Porter's model is the intensity of rivalry of firms within a nation. Porter makes two important points. First, different nations are characterized by different management ideologies, which either help them or do not help them to build national competitive advantage. For example, Porter noted the predominance of engineers in top management at German and Japanese firms. He attributed this to these firms' emphasis on improving manufacturing processes and product design. In contrast, Porter noted a predominance of people with finance backgrounds leading many U.S. firms. He linked this to U.S. firms' lack of attention to improving manufacturing processes and product design. He argued that the dominance of finance led to an overemphasis on maximizing short-term financial returns. According to Porter, one consequence of these different management ideologies was a relative loss of U.S. competitiveness in those engineering-based industries where manufacturing processes and product design issues are all-important (such as the automobile industry).

Porter's second point is that there is a strong association between vigorous domestic rivalry and the creation and persistence of competitive advantage in an industry. Rivalry compels companies to look for ways to improve efficiency, which makes them better international competitors. Domestic rivalry creates pressures to innovate, improve quality, reduce costs, and invest in upgrading advanced factors. All this helps to create world-class competitors.

Using the Framework The framework just described can help managers identify where their most significant global competitors are likely to originate. For example, a cluster of computer service and software companies in Bangalore, India, includes two of the fastest-growing information technology companies in the world, Infosys and Wipro. These companies have emerged as aggressive competitors in the global market. Both companies have recently opened up offices in the European Union and United States so they can better compete against Western rivals such as IBM and Hewlett Packard, and both are gaining share in the global marketplace.

The framework can also be used to help managers decide where they might want to locate certain productive activities. Seeking to take advantage of U.S. expertise in biotechnology, many foreign companies have set up research facilities in San Diego, Boston, and Seattle, where U.S. biotechnology companies tend to cluster. Similarly, in an attempt to take advantage of Japanese success in consumer electronics, many U.S. electronics companies have set up research and production facilities in Japan, often in conjunction with Japanese partners.

Finally, the framework can help a company assess how tough it might be to enter certain national markets. If a nation has a competitive advantage in certain industries, it might be challenging for foreigners to enter those industries. For example, the highly competitive retailing industry in the United States has proved to be a very difficult industry for foreign companies to enter. Successful foreign retailers such as Britain's Tesco and Sweden's IKEA have found it tough going into the United States because the U.S. retailing industry is the most competitive in the world.

8-3 GLOBAL EXPANSION, PROFITABILITY, AND PROFIT GROWTH

Expanding globally allows firms to increase their profitability and rate of profit growth in ways not available to purely domestic enterprises.⁷ Firms that operate internationally are able to:

1. Expand the market for their domestic product offerings by selling those products in international markets.
2. Realize location economies by dispersing individual value creation activities to those locations around the globe where they can be performed most efficiently and effectively.
3. Realize greater cost economies from experience effects by serving an expanded global market from a central location, thereby reducing the costs of value creation.
4. Earn a greater return by leveraging valuable skills developed in foreign operations and transferring them to other entities within the firm's global network of operations.

As we will see, however, a firm's ability to increase its profitability and profit growth by pursuing these strategies is constrained by the need to customize its product offering, marketing strategy, and business strategy to differing national or regional conditions—that is, by the imperative of localization.

8-3a Expanding the Market: Leveraging Products

A company can increase its growth rate by taking goods or services developed at home and selling them internationally; almost all multinationals started out doing this. Procter & Gamble (P&G), for example, developed most of its bestselling products at home and then sold them around the world. Similarly, from its earliest days, Microsoft has focused on selling its software worldwide. Automobile companies such as Ford, Volkswagen, and Toyota also grew by developing products at home and then selling them in international markets. The returns from such a strategy are likely to be greater if indigenous competitors in the nations a company enters lack comparable products. Thus, Toyota has grown its profits by entering the large automobile markets of North America and Europe and offering products differentiated from those offered by local rivals (Ford and GM) by superior quality and reliability.

The success of many **multinational companies** that expand in this manner is based not just on the goods or services that they sell in foreign nations, but also upon the distinctive competencies (i.e., unique resources) that underlie the production and marketing of those goods or services. Thus, Toyota's success is based on its distinctive competency in manufacturing automobiles. International expansion can be seen as a way for Toyota to generate greater returns from this competency. Similarly, P&G's global success was based on more than its portfolio of consumer products; it was also based on the company's competencies in mass-marketing consumer goods. P&G grew rapidly in international markets between 1950 and 1990 because it was one of the most skilled mass-marketing enterprises in the world and could “out-market” indigenous competitors in the nations it entered. Global expansion was, therefore, a way of generating higher returns from its valuable, rare, and inimitable resources in marketing.

multinational company

A company that does business in two or more national markets.

The same can be said of companies engaged in the service sectors of an economy, such as financial institutions, retailers, restaurant chains, and hotels. Expanding the market for their services often means replicating their business model in foreign nations (albeit with some changes to account for local differences, which we will discuss in more detail shortly). Starbucks, for example, has expanded globally by taking the basic business model it developed in the United States and using that as a blueprint for establishing international operations.

8-3b Realizing Cost Economies from Global Volume

In addition to growing profits more rapidly, a company can realize cost savings from economies of scale, thereby boosting profitability, by expanding its sales volume through international expansion. Such scale economies come from several sources. First, by spreading the fixed costs associated with developing a product and setting up production facilities over its global sales volume, a company can lower its average unit cost. Thus, Microsoft can garner significant scale economies by spreading the \$5- to \$10-billion cost of developing Windows 10 over global demand.

Second, by serving a global market, a company can potentially utilize its production facilities more intensively, which leads to higher productivity, lower costs, and greater profitability. For example, if Intel sold microprocessors solely in the United States, it might be able to keep its factories open only for one shift, 5 days a week. But by serving a global market from the same factories, it might be able to utilize those assets for two shifts, 7 days a week. In other words, the capital invested in those factories is used more intensively if Intel sells to a global—as opposed to a national—market, which translates into higher capital productivity and a higher return on invested capital.

Third, as global sales increase the size of the enterprise, its bargaining power with suppliers increases, which may allow it to bargain down the cost of key inputs and boost profitability that way. For example, Wal-Mart uses its enormous sales volume as a lever to bargain down the price it pays to suppliers for merchandise sold through its stores.

In addition to the cost savings that come from economies of scale, companies that sell to a global rather than a local marketplace may be able to realize further cost savings from learning effects. We first discussed learning effects in Chapter 4, where we noted that employee productivity increases with cumulative increases in output over time. (For example, it costs considerably less to build the 100th aircraft from a Boeing assembly line than the 10th, because employees learn how to perform their tasks more efficiently over time.) Selling to a global market may enable a company to increase its sales volume more rapidly—and thus increase the cumulative output from its plants—which in turn should result in accelerated learning, higher employee productivity, and a cost advantage over competitors that are growing more slowly because they lack international markets.

8-3c Realizing Location Economies

location economies

The economic benefits that arise from performing a value creation activity in an optimal location.

Earlier in this chapter, we discussed how countries differ along a number of dimensions, including differences in the cost and quality of factors of production. These differences imply that some locations are more suited than others for producing certain goods and services.⁸ **Location economies** are the economic benefits that arise from performing a value creation activity in the optimal location for that activity, wherever in

the world that might be (transportation costs and trade barriers permitting). Thus, if the best designers for a product live in France, a firm should base its design operations in France. If the most productive labor force for assembly operations is in Mexico, assembly operations should be based in Mexico. If the best marketers are in the United States, the marketing strategy should be formulated in the United States—and so on. Apple, for example, designs the iPhone and develops the associated software in California, but undertakes final assembly in China precisely because the company believes that these are the best locations in the world for carrying out these different value creation activities.

Locating a value creation activity in the optimal location for that activity can have one of two effects: (1) it can lower the costs of value creation, helping the company achieve a low-cost position; or (2) it can enable a company to differentiate its product offering, which gives it the option of charging a premium price or keeping prices low and using differentiation as a means of increasing sales volume. Thus, efforts to realize location economies are consistent with the business-level strategies of low cost and differentiation.

In theory, a company that realizes location economies by dispersing each of its value creation activities to the optimal location for that activity should have a competitive advantage over a company that bases all of its value creation activities at a single location. It should be able to better differentiate its product offering and lower its cost structure more than its single-location competitor. In a world where competitive pressures are increasing, such a strategy may well become an imperative for survival.

Introducing transportation costs and trade barriers can complicate the process of realizing location economies. New Zealand might have a comparative advantage for low-cost auto-assembly operations, but high transportation costs make it an uneconomical location from which to serve global markets. Factoring transportation costs and trade barriers into the cost equation helps explain why some U.S. companies have shifted production from Asia to Mexico. Mexico has three distinct advantages over many Asian countries as a location for value creation activities: low labor costs; Mexico's proximity to the large U.S. market, which reduces transportation costs; and the North American Free Trade Agreement (NAFTA), which has removed many trade barriers between Mexico, the United States, and Canada, increasing Mexico's appeal as a production site for the North American market. Thus, although the relative costs of value creation are important, transportation costs and trade barriers also must be considered in location decisions. (It should be noted, however, that depending on the outcome of the current renegotiation of NAFTA, Mexico's advantages may disappear if tariffs are increased on Mexican imports).

8-3d Leveraging the Competencies of Global Subsidiaries

You will recall from Chapter 3 that competitive advantage is based upon valuable, rare, and inimitable resources, in particular process knowledge, intellectual property, and organizational architecture. Initially, many multinational companies develop the valuable resources and competencies that underpin their competitive advantage in their home nation and then expand internationally, primarily by selling products and services based on those competencies. However, for more mature multinational enterprises that have already established a network of subsidiary operations in foreign markets, the development of valuable resources and competencies can just as well occur in foreign subsidiaries.⁹ Competencies can be created anywhere within a

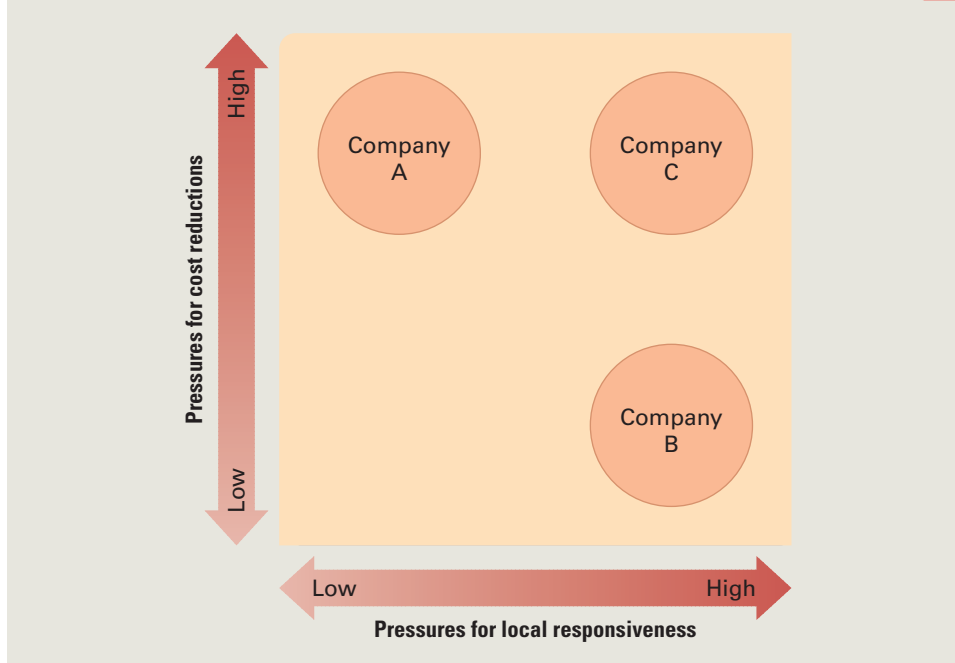
multinational's global network of operations, wherever people have the opportunity and incentive to try new ways of doing things. The creation of resources and competencies—such as unique process knowledge that helps to lower the costs of production or enhance perceived value and support higher product pricing—is not the monopoly of the corporate center.

Leveraging the valuable resources created within subsidiaries and applying them to other operations within the firm's global network may create value. For example, McDonald's is increasingly finding that its foreign franchisees are a source of valuable new ideas. Faced with slow growth in France, its local franchisees have begun to experiment with the menu, as well as the layout and theme of restaurants. Gone are the ubiquitous golden arches; gone too are many of the utilitarian chairs and tables and other plastic features of the fast-food giant. Many McDonald's restaurants in France now have hardwood floors, exposed brick walls, and even armchairs. Half of the outlets in France have been upgraded to a level that would make them unrecognizable to an American. The menu, too, has been changed to include premier sandwiches, such as chicken on focaccia bread, priced some 30% higher than the average hamburger. In France, this strategy seems to be working. Following these changes, increases in same-store sales rose from 1% annually to 3.4%. Impressed with the impact, McDonald's executives are now considering adopting similar changes at other restaurants in markets where same-store sales growth is sluggish, including the United States.¹⁰

For the managers of a multinational enterprise, this phenomenon creates important new challenges. First, managers must have the humility to recognize that valuable resources can arise anywhere within the firm's global network, not just at the corporate center. Second, they must establish an incentive system that encourages local employees to acquire and build new resources and competencies. This is not easy: Creating new competencies involves a degree of risk, and not all new skills add value. For every valuable idea created by a McDonald's subsidiary in a foreign country, there may be several failures. The management of the multinational must install incentives that encourage employees to take necessary risks and reward them for successes, and not sanction them for taking risks that did not pan out. Third, managers must have a process for identifying when valuable new resources and competencies have been created in a subsidiary. Finally, they need to act as facilitators, helping to transfer valuable resources and competencies within the firm.

8-4 COST PRESSURES AND PRESSURES FOR LOCAL RESPONSIVENESS

Companies that compete in the global marketplace typically face two types of competitive pressures: *pressures for cost reductions* and *pressures to be locally responsive* (see Figure 8.2).¹¹ These competitive pressures place conflicting demands on a company. Responding to pressures for cost reductions requires that a company attempt to minimize its unit costs. To attain this goal, it may have to base its productive activities at the most favorable low-cost location. It may also need to offer a standardized product to the global marketplace in order to realize the cost savings that come from economies of scale and learning effects. On the other hand, responding to pressures to be locally responsive requires that a company differentiate its product offering and

Figure 8.2 Pressures for Cost Reductions and Local Responsiveness

marketing strategy from country to country in an effort to accommodate the diverse demands arising from national differences in consumer tastes and preferences, business practices, distribution channels, competitive conditions, and government policies. Because differentiation across countries can involve significant duplication and a lack of product standardization, it may raise costs.

Whereas some companies, such as Company A in Figure 8.2, face high pressures for cost reductions and low pressures for local responsiveness, and others, such as Company B, face low pressures for cost reductions and high pressures for local responsiveness, many companies are in the position of Company C. They face high pressures for both cost reductions and local responsiveness. Dealing with these conflicting and contradictory pressures is a difficult strategic challenge, primarily because local responsiveness tends to raise costs.

8-4a Pressures for Cost Reductions

In competitive global markets, international businesses often face pressures for cost reductions. To respond to these pressures, a firm must try to lower the costs of value creation. A manufacturer, for example, might mass-produce a standardized product at an optimal site to realize economies of scale and location economies. Alternatively, it might outsource certain functions to low-cost foreign suppliers in an attempt to reduce costs. Thus, many computer companies have outsourced their telephone-based customer-service functions to India, where qualified technicians who speak English can be hired for a lower wage rate than in the United States. In the same vein, Wal-Mart pushes its suppliers (which are manufacturers) to also lower their prices.

In fact, the pressure that Wal-Mart has placed on its suppliers to reduce prices has been cited as a major cause of the trend among North American manufacturers to shift production to China.¹² A service business such as a bank might move back-office functions such as information processing to developing nations where wage rates are lower.

Cost-reduction pressures can be particularly intense in industries producing commodity-type products where meaningful differentiation on non-price factors is difficult and price is the main competitive weapon. This tends to be the case for products that serve universal needs. Universal needs exist when the tastes and preferences of consumers in different nations are similar, if not identical, such as for bulk chemicals, petroleum, steel, sugar, and similar products. Pressures for cost reductions also exist for many industrial and consumer products—for example, handheld calculators, semiconductor chips, personal computers, and liquid crystal display screens. Pressures for cost reductions are also intense in industries where major competitors are based in low-cost locations, where there is persistent excess capacity, and where consumers are powerful and face low switching costs. Many commentators have argued that the liberalization of the world trade and investment environment in recent decades, by facilitating greater international competition, has generally increased cost pressures.¹³

8-4b Pressures for Local Responsiveness

Pressures for local responsiveness arise from differences in consumer tastes and preferences, infrastructure and traditional practices, distribution channels, and host government demands. Responding to pressures to be locally responsive requires that a company differentiate its products and marketing strategy from country to country to accommodate these factors, all of which tend to raise a company's cost structure.

Differences in Customer Tastes and Preferences Strong pressures for local responsiveness emerge when customer tastes and preferences differ significantly between countries, as they may for historic or cultural reasons. In such cases, a multinational company's products and marketing message must be customized to appeal to the tastes and preferences of local customers. The company is then typically pressured to delegate its production and marketing responsibilities and functions to overseas subsidiaries.

For example, the automobile industry in the 1980s and early 1990s moved toward the creation of "world cars." The idea was that global companies such as General Motors, Ford, and Toyota would be able to sell the same basic vehicle globally, sourcing it from centralized production locations. If successful, the strategy would have enabled automobile companies to reap significant gains from global-scale economies. However, this strategy frequently ran aground upon the hard rocks of consumer reality. Consumers in different automobile markets have historically had different tastes and preferences, and these require different types of vehicles. North American consumers show a strong demand for pickup trucks. This is particularly true in the South and West, where many families have a pickup truck as a second or third vehicle. But in European countries, pickup trucks are seen purely as utility vehicles and are purchased primarily by firms rather than individuals. As a consequence, the product mix and marketing message need to be tailored to take into account the different nature of demand in North America and Europe. However, as noted in the Opening Case, by building cars on a limited number of platforms, companies like Ford have been able

to achieve economies of scale from global volume, while at the same time customizing the end product to local demands.

Some commentators have argued that customer demands for local customization are on the decline worldwide.¹⁴ According to this argument, modern communications and transport technologies have created the conditions for a convergence of the tastes and preferences of customers from different nations. The result is the emergence of enormous global markets for standardized consumer products. The worldwide acceptance of McDonald's hamburgers, Coca-Cola, GAP clothes, the Apple iPhone, and Sony television sets, all of which are sold globally as standardized products, is often cited as evidence of the increasing homogeneity of the global marketplace.

However, this argument may not hold in many consumer-goods markets. Significant differences in consumer tastes and preferences still exist across nations and cultures. Managers in international businesses do not yet have the luxury of being able to ignore these differences, and they may not for a long time to come.

Differences in Infrastructure and Traditional Practices Pressures for local responsiveness also arise from differences in infrastructure or traditional practices among countries, creating a need to customize products accordingly. To meet this need, companies may have to delegate manufacturing and production functions to foreign subsidiaries. For example, in North America, consumer electrical systems are based on 110 volts, whereas in some European countries 240-volt systems are standard. Thus, domestic electrical appliances must be customized to take this difference in infrastructure into account. Traditional social practices also often vary across nations. In Britain, people drive on the left-hand side of the road, creating a demand for right-hand-drive cars, whereas in France and the rest of Europe, people drive on the right-hand side of the road (and therefore want left-hand-drive cars).

Although many differences in infrastructure are rooted in history, some are quite recent. In the wireless telecommunications industry, different technical standards are found in different parts of the world. A technical standard known as GSM is common in Europe, and an alternative standard, CDMA, is more common in the United States and parts of Asia. The significance of these different standards is that equipment designed for GSM will not work on a CDMA network, and vice versa. Thus, companies that manufacture wireless handsets and infrastructure, such as switches, need to customize their product offerings according to the technical standard prevailing in a given country.

Differences in Distribution Channels A company's marketing strategies may have to be responsive to differences in distribution channels among countries, which may necessitate delegating marketing functions to national subsidiaries. In the pharmaceutical industry, for example, the British and Japanese distribution system is radically different from the U.S. system. British and Japanese doctors will not accept or respond favorably to a U.S.-style, high-pressure sales force. Thus, pharmaceutical companies must adopt different marketing practices in Britain and Japan compared with the United States—soft sell versus hard sell.

Similarly, Poland, Brazil, and Russia have similar per capita income on the basis of purchasing-power parity, but there are big differences in distribution systems across the three countries. In Brazil, supermarkets account for 36% of food retailing;

in Poland, 18%; and in Russia, less than 1%.¹⁵ These differences in channels require that companies adapt their own distribution and sales strategies.

Host Government Demands Finally, economic and political demands imposed by host country governments may require local responsiveness. For example, pharmaceutical companies are subject to local clinical testing, registration procedures, and pricing restrictions, all of which make it necessary that the manufacturing and marketing of a drug meet local requirements. Moreover, because governments and government agencies control a significant portion of the health-care budget in most countries, they are in a powerful position to demand a high level of local responsiveness. More generally, threats of protectionism, economic nationalism, and local content rules (which require that a certain percentage of a product be manufactured locally) can dictate that international businesses manufacture locally.

The Rise of Regionalism Typically, we think of pressures for local responsive as deriving from *national* differences in tastes and preferences, infrastructure, and the like. While this is still often the case, there is also a tendency toward the convergence of tastes, preferences, infrastructure, distribution channels, and host government demands within a broader *region* that is composed of two or more nations.¹⁶ We sometimes see this when there are strong pressures for convergence due to, for example, a shared history and culture, or the establishment of a trading block in a deliberate attempt to harmonize trade policies, infrastructure, regulations, and the like.

The most obvious example of a region is the European Union (EU), and particularly the eurozone countries within that trade block, where institutional forces are pushing toward convergence. The creation of a single EU market, with a single currency, common business regulations, standard infrastructure, and so on, cannot help but result in the reduction of certain national differences between countries within the EU, and the creation of one regional rather than several national markets. Indeed, at the economic level at least, that is the explicit intent of the EU.

Another example of regional convergence is North America, which includes the United States, Canada, and to some extent in some product markets, Mexico. Canada and the United States share history, language, and much of their culture, and both are members of NAFTA. Mexico is clearly different in many regards, but its proximity to the United States, along with its membership in NAFTA, implies that for some product markets (e.g., automobiles) it might be reasonable to consider it part of a relatively homogenous regional market (of course, this might change if NAFTA is dissolved at some future point). In the Latin America region, shared Spanish history, cultural heritage, and language (with the exception of Brazil, which was colonized by the Portuguese) mean that national differences are somewhat moderated. One can argue that Greater China, which includes the city-states of Hong Kong and Singapore, along with Taiwan, is a coherent region, as is much of the Middle East, where a strong Arab culture and shared history may limit national differences. Similarly, Russia and some former states of the Soviet Union such as Belarus and the Ukraine might be considered part of a larger regional market, at least for some products.

Taking a regional perspective is important because it may suggest that localization at the regional rather than the national level is the appropriate strategic response. For example, rather than produce cars for each national market within Europe or North America, it makes far more sense for car manufacturers to build cars for the European

or North American regions. The ability to standardize a product offering within a region allows for the attainment of greater scale economies, and hence lower costs, than if each nation required its own offering. At the same time, one should be careful to not push this perspective too far. There are still deep, profound, cultural differences between the United Kingdom, France, Germany, and Italy—all members of the EU—which may require some degree of local customization at the national level. Managers must thus make a judgment call about the appropriate level of aggregation given (1) the product market they are looking at, and (2) the nature of national differences and trends for regional convergence. What might make sense for automobiles might not be appropriate for packaged food products.

8-5 CHOOSING A GLOBAL STRATEGY

Pressures for local responsiveness imply that it may not be possible for a firm to realize the full benefits from economies of scale and location economies. It may not be possible to serve the global marketplace from a single, low-cost location, producing a globally standardized product, and marketing it worldwide to achieve economies of scale. In practice, the need to customize the product offering to local conditions may work against the implementation of such a strategy. For example, automobile firms have found that Japanese, American, and European consumers demand different kinds of cars, and this necessitates producing products that are customized for local markets (although using common global platforms—see the Opening Case). In response, firms such as Honda, Ford, and Toyota are pursuing a strategy of establishing top-to-bottom design and production facilities in each region so that they can better serve local demands. Although such customization brings benefits, it also limits the ability of a firm to realize significant scale economies and location economies.

In addition, pressures for local responsiveness imply that it may not be possible to leverage skills and products associated with a firm's distinctive competencies wholesale from one nation to another. Concessions often have to be made to local conditions. Despite being depicted as “poster child” for the proliferation of standardized, global products, even McDonald's has found that it has to customize its product offerings (its menu) in order to account for national differences in tastes and preferences.

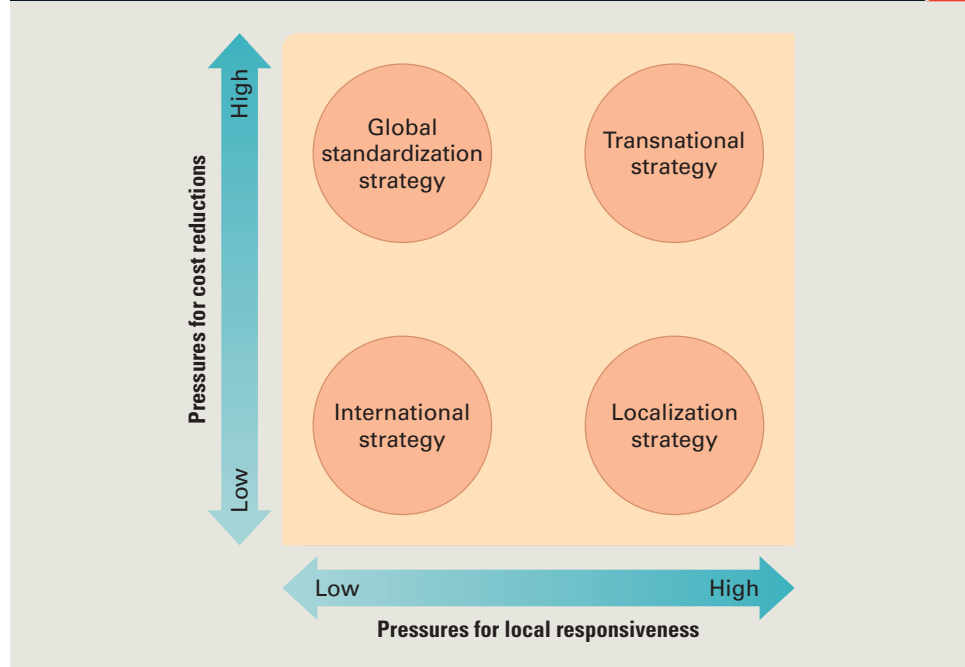
Given the need to balance the cost and differentiation (value) sides of a company's business model, how do differences in the strength of pressures for cost reductions versus those for local responsiveness affect the choice of a company's strategy? Companies typically choose among four main strategic postures when competing internationally: a global standardization strategy, a localization strategy, a transnational strategy, and an international strategy.¹⁷ The appropriateness of each strategy varies with the extent of pressures for cost reductions and local responsiveness. Figure 8.3 illustrates the conditions under which each strategy is most appropriate.

8-5a Global Standardization Strategy

Companies that pursue a **global standardization strategy** focus on increasing profitability by reaping the cost reductions that come from economies of scale and location economies; that is, they pursue a low-cost strategy on a global scale. The production,

global standardization strategy

A business model based on pursuing a low-cost strategy on a global scale.

Figure 8.3 Four Basic Strategies

marketing, and R&D activities of companies pursuing a global strategy are concentrated in a few favorable locations. These companies try not to customize their product offerings and marketing strategy to local conditions because customization, which involves shorter production runs and the duplication of functions, can raise costs. Instead, they prefer to market a standardized product worldwide so that they can reap the maximum benefits from economies of scale. They also tend to use their cost advantage to support aggressive pricing in world markets.

This strategy makes most sense when there are strong pressures for cost reductions and demand for local responsiveness is minimal. Increasingly, these conditions prevail in many industrial-goods industries whose products often serve universal needs. In the semiconductor industry, for example, global standards have emerged, creating enormous demand for standardized global products. Accordingly, companies such as Intel, Texas Instruments, and Motorola all pursue a global strategy.

These conditions are not always found in consumer-goods markets where demands for local responsiveness remain high. However, even some consumer-goods companies are moving toward a global standardization strategy in an attempt to drive down costs.

localization strategy

A strategy focused on increasing profitability by customizing a company's goods or services so that they provide a favorable match to tastes and preferences in different national markets.

8-5b Localization Strategy

A **localization strategy** focuses on increasing profitability by customizing the company's goods or services so that they provide a favorable match to tastes and preferences in different national or regional markets. Localization is most appropriate when there

are substantial differences across nations or regions with regard to consumer tastes and preferences, and where cost pressures are not too intense. By customizing the product offering to local demands, the company increases the value of that product in the local market. On the downside, because it involves some duplication of functions and smaller production runs, customization limits the ability of the company to capture the cost reductions associated with mass-producing a standardized product for global consumption. The strategy may make sense, however, if the added value associated with local customization supports higher pricing—which would enable the company to recoup its higher costs—or if it leads to substantially greater local demand, enabling the company to reduce costs through the attainment of scale economies in the local market.

MTV is a good example of a company that has had to pursue a localization strategy. MTV localizes its programming to match the demands of viewers in different nations. For example, in India it has a program based on the popular sport of cricket, a game that few in the United States understand. If MTV hadn't done this, it would have lost market share to local competitors, its advertising revenues would have fallen, and its profitability would have declined. Thus, even though it raised costs, localization became a strategic imperative at MTV.

At the same time, it is important to realize that companies like MTV still must closely monitor costs. Companies pursuing a localization strategy need to be efficient and, whenever possible, capture scale economies from their global reach. As noted earlier, many automobile companies have found that they have to customize some of their product offerings to local market demands—for example, by producing large pickup trucks for U.S. consumers and small, fuel-efficient cars for European and Japanese consumers. At the same time, these companies try to achieve scale economies from their global volume by using common vehicle platforms and components across many different models and by manufacturing those platforms and components at efficiently scaled factories that are optimally located. By designing their products in this way, these companies have localized their product offerings and simultaneously capture some scale economies.

8-5c Transnational Strategy

We have argued that a global standardization strategy makes most sense when cost pressures are intense and demands for local responsiveness limited. Conversely, a localization strategy makes most sense when demands for local responsiveness are high, but cost pressures are moderate or low. What happens, however, when the company simultaneously faces both strong cost pressures and strong pressures for local responsiveness? How can managers balance out such competing and inconsistent demands? According to some researchers, pursuing a transnational strategy is the answer.

Two of these researchers, Christopher Bartlett and Sumantra Ghoshal, argue that, in today's global environment, competitive conditions are so intense that, to survive, companies must do all they can to respond to pressures for both cost reductions and local responsiveness. They must try to realize location economies and economies of scale from global volume, transfer distinctive competencies and skills within the company, and simultaneously pay attention to pressures for local responsiveness.¹⁸

transnational strategy

A business model that simultaneously achieves low costs, differentiates the product offering across geographic markets, and fosters a flow of skills between different subsidiaries in the company's global network of operations.

Moreover, Bartlett and Ghoshal note that, in the modern, multinational enterprise, valuable competencies and resources do not reside just in the home country but can develop in any of the company's worldwide operations. Thus, they maintain that the flow of skills and product offerings should not be all one way, from home company to foreign subsidiary. Rather, the flow should also be from foreign subsidiary to home country, and from foreign subsidiary to foreign subsidiary. Transnational companies, in other words, must focus on leveraging subsidiary skills.

In essence, companies that pursue a **transnational strategy** are trying to develop a strategy that simultaneously achieves low costs, differentiates the product offering across geographic markets, and fosters a flow of resources such as process knowledge between different subsidiaries in the company's global network of operations. As attractive as this may sound, the strategy is not easy to pursue because it places conflicting demands on the company. Differentiating the product to respond to local demands in different geographic markets raises costs, which runs counter to the goal of reducing costs. Companies such as 3M and ABB (a Swiss-based multinational engineering conglomerate) have tried to implement a transnational strategy and found it difficult.

Indeed, how best to implement a transnational strategy is one of the most complex questions that large, global companies grapple with today. It may be that few, if any, companies have perfected this strategic posture. But some clues to the right approach can be derived from a number of companies. Consider, for example, the case of Caterpillar. The need to compete with low-cost competitors such as Komatsu of Japan forced Caterpillar to look for greater cost economies. However, variations in construction practices and government regulations across countries meant that Caterpillar also had to be responsive to local demands. Therefore, it confronted significant pressures for cost reductions and for local responsiveness.

To deal with cost pressures, Caterpillar redesigned its products to use many identical components and invested in a few large-scale, component-manufacturing facilities, sited at favorable locations, to fill global demand and realize scale economies. At the same time, the company augments the centralized manufacturing of components with assembly plants in each of its major global markets. At these plants, Caterpillar adds local product features, tailoring the finished product to local needs. Thus, Caterpillar realizes many of the benefits of global manufacturing while reacting to pressures for local responsiveness by differentiating its product among national markets.¹⁹ Caterpillar started to pursue this strategy in the 1980s. By the 2000s, it had succeeded in doubling output per employee, significantly reducing its overall cost structure in the process. Meanwhile, Komatsu and Hitachi, which are still wedded to a Japan-centric global strategy, have seen their cost advantages evaporate and have been steadily losing market share to Caterpillar.

However, building an organization capable of supporting a transnational strategy is a complex, challenging task. Indeed, some would say it is too complex because the strategy implementation problems of creating a viable organizational structure and set of control systems to manage this strategy are immense. We return to this issue in Chapter 12.

8-5d International Strategy

Sometimes it is possible to identify multinational companies that find themselves in the fortunate position of being confronted with low cost pressures and low pressures

for local responsiveness. Typically, these enterprises sell a product that serves universal needs, but because they do not face significant competitors, they are not confronted with pressures to reduce their cost structure. Xerox found itself in this position in the 1960s, after its invention and commercialization of the photocopier. Strong patents protected the technology comprising the photocopier, so for several years Xerox did not face competitors—it had a monopoly. Because the product was highly valued in most developed nations, Xerox was able to sell the same basic product all over the world and charge a relatively high price for it. At the same time, because it did not face direct competitors, the company did not have to deal with strong pressures to minimize its costs.

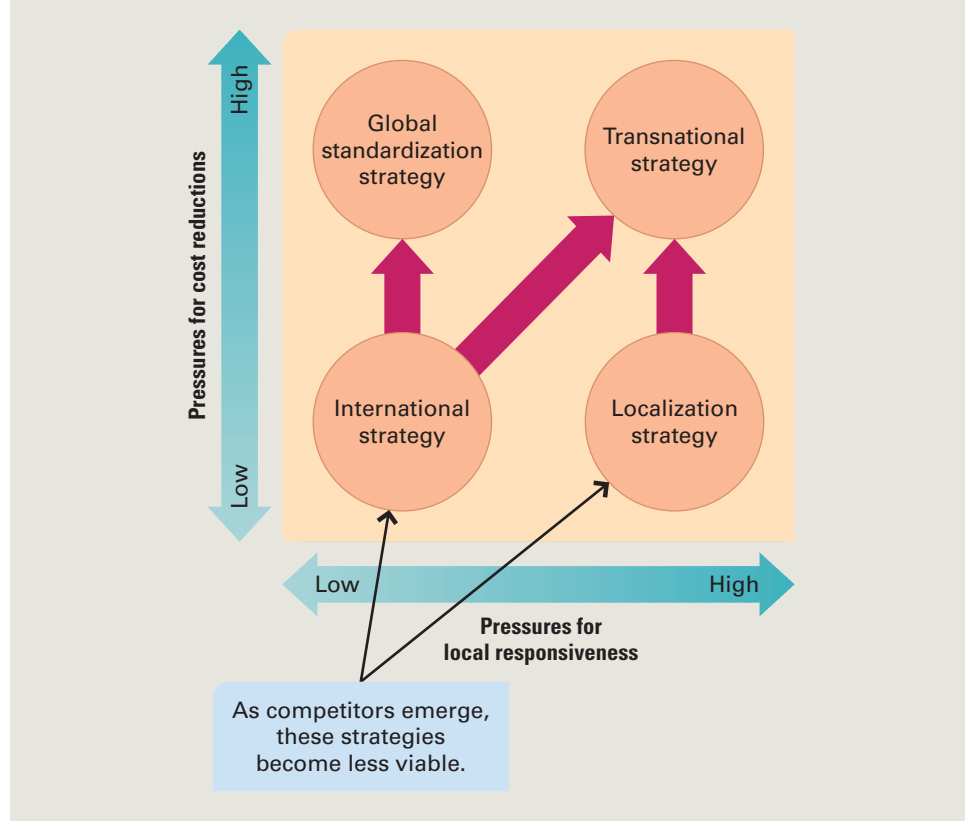
Historically, companies like Xerox have followed a similar pattern as they developed their international operations. They tend to centralize product development functions such as R&D at home. However, companies also tend to establish manufacturing and marketing functions in each major country or geographic region in which they do business. Although they may undertake some local customization of product offering and marketing strategy, this tends to be rather limited in scope. Ultimately, in most international companies, the head office retains tight control over marketing and product strategy.

Other companies that have pursued this strategy include P&G, which had historically always developed innovative new products in Cincinnati and thereafter transferred them wholesale to local markets. Microsoft has followed a similar strategy. The bulk of Microsoft's product development work takes place in Redmond, Washington, where the company is headquartered. Although some localization work is undertaken elsewhere, it is limited to producing foreign-language versions of popular Microsoft programs such as Office.

8-5e Changes in Strategy over Time

The Achilles heel of the international strategy is that, over time, competitors inevitably emerge, and if managers do not take proactive steps to reduce their cost structure, their company may be rapidly outflanked by efficient, global competitors. This is exactly what happened to Xerox. Japanese companies such as Canon ultimately invented their way around Xerox's patents, produced their own photocopying equipment in very efficient manufacturing plants, priced the machines below Xerox's products, and rapidly took global market share from Xerox. Xerox's demise was not due to the emergence of competitors, for ultimately that was bound to occur, but rather to its failure to proactively reduce its cost structure in advance of the emergence of competitors. The message here is that an international strategy may not be viable in the long term, and to survive, companies that are able to pursue it need to shift toward a global standardization strategy, or perhaps a transnational strategy, ahead of competitors (see Figure 8.4).

The same can be said about a localization strategy. Localization may give a company a competitive edge, but if it is simultaneously facing aggressive competitors, the company will also need to reduce its cost structure—and the only way to do that may be to adopt a transnational strategy. Thus, as competition intensifies, international and localization strategies tend to become less viable, and managers need to orientate their companies toward either a global standardization strategy or a transnational strategy.

Figure 8.4 Changes over Time

8-6 THE CHOICE OF ENTRY MODE

Any firm contemplating entering a different national market must determine the best mode or vehicle for such entry. There are five primary choices of entry mode: exporting, licensing, franchising, entering into a joint venture with a host-country company, and setting up a wholly-owned subsidiary in the host country. Each mode has advantages and disadvantages, and managers must weigh these carefully when deciding which mode to use.²⁰

8-6a Exporting

Most manufacturing companies begin their global expansion as exporters and only later switch to one of the other modes for serving a foreign market. Exporting has two distinct advantages: It avoids the costs of establishing manufacturing operations in the host country, which are often substantial, and it may be consistent with scale economies and location economies. By manufacturing the product in a centralized location and then exporting it to other national markets, a company may be able to realize substantial scale economies from its global sales volume. That is how Sony came to

dominate the global television market, how many Japanese auto companies originally made inroads into the U.S. auto market, and how Samsung gained share in the market for computer memory chips.

There are a number of drawbacks to exporting. First, exporting from the company's home base may not be appropriate if there are lower-cost locations for manufacturing the product abroad (that is, if the company can achieve location economies by moving production elsewhere). Thus, particularly in the case of a company pursuing a global standardization or transnational strategy, it may pay to manufacture in a location where conditions are most favorable from a value creation perspective and then export from that location to the rest of the globe. This is not so much an argument against exporting as it is an argument against exporting from the company's home country. For example, many U.S. electronics companies have moved some manufacturing to Asia because low-cost but highly skilled labor is available there. They export from Asia to the rest of the globe, including the United States (as Apple does with the iPhone).

Another drawback is that high transport costs can make exporting uneconomical, particularly in the case of bulk products. One way of alleviating this problem is to manufacture bulk products on a regional basis, thereby realizing some economies from large-scale production while limiting transport costs. Many multinational chemical companies manufacture their products on a regional basis, serving several countries in a region from one facility.

Tariff barriers, too, can make exporting uneconomical, and a government's threat to impose tariff barriers can make the strategy very risky. Indeed, the implicit threat from the U.S. Congress to impose tariffs on Japanese cars imported into the United States led directly to the decision by many Japanese auto companies to set up manufacturing plants in the United States.

Finally, a common practice among companies that are just beginning to export also poses risks. A company may delegate marketing activities in each country in which it does business to a local agent, but there is no guarantee that the agent will act in the company's best interest. Often, foreign agents also carry the products of competing companies and thus have divided loyalties. Consequently, agents may not perform as well as the company would if it managed marketing itself. One way to solve this problem is to set up a wholly-owned subsidiary in the host country to handle local marketing. In this way, the company can reap the cost advantages that arise from manufacturing the product in a single location and exercise tight control over marketing strategy in the host country.

8-6b Licensing

International licensing is an arrangement whereby a foreign licensee purchases the rights to produce a company's product in the licensee's country for a negotiated fee (normally, royalty payments on the number of units sold). The licensee then provides most of the capital necessary to open the overseas operation.²¹ The advantage of licensing is that the company does not have to bear the development costs and risks associated with opening up a foreign market. Licensing therefore can be a very attractive option for companies that lack the capital to develop operations overseas. It can also be an attractive option for companies that are unwilling to commit substantial financial resources to an unfamiliar or politically volatile foreign market where political risks are particularly high.

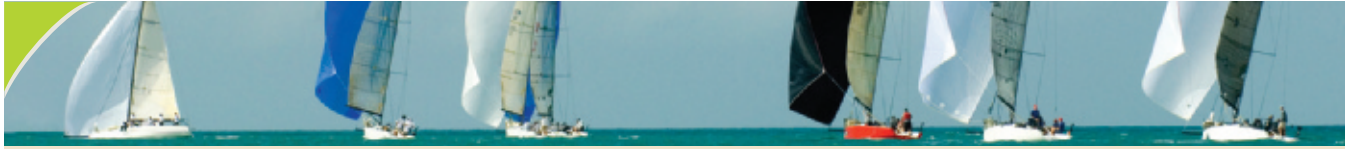
Licensing has some serious drawbacks, however. First, it does not give a company the tight control over manufacturing, marketing, and strategic functions in foreign countries that it needs to have in order to realize scale economies and location economies—as companies pursuing both global standardization and transnational strategies try to do. Typically, each licensee sets up its manufacturing operations. Hence, the company stands little chance of realizing scale economies and location economies by manufacturing its product in a centralized location. When these economies are likely to be important, licensing may not be the best way of expanding overseas.

Second, competing in a global marketplace may make it necessary for a company to coordinate strategic moves across countries so that the profits earned in one country can be used to support competitive attacks in another. Licensing, by its very nature, severely limits a company's ability to coordinate strategy in this way. A licensee is unlikely to let a multinational company take its profits (beyond those due in the form of royalty payments) and use them to support an entirely different licensee operating in another country.

Third, there is risk associated with licensing technological knowhow to foreign companies. For many multinational companies, technological knowhow forms the basis of their competitive advantage, and they want to maintain control over how this competitive advantage is put to use. By licensing its technology, a company can quickly lose control over it. RCA, for instance, once licensed its color television technology to a number of Japanese companies. The Japanese companies quickly assimilated RCA's technology and then used it to enter the U.S. market, where they soon gained a larger share of the U.S. market than the RCA brand holds.

There are ways of reducing this risk. One way is by entering into a cross-licensing agreement with a foreign firm. Under a cross-licensing agreement, a firm might license some valuable, intangible property to a foreign partner and, in addition to a royalty payment, also request that the foreign partner license some of its valuable knowhow to the firm. Such agreements are reckoned to reduce the risks associated with licensing technological knowhow, as the licensee realizes that if it violates the spirit of a licensing contract (by using the knowledge obtained to compete directly with the licensor), the licensor can do the same to it. Put differently, cross-licensing agreements enable firms to hold each other hostage, thereby reducing the probability that they will behave opportunistically toward each other.²² Such cross-licensing agreements are increasingly common in high-technology industries. For example, the U.S. biotechnology firm Amgen licensed one of its key drugs, Neupogen, to Kirin, the Japanese pharmaceutical company. The license gives Kirin the right to sell Neupogen in Japan. In return, Amgen receives a royalty payment, and through a licensing agreement it gains the right to sell certain Kirin products in the United States.

Finally, a licensee can degrade or damage the brand of the company that it is licensing from if it pursues strategies that are not in the best interests of the licensee. For example, the luxury apparel company Burberry licensed Sanyo Shokai of Japan to sell its branded products in Japan. However, Sanyo Shokai ultimately started to damage Burberry's global brand by charging a much lower price for Burberry branded products in Japan than elsewhere in the world (see Strategy in Action 8.2 for details). Burberry responded to this problem by terminating its licensing arrangement with Sanyo Shokai and setting up its own wholly-owned stores in the country.



8.2 STRATEGY IN ACTION

Burberry Shifts its Strategy in Japan

Burberry, the iconic British luxury apparel company best known for its high-fashion outerwear, has been operating in Japan for nearly half a century. Until recently, its branded products were sold under a licensing agreement with Sanyo Shokai. The Japanese company had considerable discretion as to how it utilized the Burberry brand. It sold everything from golf bags to miniskirts and Burberry-clad Barbie dolls in its 400 stores around the country, typically at prices significantly below those Burberry charged for its high-end products in the United Kingdom.

For a long time, it looked like a good deal for Burberry. Sanyo Shokai did all of the market development in Japan, generating revenues of around \$800 million a year and paying Burberry \$80 million in annual royalty payments. However, by 2007, Burberry CEO Angela Ahrendts was becoming increasingly dissatisfied with the Japanese licensing deal and 22 others like it in countries around the world. In Ahrendts's view, the licensing deals were diluting Burberry's core brand image. Licensees such as Sanyo Shokai were selling a wide range of products at a much lower price point than Burberry charged for products in its own stores. "In luxury," Ahrendts once remarked, "ubiquity will kill you—it means that you're not really luxury anymore." Moreover, with an increasing number of customers buying Burberry products online and on trips to Britain,

where the brand was considered very upmarket, Ahrendts felt that it was crucial for Burberry to tightly control its global brand image.

Ahrendts was determined to rein in licensees and regain control of Burberry's sales in foreign markets, even if it meant taking a short-term hit to sales. She started off the process of terminating licensees before leaving Burberry to run Apple's retail division in 2014. Her hand-picked successor as CEO, Christopher Bailey, who rose through the design function at Burberry, has continued to pursue this strategy.

In Japan, the license was terminated in 2015. Sanyo Shokai was required to close nearly 400 licensed Burberry stores. Burberry is not giving up on Japan, however. After all, Japan is the world's second-largest market for luxury goods. Instead, the company will now sell products through a limited number of wholly-owned stores. The goal is to have 35 to 50 stores in the most exclusive locations in Japan by 2018. They will offer only high-end products such as Burberry's classic \$1,800 trench coat. In general, the price point will be 10 times higher than was common for most Burberry products in Japan. The company realizes the move is risky and fully expects sales to initially fall before rising again as it rebuilds its brand, but CEO Bailey argues that the move is absolutely necessary if Burberry is to have a coherent global brand image for its luxury products.

Sources: Kathy Chu and Megumi Fujikawa, "Burberry Gets a Grip on Brand in Japan," *The Wall Street Journal*, August 15–16, 2015; Angela Ahrendts, "Burberry's CEO on Turning an Aging British Icon into a Global Luxury Brand," *Harvard Business Review*, January–February 2013; Tim Blanks, "The Designer Who Would be CEO," *The Wall Street Journal Magazine*, June 18, 2015.

8-6c Franchising

In many respects, franchising is similar to licensing, although franchising tends to involve longer-term commitments than licensing. Franchising is basically a specialized form of licensing in which the franchiser not only sells intangible property to the franchisee (normally a trademark), but also insists that the franchisee abide by strict rules governing how it does business. The franchiser will often assist the franchisee run the business on an ongoing basis. As with licensing, the franchiser

typically receives a royalty payment, which amounts to a percentage of the franchisee revenues.

Whereas licensing is a strategy pursued primarily by manufacturing companies, franchising, which resembles it in some respects, is a strategy employed chiefly by service companies. McDonald's provides a good example of a firm that has grown by using a franchising strategy. McDonald's has set down strict rules as to how franchisees should operate a restaurant. These rules extend to controlling the menu, cooking methods, staffing policies, and restaurant design and location. McDonald's also organizes the supply chain for its franchisees and provides management training and financial assistance.²³

The advantages of franchising are similar to those of licensing. Specifically, the franchiser does not need to bear the development costs and risks associated with opening up a foreign market on its own, for the franchisee typically assumes those costs and risks. Thus, using a franchising strategy, a service company can build up a global presence quickly and at a low cost.

The disadvantages of franchising are less pronounced than in licensing. Because service companies often use franchising, there is no reason to consider the need for coordination of manufacturing to achieve experience curve and location economies. But franchising may inhibit the firm's ability to take profits out of one country to support competitive attacks in another. A more significant disadvantage of franchising is quality control. The foundation of franchising arrangements is that the firm's brand name conveys a message to consumers about the quality of the firm's product. Thus, a business traveler checking in at a Four Seasons hotel in Hong Kong can reasonably expect the same quality of room, food, and service that would be received in New York, Hawaii, or Ontario, Canada. The Four Seasons name is assumed to guarantee consistent product quality. This presents a problem in that foreign franchisees may not be as concerned about quality as they are supposed to be, and the result of poor quality can cascade beyond lost sales in a particular foreign market to a decline in the firm's worldwide reputation. For example, if a business traveler has a bad experience at the Four Seasons in Hong Kong, he or she may never go to another Four Seasons hotel, and may urge colleagues to avoid the chain as well. The geographical distance of the firm from its foreign franchisees can make poor quality difficult to detect. In addition, the numbers of franchisees—in the case of McDonald's, tens of thousands—can make quality control difficult.

To reduce these problems, a company can set up a subsidiary in each country or region in which it is expanding. The subsidiary, which might be wholly-owned by the company or a joint venture with a foreign company, then assumes the rights and obligations to establish franchisees throughout that particular country or region. The combination of proximity and the limited number of independent franchisees that need to be monitored reduces the quality control problem. Because the subsidiary is at least partly owned by the company, it can place its own managers in the subsidiary to ensure the level of quality monitoring it demands. This organizational arrangement has proved very popular in practice; it has been used by McDonald's, KFC, and Hilton Worldwide to expand international operations, to name just three examples.

8-6d Joint Ventures

Establishing a joint venture with a foreign company has long been a favored mode for entering a new market. The most typical form of joint venture is a 50/50 joint venture,

in which each party takes a 50% ownership stake and a team of managers from both parent companies shares operating control. Some companies seek joint ventures wherein they become the majority shareholder (for example, a 51 to 49% ownership split), which permits tighter control by the dominant partner.²⁴

Joint ventures have several advantages. First, a company may feel that it can benefit from a local partner's knowledge of a host country's competitive conditions, culture, language, political systems, and business systems. Second, when the development costs and risks of opening up a foreign market are high, a company might gain by sharing these costs and risks with a local partner. Third, in some countries, political considerations make joint ventures the only feasible entry mode. For example, historically, many U.S. companies found it much easier to obtain permission to set up operations in Japan if they joined with a Japanese partner than if they tried to enter on their own.

Despite the advantages, there are major disadvantages with joint ventures. First, as with licensing, a firm that enters into a joint venture risks yielding control of its technology to its partner. Thus, a proposed joint venture in 2002 between Boeing and Mitsubishi Heavy Industries to build Boeing's new, wide-body jet (the 787) raised fears that Boeing might unwittingly give its commercial airline technology to the Japanese. However, joint-venture agreements can be constructed to minimize this risk. One option is to hold majority ownership in the venture. This allows the dominant partner to exercise great control over its technology—but it can be difficult to find a foreign partner who is willing to settle for minority ownership. Another option is to “wall off” from a partner technology that is central to the core competence of the firm while sharing other technology.

A second disadvantage is that a joint venture does not give a firm the tight control over subsidiaries that it might need to realize experience-curve or location economies. Nor does it give a firm the control over a foreign subsidiary it might need for engaging in coordinated, global attacks against its rivals. Consider the entry of Texas Instruments (TI) into the Japanese semiconductor market. When TI established semiconductor facilities in Japan, it did so for the dual purpose of checking Japanese manufacturers' market share and limiting the cash they had available for invading TI's global market. In other words, TI was engaging in global strategic coordination. To implement this strategy, TI's subsidiary in Japan had to be prepared to take instructions from corporate headquarters regarding competitive strategy. The strategy also required the Japanese subsidiary to run at a loss if necessary. Few, if any, potential joint-venture partners would have been willing to accept such conditions, as it would have necessitated a willingness to accept a negative return on investment. Indeed, many joint ventures establish a degree of autonomy that would make such direct control over strategic decisions all but impossible to establish.²⁵ Thus, to implement this strategy, TI set up a wholly-owned subsidiary in Japan.

8-6e Wholly-Owned Subsidiaries

A wholly-owned subsidiary is one in which the parent company owns 100% of the subsidiary's stock. To establish a wholly-owned subsidiary in a foreign market, a company can either set up a completely new operation in that country or acquire an established host-country company to promote its products in the host market.

Setting up a wholly-owned subsidiary offers three advantages. First, when a company's competitive advantage is based on its control of a technological competency, a wholly-owned subsidiary will normally be the preferred entry mode

because it reduces the company's risk of losing this control. Consequently, many high-tech companies prefer wholly owned subsidiaries to joint ventures or licensing arrangements. Wholly-owned subsidiaries tend to be the favored entry mode in the semiconductor, computer, electronics, and pharmaceutical industries.

Second, a wholly-owned subsidiary gives a company the kind of tight control over operations in different countries that it needs if it is going to engage in global strategic coordination—taking profits from one country to support competitive attacks in another.

Third, a wholly-owned subsidiary may be the best choice if a company wants to realize location economies and the scale economies that flow from producing a standardized output from a single or limited number of manufacturing plants. When pressures on costs are intense, it may pay a company to configure its value chain in such a way that value added at each stage is maximized. Thus, a national subsidiary may specialize in manufacturing only part of the product line, or certain components of the end product, exchanging parts and products with other subsidiaries in the company's global system. Establishing such a global production system requires a high degree of control over the operations of national affiliates. Different national operations must be prepared to accept centrally determined decisions as to how they should produce, how much they should produce, and how their output should be priced for transfer between operations. A wholly owned subsidiary would have to comply with these mandates, whereas licensees or joint-venture partners would most likely shun such a subservient role.

On the other hand, establishing a wholly-owned subsidiary is generally the costliest method of serving a foreign market. The parent company must bear all the costs and risks of setting up overseas operations—in contrast to joint ventures, where the costs and risks are shared, or licensing, where the licensee bears most of the costs and risks. But the risks of learning to do business in a new culture diminish if a company acquires an established host-country enterprise. Acquisitions, however, raise a whole set of additional problems, such as trying to marry divergent corporate cultures, and these may more than offset the benefits. (The problems associated with acquisitions are discussed in Chapter 10.)

8-6f Choosing an Entry Strategy

The advantages and disadvantages of the various entry modes are summarized in Table 8.1. Inevitably, there are tradeoffs in choosing one entry mode over another. For example, when considering entry into an unfamiliar country with a track record of nationalizing foreign-owned enterprises, a company might favor a joint venture with a local enterprise. Its rationale might be that the local partner will help it establish operations in an unfamiliar environment and speak out against nationalization should the possibility arise. But if the company's distinctive competency is based on proprietary technology, entering into a joint venture might mean risking loss of control over that technology to the joint venture partner, which would make this strategy unattractive. Despite such hazards, some generalizations can be offered about the optimal choice of entry mode.

Distinctive Competencies and Entry Mode When companies expand internationally to earn greater returns from their differentiated product offerings, entering markets where indigenous competitors lack comparable products, the companies are pursuing

Table 8.1 The Advantages and Disadvantages of Different Entry Modes

Entry Mode	Advantages	Disadvantages
Exporting	<ul style="list-style-type: none"> • Ability to realize location- and scale-based economies 	<ul style="list-style-type: none"> • High transport costs • Trade barriers • Problems with local marketing agents
Licensing	<ul style="list-style-type: none"> • Low development costs and risks 	<ul style="list-style-type: none"> • Inability to realize location- and scale-based economies • Inability to engage in global strategic coordination • Lack of control over technology
Franchising	<ul style="list-style-type: none"> • Low development costs and risks 	<ul style="list-style-type: none"> • Inability to engage in global strategic coordination • Lack of control over quality
Joint ventures	<ul style="list-style-type: none"> • Access to local partner's knowledge • Shared development costs and risks • Political dependency 	<ul style="list-style-type: none"> • Inability to engage in global strategic coordination • Inability to realize location- and scale-based economies • Lack of control over technology
Wholly-owned subsidiaries	<ul style="list-style-type: none"> • Protection of technology • Ability to engage in global strategic coordination • Ability to realize location- and scale-based economies 	<ul style="list-style-type: none"> • High costs and risks

an international strategy. The optimal entry mode for such companies depends to some degree upon the nature of their distinctive competency. In particular, we need to distinguish between companies with a distinctive competency in technological know-how and those with a distinctive competency in management knowhow.

If a company's competitive advantage—its distinctive competency—derives from its control of proprietary technological knowhow (i.e., intellectual property), licensing and joint-venture arrangements should be avoided if possible to minimize the risk of losing control of that technology. Thus, if a high-tech company is considering setting up operations in a foreign country in order to profit from a distinctive competency in technological knowhow, it should probably do so through a wholly-owned subsidiary.

However, this should not be viewed as a hard-and-fast rule. For instance, a licensing or joint-venture arrangement might be structured in such a way as to reduce the risks that licensees or joint-venture partners will expropriate a company's technological knowhow. (We consider this kind of arrangement in more detail later in the chapter when we discuss the issue of structuring strategic alliances.) Or consider a situation where a company believes its technological advantage will be short lived and expects

rapid imitation of its core technology by competitors. In this situation, the company might want to license its technology as quickly as possible to foreign companies in order to gain global acceptance of its technology before imitation occurs.²⁶ Such a strategy has some advantages. By licensing its technology to competitors, the company may deter them from developing their own, possibly superior, technology. It also may be able to establish its technology as the dominant design in the industry, ensuring a steady stream of royalty payments. Such situations aside, however, the attractions of licensing are probably outweighed by the risks of losing control of technology, and therefore licensing should be avoided.

The competitive advantage of many service companies such as McDonald's or Hilton Worldwide is based on management knowhow (i.e., process knowledge). For such companies, the risk of losing control of their management skills to franchisees or joint-venture partners is not that great. The reason is that the valuable asset of such companies is their brand name, and brand names are generally well protected by intellectual property laws pertaining to trademarks. Given this fact, many issues that arise in the case of technological knowhow do not arise in the case of management knowhow. As a result, many service companies favor a combination of franchising and subsidiaries to control franchisees within a particular country or region. The subsidiary may be wholly-owned or a joint venture. In most cases, however, service companies have found that entering into a joint venture with a local partner in order to set up a controlling subsidiary in a country or region works best because a joint venture is often politically more acceptable and brings a degree of local knowledge to the subsidiary.

Pressures for Cost Reduction and Entry Mode The greater the pressures for cost reductions, the more likely that a company will want to pursue some combination of exporting and wholly-owned subsidiaries. By manufacturing in the locations where factor conditions are optimal and then exporting to the rest of the world, a company may be able to realize substantial location economies and substantial scale economies. The company might then want to export the finished product to marketing subsidiaries based in various countries. Typically, these subsidiaries would be wholly-owned and have the responsibility for overseeing distribution in a particular country. Setting up wholly-owned marketing subsidiaries is preferable to a joint-venture arrangement or using a foreign marketing agent because it gives the company the tight control over marketing that might be required to coordinate a globally dispersed value chain. In addition, tight control over a local operation enables the company to use the profits generated in one market to improve its competitive position in another market. Hence companies pursuing global or transnational strategies prefer to establish wholly-owned subsidiaries.

8-7 GLOBAL STRATEGIC ALLIANCES

global strategic alliances

Cooperative agreements between companies from different countries that are actual or potential competitors.

Global strategic alliances are cooperative agreements between companies from different countries that are actual or potential competitors. Strategic alliances range from formal joint ventures in which two or more companies have an equity stake, to short-term contractual agreements in which two companies may agree to cooperate on a particular problem (such as developing a new product).

8-7a Advantages of Strategic Alliances

Companies enter into strategic alliances with competitors to achieve a number of strategic objectives.²⁷ First, strategic alliances may facilitate entry into a foreign market. For example, many firms feel that if they are to successfully enter the Chinese market, they need a local partner who understands business conditions and has good connections. Thus, Warner Brothers entered into a joint venture with two Chinese partners to produce and distribute films in China. As a foreign film company, Warner found that if it wanted to produce films on its own for the Chinese market, it had to go through a complex approval process for every film. It also had to farm out distribution to a local company, which made doing business in China very difficult. Due to the participation of Chinese firms, however, the joint-venture films will merit a streamlined approval process, and the venture will be able to distribute any films it produces. Moreover, the joint venture will be able to produce films for Chinese TV, something that foreign firms are not allowed to do.²⁸

Second, strategic alliances allow firms to share the fixed costs (and associated risks) of developing new products or processes. An alliance between Boeing and a number of Japanese companies to build Boeing's latest commercial jetliner, the 787, was motivated by Boeing's desire to share the estimated \$8-billion investment required to develop the aircraft.

Third, an alliance is a way to bring together complementary skills and assets that neither company could easily develop on its own.²⁹ In 2011, for example, Microsoft and Nokia established an alliance aimed at developing and marketing smartphones that used Microsoft's Windows 8 operating system. Microsoft contributed its software engineering skills, particularly with regard to the development of a version of its Windows operating system for smartphones, and Nokia contributed its design, engineering, and marketing knowhow. The first phones resulting from this collaboration reached the market in late 2012 (Microsoft subsequently purchased Nokia's mobile phone business in 2013.)

Fourth, it can make sense to form an alliance that will help firms establish technological standards for the industry that will benefit them. This was also a goal of the alliance between Microsoft and Nokia. The idea was to establish Windows 8 as the de facto operating system for smartphones in the face of strong competition from Apple, with its iPhone, and Google, whose Android operating system was the most widely used smartphone operating system in the world in 2012.

8-7b Disadvantages of Strategic Alliances

The advantages we have discussed can be very significant. Despite this, some commentators have criticized strategic alliances on the grounds that they give competitors a low-cost route to new technology and markets.³⁰ For example, a few years ago, some commentators argued that many strategic alliances between U.S. and Japanese firms were part of an implicit Japanese strategy to keep high-paying, high-value-added jobs in Japan while gaining the project engineering and production process skills that underlie the competitive success of many U.S. companies.³¹ They argued that Japanese success in the machine tool and semiconductor industries was built on U.S. technology acquired through strategic alliances. And they argued that U.S. managers were aiding the Japanese by entering alliances that channel new inventions to Japan and provide a U.S. sales and distribution network for the resulting

products. Although such deals may generate short-term profits, the argument goes, in the long term, the result is to “hollow out” U.S. firms, leaving them with no competitive advantage in the global marketplace.

These critics have a point; alliances have risks. Unless a firm is careful, it can give away more than it receives. But there are so many examples of apparently successful alliances between firms—including alliances between U.S. and Japanese firms—that this position appears extreme. It is difficult to see how the Boeing–Mitsubishi alliance for the 787, or the long-term Fuji–Xerox alliance, fit the critics’ thesis. In these cases, both partners seem to have gained from the alliance. Why do some alliances benefit both firms, while others benefit one firm and hurt the other? The next section provides an answer to this question.

8-7c Making Strategic Alliances Work

The failure rate for international strategic alliances is quite high. For example, one study of 49 international strategic alliances found that two-thirds run into serious managerial and financial troubles within 2 years of their formation, and that although many of these problems are ultimately solved, 33% are rated as failures by the parties involved.³² The success of an alliance seems to be a function of three main factors: partner selection, alliance structure, and the manner in which the alliance is managed.

Partner Selection One key to making a strategic alliance work is selecting the right partner. A good partner has three principal characteristics. First, a good partner helps the company accomplish strategic goals such as achieving market access, sharing the costs and risks of new-product development, or gaining access to critical core competencies. In other words, the partner must have capabilities that the company lacks and that it values. Second, a good partner shares the firm’s vision for the purpose of the alliance. If two companies approach an alliance with radically different agendas, the chances are great that the relationship will not be harmonious and the partnership will end.

Third, a good partner is unlikely to try to exploit the alliance for its own ends—that is, to expropriate the company’s technological knowhow while giving away little in return. In this respect, firms with reputations for fair play probably make the best partners. For example, IBM is involved in so many strategic alliances that it would not pay for the company to trample over its individual alliance partners.³³ This would tarnish IBM’s reputation of being a good ally and would make it more difficult for it to attract alliance partners. Because IBM attaches great importance to its alliances, it is unlikely to engage in the kind of opportunistic behavior that critics highlight. Similarly, their reputations make it less likely (but by no means impossible) that such Japanese firms as Sony, Toshiba, and Fuji, which have histories of alliances with non-Japanese firms, would exploit an alliance partner.

To select a partner with these three characteristics, a company needs to conduct comprehensive research on potential alliance candidates. To increase the probability of selecting a good partner, the company should collect as much pertinent, publicly available information about potential allies as possible; collect data from informed third parties, including companies that have had alliances with the potential partners, investment bankers who have had dealings with them, and former employees; and get to know potential partners as well as possible before committing to an alliance. This last step should include face-to-face meetings between senior managers (and perhaps middle-level managers) to ensure that the chemistry is right.

Alliance Structure Having selected a partner, the alliance should be structured so that the company's risk of giving too much away to the partner is reduced to an acceptable level. First, alliances can be designed to make it difficult (if not impossible) to transfer technology not meant to be transferred. Specifically, the design, development, manufacture, and service of a product manufactured by an alliance can be structured to “wall off” sensitive technologies to prevent their leakage to the other participant. In the alliance between General Electric and Snecma to build commercial aircraft engines, for example, GE reduced the risk of “excess transfer” by walling off certain steps of the production process. The modularization effectively cut off the transfer of what GE regarded as key competitive technology while permitting Snecma access to final assembly. Similarly, in the alliance between Boeing and the Japanese to build the 787, Boeing walled off research, design, and marketing functions considered central to its competitive position, while allowing the Japanese to share in production technology. Boeing also walled off new technologies not required for 787 production.³⁴

Second, contractual safeguards can be written into an alliance agreement to guard against the risk of **opportunism** by a partner. For example, TRW has three strategic alliances with large Japanese auto component suppliers to produce seat belts, engine valves, and steering gears for sale to Japanese-owned auto assembly plants in the United States. TRW has clauses in every alliance contract that bar the Japanese firms from competing with TRW to supply U.S.-owned auto companies with component parts. TRW thus protects itself against the possibility that the Japanese companies are entering into the alliances merely as a means of gaining access to the North American market to compete with TRW in its home market.

opportunism

Seeking one's own self-interest, often through the use of guile.

Third, both parties in an alliance can agree in advance to exchange skills and technologies that the other covets, thereby ensuring a chance for equitable gain. Cross-licensing agreements are one way to achieve this goal.

Fourth, the risk of opportunism by an alliance partner can be reduced if the firm extracts a significant, credible commitment from its partner in advance. The long-term alliance between Xerox and Fuji to build photocopiers for the Asian market perhaps best illustrates this. Rather than enter into an informal agreement or a licensing arrangement (which Fujifilm initially preferred), Xerox insisted that Fuji invest in a 50/50 joint venture to serve Japan and East Asia. This venture constituted such a significant investment in people, equipment, and facilities that Fujifilm was committed from the outset to making the alliance work in order to earn a return on its investment. By agreeing to the joint venture, Fuji essentially made a credible commitment to the alliance. In turn, Xerox felt secure in transferring its photocopier technology to Fuji.

Managing the Alliance Once a partner has been selected and an appropriate alliance structure agreed upon, the task facing the company is to maximize benefits from the alliance. One important ingredient of success appears to be sensitivity to cultural differences. Many variations in management style are attributable to cultural differences, and managers need to make allowances for these when dealing with their partners. Beyond this, maximizing benefits from an alliance seems to involve building trust between partners and learning from partners.³⁵

Managing an alliance successfully requires building interpersonal relationships between the firms' managers, or what is sometimes referred to as *relational capital*.³⁶ This is one lesson that can be drawn from the strategic alliance between Ford and Mazda. Ford and Mazda set up a framework of meetings within which their managers not only discuss matters pertaining to the alliance, but also have time to get to know

one another. The belief is that the resulting friendships help build trust and facilitate harmonious relations between the two firms. Personal relationships also foster an informal management network between the firms. This network can then be used to help solve problems arising in more formal contexts (such as in joint committee meetings between personnel from the two firms).

Academics have argued that a major determinant of how much knowledge a company acquires from an alliance is its ability to learn from its alliance partner.³⁷ For example, in a study of 15 strategic alliances between major multinationals, Gary Hamel, Yves Doz, and C. K. Prahalad focused on a number of alliances between Japanese companies and Western (European or American) partners.³⁸ In every case in which a Japanese company emerged from an alliance stronger than its Western partner, the Japanese company had made a greater effort to learn. Few of the Western companies studied seemed to want to learn from their Japanese partners. They tended to regard the alliance purely as a cost-sharing or risk-sharing arrangement, rather than an opportunity to learn how a potential competitor does business.

For an example of an alliance in which there was a clear learning asymmetry, consider the agreement between General Motors and Toyota Motor Corporation to build the Chevrolet Nova. This alliance was structured as a formal joint venture, New United Motor Manufacturing, in which both parties had a 50% equity stake. The venture owned an auto plant in Fremont, California. According to one of the Japanese managers, Toyota achieved most of its objectives from the alliance: “We learned about U.S. supply and transportation. And we got the confidence to manage U.S. workers.” All that knowledge was then quickly transferred to Georgetown, Kentucky, where Toyota opened a plant of its own. By contrast, although General Motors (GM) got a new product (the Nova), some GM managers complained that their new knowledge was never put to good use inside GM. They say that they should have been kept together as a team to educate GM’s engineers and workers about the Japanese system. Instead, they were dispersed to different GM subsidiaries.

When entering an alliance, a company must take measures to ensure that it learns from its alliance partner and then embeds that knowledge within its own organization. One suggested approach is to educate all operating employees about the partner’s strengths and weaknesses, and to make clear to them how acquiring particular skills will bolster their company’s competitive position. For such learning to be of value, the knowledge acquired from an alliance must be diffused throughout the organization—which did not happen at GM. To spread knowledge, the managers involved in an alliance should be used as a resource to educate others within the company about the skills of the alliance partner.

KEY TERMS

multinational company	245	global standardization strategy	253	transnational strategy	256	global strategic alliances	266
location economies	246	localization strategy	254			opportunism	269

TAKEAWAYS FOR STRATEGIC MANAGERS

1. For some companies, international expansion represents a way of earning greater returns by transferring the skills and product offerings derived from their distinctive competencies to markets where indigenous competitors lack those skills. As barriers to international trade have fallen, industries have expanded beyond national boundaries and domestic competition, and opportunities have increased.
2. Because of national differences, it pays for a company to base each value creation activity it performs at the location where factor conditions are most conducive to the performance of that activity. This strategy is known as focusing on the attainment of location economies.
3. By building sales volume more rapidly, international expansion can help a company gain a cost advantage through the realization of scale economies and learning effects.
4. The best strategy for a company to pursue depends on the pressures it must cope with: pressures for cost reductions or for local responsiveness. Pressures for cost reductions are greatest in industries producing commodity-type products, where price is the main competitive weapon. Pressures for local responsiveness arise from differences in consumer tastes and preferences, as well as from national infrastructure and traditional practices, distribution channels, and host government demands.
5. Companies pursuing an international strategy transfer the skills and products derived from distinctive competencies to foreign markets, while undertaking some limited local customization.
6. Companies pursuing a localization strategy customize their product offerings, marketing strategies, and business strategies to national conditions.
7. Companies pursuing a global standardization strategy focus on reaping the cost reductions that come from scale economies and location economies.
8. Many industries are now so competitive that companies must adopt a transnational strategy. This involves a simultaneous focus upon reducing costs, transferring skills and products, and being locally responsive. Implementing such a strategy may prove difficult.
9. There are five different ways of entering a foreign market: exporting, licensing, franchising, entering into a joint venture, and setting up a wholly-owned subsidiary. The optimal choice among entry modes depends on the company's strategy.
10. Strategic alliances are cooperative agreements between actual or potential competitors. The advantages of alliances are that they facilitate entry into foreign markets, enable partners to share the fixed costs and risks associated with new products and processes, facilitate the transfer of complementary skills between companies, and help companies establish technical standards.
11. The drawbacks of a strategic alliance are that the company risks giving away technological knowhow and market access to its alliance partner, while getting very little in return.
12. The disadvantages associated with alliances can be reduced if the company selects partners carefully, paying close attention to reputation, and structures the alliance in order to avoid unintended transfers of knowhow.

DISCUSSION QUESTIONS

1. Plot the position of the following companies on Figure 8.3: Microsoft, Google, Coca-Cola, Dow Chemicals, Pfizer, and McDonald's. In each case, justify your answer.
2. Are the following global standardization industries, or industries where localization is more important: bulk chemicals, pharmaceuticals, branded food products, moviemaking, television manufacture, personal computers, airline travel, fashion retailing?
3. Discuss how the need for control over foreign operations varies with the strategy and distinctive

- competencies of a company. What are the implications of this relationship for the choice of entry mode?
4. Licensing proprietary technology to foreign competitors is the best way to give up a company's competitive advantage. Discuss.
 5. What kind of companies stand to gain the most from entering into strategic alliances with potential competitors? Why?

CLOSING CASE

The Globalization of Starbucks

Thirty years ago, Starbucks was a single store in Seattle's Pike Place Market selling premium-roasted coffee. Today, it is a global roaster and retailer of coffee with more than 24,000 stores, 40% of which are in some 70 countries worldwide. Starbucks set out on its current course in the 1980s, when the company's director of marketing, Howard Schultz, returned from a trip to Italy enchanted with the Italian coffeehouse experience. Schultz, who later became CEO, persuaded the company's owners to experiment with the coffeehouse format, and the Starbucks experience was born. The strategy was to sell the company's own, premium-roasted coffee and freshly brewed, espresso-style coffee beverages, along with a variety of pastries, coffee accessories, teas, and other products, in a tastefully designed coffeehouse setting. From the outset, the company focused on selling "a third-place experience" (in other words, spending significant time at a place that is neither work nor home), rather than just the coffee. The formula led to spectacular success in the United States, where, within a decade, Starbucks went from obscurity to one of the best-known brands in the country. Thanks to Starbucks, coffee stores became places for relaxation, chatting with friends, reading the newspaper, holding business meetings, or (more recently) browsing the Web.

In 1995, with 700 stores across the United States, Starbucks began exploring foreign opportunities. The first target market was Japan. The company

established a joint venture with a local retailer, Sazaby Inc. Each company held a 50% stake in the venture, Starbucks Coffee of Japan. Starbucks initially invested \$10 million in this venture, its first foreign direct investment. The Starbucks format was then licensed to the venture, which was charged with growing Starbucks' presence in Japan.

To make sure the Japanese operations replicated the "Starbucks experience" in North America, Starbucks transferred some employees to oversee the Japanese operation. The licensing agreement required all Japanese store managers and employees to attend training classes similar to those given to U.S. employees. The agreement also required that stores adhere to the design parameters established in the United States. In 2001, the company introduced a stock option plan for all Japanese employees, making it the first company in Japan to do so. Sceptics doubted that Starbucks would be able to replicate its North American success overseas but, by 2014, Starbucks' had 1,034 stores and a profitable business in Japan.

After Japan, the company embarked on an aggressive foreign investment program. In 1998, it purchased Seattle Coffee, a British coffee chain with 60 retail stores, for \$84 million. An American couple, originally from Seattle, had started Seattle Coffee with the intention of establishing a Starbucks-like chain in Britain. By 2014, there were 530 stores in the United Kingdom. In the late

1990s, Starbucks opened stores in Taiwan, China, Singapore, Thailand, New Zealand, South Korea, and Malaysia. In Asia, Starbucks' frequent strategy was to license its format to a local operator in return for initial licensing fees and royalties on store revenues. As in Japan, Starbucks insisted on an intensive employee-training program and strict specifications regarding the format and layout of the store. By 2002, Starbucks was pursuing an aggressive expansion in mainland Europe, primarily through joint ventures with local companies. Its largest footprints are in Switzerland, France, and Germany.

To succeed in some countries, Starbucks has found that it has to adjust its basic formula to accommodate local differences. France, for example, has a well-established café culture. The French find Starbucks' lattes too bland, and the espresso too burnt, so Starbucks has had to change the recipe for its drinks to match French tastes. Since French consumers like to sit and chat while they drink their coffee, Starbucks has had to add more seating per store than is common elsewhere.

As it has grown its global footprint, Starbucks has also embraced ethical sourcing policies and

environmental responsibility. Now one of the world's largest buyers of coffee, in 2000 Starbucks started to purchase Fair Trade Certified coffee. The goal was to empower small-scale farmers organized in cooperatives to invest in their farms and communities, to protect the environment, and to develop the business skills necessary to compete in the global marketplace. In short, Starbucks was trying to use its influence to not only change the way people consumed coffee around the world, but also to change the way coffee was produced in a manner that benefited the farmers and the environment. According to Starbucks, by 2017, some 95.3% of the company's coffee was "ethically sourced."

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CASE DISCUSSION QUESTIONS

1. Where did the original idea for the Starbucks format come from? What lesson for international business can be drawn from this?
2. What drove Starbucks to start expanding internationally? How is the company creating value for its shareholders by pursuing an international expansion strategy?
3. Why do you think Starbucks decided to enter the Japanese market via a joint venture with a Japanese company? What lesson can you draw from this?
4. Is Starbucks a force for globalization? Explain your answer.
5. When it comes to purchasing coffee beans, Starbucks adheres to a fair-trade program. What do you think is the difference between fair trade and free trade? How might a fair-trade policy benefit Starbucks?

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CHAPTER

9

CORPORATE-LEVEL STRATEGY: HORIZONTAL INTEGRATION, VERTICAL INTEGRATION, AND STRATEGIC OUTSOURCING

LEARNING OBJECTIVES

- 9.1 Discuss how corporate-level strategy can be used to strengthen a company's business model and business-level strategies
- 9.2 Define horizontal integration and discuss the primary advantages and disadvantages associated with this corporate-level strategy
- 9.3 Explain the difference between a company's internal value chain and the industry value chain
- 9.4 Describe why, and under what conditions, cooperative relationships such as strategic alliances and outsourcing may become a substitute for vertical integration

OPENING CASE

Netflix in 2018

In 2018, Netflix had over 125 million subscribers in some 190 countries worldwide. It had earned almost \$12 billion in revenues in 2017, and rapid growth in both domestic and international subscribers had fueled intense investor enthusiasm, causing its market capitalization to reach just under \$150 billion and making it one of the fastest-growing stocks on the market.¹



John Scull/Getty Images Entertainment/Getty Images

When Netflix was founded in 1997, its business model was to rent and sell movies on DVDs by mail. Customers could browse and select movies online, and those movies would be mailed out to the customer, who would then mail the movies back after watching. Though it initially started with a per-movie rental fee like its largest bricks-and-mortar rival, Blockbuster, it soon moved to a subscription fee. Customers could choose among plans with different prices based on how many movies they wanted to rent simultaneously, and they could keep movies out as long as they wanted without late fees. The subscription plan was a hit, and by 2005 the company was shipping out over a million DVDs a day.²

One of the most compelling features of the Netflix site was its recommender system. As people rented movies, Netflix prompted them to review the movies they had already seen. It thus steadily accrued a massive database about correlations among movie preferences that it could use to make movie suggestions to users. For example, if a user gave a five-star rating to "Journey to the Center of the Earth," the system would suggest they might also like "The Mummy," "Indiana Jones and Kingdom of the Crystal Skull," and "Inkheart."

The service turned out to be enormously popular and soon sounded a death knell for bricks-and-mortar video stores. By having centralized inventory and shipping movies to people, Netflix could offer a much wider selection than physical stores could offer, and its scale meant it could both negotiate better prices on content, and invest in value-added services for customers like the review and recommender systems mentioned previously, online movie trailers, and more. Importantly, Netflix was also a key channel for films by small, independent filmmakers to reach audiences, enabling the company to forge relationships that would prove to be increasingly valuable as time passed.

In 2007, Netflix began offering movie streaming, which rapidly grew to be the preferred mode of movie consumption. Then, in 2011, the company began acquiring original content for exclusive distribution on Netflix, starting with the series *House of Cards* and *Lilyhammer*. By 2013, it had moved into co-producing original content with production houses such as Marvel Television, Dreamworks, and others. In 2017, it opened Netflix Studios and began recruiting some of television's most successful writers and producers to produce original content in house.³

For a movie rental service to vertically integrate into developing its own content seemed a peculiar move. Making films and television shows required fundamentally different technology, equipment, personnel, and expertise than distributing films and television shows. What could a specialist in media distribution know about media production? A lot, it turns out.

Netflix's rapidly growing datasets meant that it knew which customers liked which films, which genres were growing, which new stars were gaining followings, which new production houses were gaining traction, and more. The relationships it had cultivated with independent filmmakers and budding actors helped ensure the firm's access to a pipeline of new creative talent and helped build goodwill toward the company. Sean Fennessey, a writer for pop culture website *The Ringer*, explained how important Netflix was to frustrated filmmakers who could not raise enough support to get a major studio movie off the ground, "To the creators stifled by the rise of Hollywood's all-or-nothing focus on franchise films, Netflix felt like salve on an open wound."⁴

Netflix also used its massive distribution reach to promote its original content, building audiences for its series and crafting its reputation as a first-tier production house. As put by Ted Sarandos, Netflix Chief Content Officer, "the way we can secure those shows is having a great reputation with talent, having a brand people want to be associated with, and a good track record of delivering."

Furthermore, while most film studios needed to profit directly from their films, Netflix profited in multiple ways from its content: Having popular, exclusive shows helped attract and retain subscribers, and having both a large audience and a powerful library of original content gave it more bargaining power when negotiating license fees for content produced by others. Collectively, it was a powerful advantage.

Netflix planned to spend \$8 billion on original content in 2018—an estimated 700 original shows and including 80 original films⁵—making it the largest film producer in the United States.⁶ In fact, in the first quarter of 2018, Netflix made 25 films, the same number as the next six largest U.S. studios combined.⁷

9-1 OVERVIEW

The overriding goal of managers is to maximize the value of a company for its shareholders. The Opening Case about Netflix's move into producing original content shows how value can be created in different ways through vertical integration, including leveraging expertise into adjacent fields, increasing customer loyalty, and increasing bargaining power over suppliers. Often, however, the potential value from vertical integration is overestimated; it is thus crucial to be able to understand what the sources of value are, what the probability of harvesting that value is, and the costs and trade-offs involved.

In general, corporate-level strategy involves choices strategic managers must make: (1) deciding in which businesses and industries a company should compete; (2) selecting which value creation activities it should perform in those businesses; and (3) determining how it should enter, consolidate, or exit businesses or industries to maximize long-term profitability. When formulating corporate-level strategy, managers must adopt a long-term perspective and consider how changes taking place in an industry and in its products, technology, customers, and competitors will affect their company's current business model and its future strategies. They then decide how to implement specific corporate-level strategies that redefine their company's business model to allow it to increase its competitive advantage in a changing industry environment by taking advantage of opportunities and countering threats. Thus, the principal goal of corporate-level strategy is to enable a company to sustain or promote its competitive advantage and profitability in its present business—and in any new businesses or industries that it chooses to enter.

This chapter is the first of two that describe the role of corporate-level strategy in repositioning and redefining a company's business model. We discuss three corporate-level strategies—horizontal integration, vertical integration, and strategic outsourcing—that are primarily directed toward improving a company's competitive advantage and profitability in its current business or industry. Diversification, which entails entry into new kinds of businesses or industries, is examined in the next chapter, along with guidelines for choosing the most profitable way to enter new businesses or industries, or to exit others. By the end of this chapter and the next, you will understand how the different levels of strategy contribute to the creation of a successful, profitable business or multibusiness model. You will also be able

to distinguish between the types of corporate strategies managers use to maximize long-term company profitability.

9-2 CORPORATE-LEVEL STRATEGY AND THE MULTIBUSINESS MODEL

The choice of corporate-level strategies is the final part of the strategy-formulation process. Corporate-level strategies drive a company's business model over time and determine which types of business- and functional-level strategies managers will choose to maximize long-term profitability. The relationship between business-level strategy and functional-level strategy was discussed in Chapter 5. Strategic managers develop a business model and strategies that use their company's distinctive competencies to strive for a cost-leadership position and/or to differentiate its products. Chapter 8 described how global strategy is an extension of these basic principles.

In this chapter and the next, we repeatedly emphasize that, to increase profitability, a corporate-level strategy should enable a company or one or more of its business divisions or units *to perform value-chain functional activities (1) at a lower cost and/or (2) in a way that results in increased differentiation*. Only when it selects the appropriate corporate-level strategies can a company choose the pricing option (lowest, average, or premium price) that will allow it to maximize profitability. In addition, corporate-level strategy will increase profitability if it helps a company reduce industry rivalry by reducing the threat of damaging price competition. In sum, a company's corporate-level strategies should be chosen to promote the success of its business-level strategies, which allows it to achieve a sustainable competitive advantage, leading to higher profitability.

Many companies choose to expand their business activities beyond one market or industry and enter others. When a company decides to expand into new industries, it must construct its business model at two levels. First, it must develop a business model and strategies for each business unit or division in every industry in which it competes. Second, it must develop a higher-level *multibusiness model* that justifies its entry into different businesses and industries. This multibusiness model should explain how and why entering a new industry will allow the company to use its existing functional competencies and business strategies to increase its overall profitability. This model should also explain any other ways in which a company's involvement in more than one business or industry can increase its profitability. IBM, for example, might argue that its entry into online computer consulting, data storage, and cloud computing enables it to offer its customers a lineup of computer services that allows it to better compete with HP, Oracle, and Amazon.com. Apple might argue that its entry into digital music and entertainment has given it a commanding lead over rivals such as Sony, Google, and Microsoft.

This chapter first focuses on the advantages of staying inside one industry by pursuing horizontal integration. It then looks at why companies use vertical integration and expand into new industries. In the next chapter, we examine two principal corporate strategies companies use to enter new industries to increase their profitability—related and unrelated diversification—and several other strategies companies use to enter and compete in new industries.

9-3 HORIZONTAL INTEGRATION: SINGLE-INDUSTRY CORPORATE STRATEGY

Managers use corporate-level strategy to identify industries in which their company should compete in order to maximize its long-term profitability. For many companies, profitable growth and expansion often entail finding ways to successfully compete within a single market or industry over time. In other words, a company confines its value creation activities to just one business or industry. Examples of such single-business companies include McDonald's, with its focus on the global fast-food business, and Wal-Mart, with its focus on global discount retailing.

Staying within one industry allows a company to focus all of its managerial, financial, technological, and functional resources and capabilities on competing successfully in one area. This is important in fast-growing, changing industries in which demands on a company's resources and capabilities are likely to be substantial, but where the long-term profits from establishing a competitive advantage are also likely to be substantial.

A second advantage of staying within a single industry is that a company “sticks to the knitting,” meaning that it stays focused on what it knows and does best. A company does not make the mistake of entering new industries in which its existing resources and capabilities create little value and/or where a whole new set of competitive industry forces—new competitors, suppliers, and customers—present unanticipated threats. Coca-Cola, like many other companies, has committed this strategic error in the past. Coca-Cola once decided to expand into the movie business and acquired Columbia Pictures; it also acquired a large California winemaker. It soon found it lacked the competencies to successfully compete in these new industries, and it had not foreseen the strong competitive forces that existed in these industries from movie companies such as Paramount and winemakers such as Gallo. Coca-Cola concluded that entry into these new industries had reduced rather than created value, and had lowered its profitability; it divested or sold off these new businesses at a significant loss.

Even when a company stays in one industry, sustaining a successful business model over time can be difficult because of changing conditions in the environment, such as advances in technology that allow new competitors into the market, or because of changing customer needs. Three decades ago, the strategic issue facing telecommunications providers was how to shape their landline phone services to best meet customer needs in local and long-distance telephone service. However, when wireless telephone service emerged and quickly gained in popularity, landline providers like Verizon and AT&T had to quickly change their business models, lower the price of landline service, merge with wireless companies, and offer broadband services to ensure their survival.

Even within one industry, it is very easy for strategic managers to fail to see the “forest” (the changing nature of the industry, which results in new product/market opportunities) for the “trees” (focusing only on how to position current products). A focus on corporate-level strategy can help managers anticipate future trends and then change their business models to position their companies to compete successfully in a changing environment. Strategic managers must not become so committed to improving their company's *existing* product or service lines that they fail to recognize *new* product or service opportunities and threats. Apple has been so successful because it recognized the increasing number of product opportunities offered by digital entertainment. The task for corporate-level managers is to analyze how emerging technologies will impact their business models, how and why these technologies might change

customer needs and customer groups in the future, and what kinds of new, distinctive competencies will be needed to respond to these changes.

One corporate-level strategy that has been widely used to help managers strengthen their company's business model is **horizontal integration**, the process of acquiring or merging with industry competitors to achieve the competitive advantages that arise from a large size and scope of operations. An **acquisition** occurs when one company uses capital resources such as stock, debt, or cash, to purchase another company. A **merger** is an agreement between equals to pool their operations and create a new entity.

Mergers and acquisitions are common in most industries. In the aerospace industry, Boeing merged with McDonnell Douglas to create the world's largest aerospace company; in the pharmaceutical industry, Pfizer acquired Warner-Lambert to become the largest pharmaceutical firm; and global airlines are increasingly merging their operations in order to rationalize the number of flights offered between destinations, provide more complete global service, and increase their market power. Horizontal integration often significantly improves the competitive advantage and profitability of companies whose managers choose to stay within one industry and focus on managing its competitive position to keep the company at the value creation frontier.

9-3a Benefits of Horizontal Integration

In pursuing horizontal integration, managers invest their company's capital resources to purchase the assets of industry competitors to increase the profitability of its single-business model. Profitability increases when horizontal integration (1) lowers the cost structure, (2) increases product differentiation, (3) leverages a competitive advantage more broadly, (4) reduces rivalry within the industry, and (5) increases bargaining power over suppliers and buyers.

Lower Cost Structure Horizontal integration can lower a company's cost structure because it creates increasing *economies of scale*. Suppose five major competitors operate a manufacturing plant in some region of the United States, but none of the plants operate at full capacity. If one competitor buys another and closes that plant, it can operate its own plant at full capacity and reduce its manufacturing costs. Achieving economies of scale is very important in industries that have a high-fixed-cost structure. In such industries, large-scale production allows companies to spread their fixed costs over a large volume, and in this way drive down average unit costs. In the telecommunications industry, for example, the fixed costs of building advanced 4G and LTE broadband networks that offer tremendous increases in speed are enormous, and to make such an investment profitable requires a large volume of customers.

Thus, AT&T and Verizon purchased other telecommunications companies to acquire their customers, increase their customer base, increase utilization rates, and reduce the cost of servicing each customer. Similar considerations were involved in the hundreds of acquisitions that have taken place in the pharmaceutical industry in the last two decades because of the need to realize scale economies in research and development (R&D) and sales and marketing. The fixed costs of building a nationwide pharmaceutical sales force are enormous, and pharmaceutical companies such as Pfizer and Merck must possess a wide portfolio of drugs to sell to effectively make use of their sales forces.

A company can also lower its cost structure when horizontal integration allows it to *reduce the duplication of resources* between two companies, such as by eliminating the need for two sets of corporate head offices, two separate sales teams, and so forth. Notably, however, these cost savings are often overestimated. If two companies are

horizontal integration

The process of acquiring or merging with industry competitors to achieve the competitive advantages that arise from a large size and scope of operations.

acquisition

When a company uses its capital resources to purchase another company.

merger

An agreement between two companies to pool their resources and operations and join together to better compete in a business or industry.

operating a function such as a call center, for example, and both are above the minimum efficient scale for operating such a center, there may be few economies from consolidating operations. If each center was already optimally utilized, the consolidated call center could require just as many service people, computers, phone lines, and real estate as the two call centers previously required. Similarly, one justification made for banks consolidating during the late 1990s was that they could save by consolidating their information technology (IT) resources. Ultimately, however, most merged banks realized that their potential savings were meager at best, and the costs of attempting to harmonize their information systems were high; thus, most of them continued to run the separate legacy systems they had prior to merging.

Increased Product Differentiation Horizontal integration may also increase profitability when it increases product differentiation; for example, by increasing the flow of innovative products that a company's sales force can sell to customers at premium prices. Desperate for new drugs to fill its pipeline, for example, Eli Lilly paid \$6.5 billion to ImClone Systems to acquire its new, cancer-preventing drugs in order to outbid rival Bristol-Myers Squibb. Google, anxious to provide its users with online coupons, offered to pay \$6 billion for Groupon to fill this niche in its online advertising business to increase its differentiation advantage—and reduce industry rivalry. Similarly, in the opening case, Netflix dramatically expanded the range of original content it offers to its large subscriber base, helping to increase customer loyalty.

Horizontal integration may also increase differentiation when it allows a company to combine the product lines of merged companies so that it can offer customers a wider range of products that can be bundled together. **Product bundling** involves offering customers the opportunity to purchase a range of products at a single, combined price. This increases the value of a company's product line because customers often obtain a price discount when purchasing a set of products at one time, and customers become used to dealing with only one company and its representatives. It is important to note, however, that product bundling often does not require joint ownership—it can often be achieved through contracts between producers of complementary goods.

Another way to increase product differentiation is through **cross-selling**, which is when a company takes advantage of or leverages its established relationship with customers by way of acquiring additional product lines or categories that it can sell to them. In this way, a company increases differentiation because it can provide a “total solution” and satisfy all of a customer's specific needs. Cross-selling and becoming a total solution provider is an important rationale for horizontal integration in the computer sector, where IT companies attempt to increase the value of their offerings by satisfying all of the hardware and service needs of corporate customers. Providing a total solution saves customers time and money because they do not have to work with several suppliers, and a single sales team can ensure that all the components of a customer's IT seamlessly work together. When horizontal integration increases the differentiated appeal and value of the company's products, the total solution provider gains market share.

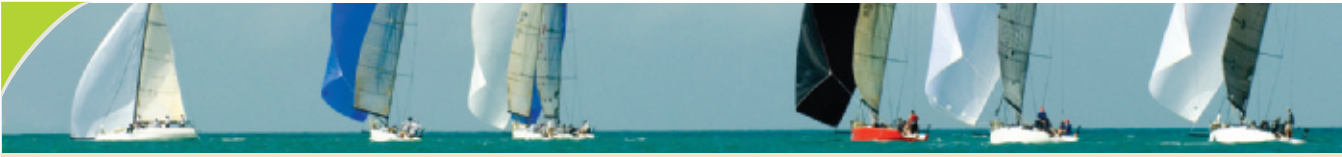
Leveraging a Competitive Advantage More Broadly For firms that have resources or capabilities that could be valuably deployed across multiple market segments or geographies, horizontal integration may offer opportunities to become more profitable. In the retail industry, for example, Wal-Mart's enormous bargaining power with suppliers and its exceptional efficiency in inventory logistics enabled it to have a competitive advantage in other discount retail store formats, such as its chain of Sam's Clubs (an even-lower-priced warehouse segment). It also expanded the range

product bundling

Offering customers the opportunity to purchase a range of products at a single, combined price; this increases the value of a company's product line because customers often obtain a price discount when purchasing a set of products at one time, and customers become used to dealing with only one company and its representatives.

cross-selling

When a company takes advantage of or leverages its established relationship with customers by way of acquiring additional product lines or categories that it can sell to them. In this way, a company increases differentiation because it can provide a “total solution” and satisfy all of a customer's specific needs.



9.1 STRATEGY IN ACTION

Wal-Mart's Expansion into Other Retail Formats

In 2018, Wal-Mart was the largest firm in the world by revenues, with sales of over \$500 billion, more than 11,718 stores worldwide, and employing 2.3 million people. However, as the U.S. discount retail market was mature (where Wal-Mart earned 70% of its revenues), it looked for other opportunities to apply its exceptional retailing power and expertise. In the United States, it had expanded into supercenters that sold groceries in addition to general merchandise and even lower-priced warehouse store formats (Sam's Club), both of which were doing well. These stores could directly leverage Wal-Mart's bargaining power over suppliers (for many producers of general merchandise, Wal-Mart accounted for more than 70% of their sales, giving it unrivaled power to negotiate prices and delivery terms), and benefited from its exceptionally efficient system for transporting, managing, and tracking inventory. Wal-Mart had invested relatively early in advanced information technology: it adopted radio frequency identification (RFID) tagging well ahead of its competitors, and satellites tracked inventory in real time. Wal-Mart knew where each item of inventory was at all times and when it was sold, enabling it to simultaneously minimize its inventory holding costs while optimizing the inventory mix in each store. As a result, it had higher sales per square foot and inventory turnover than either Target or Kmart. It handled inventory through a massive, hub-and-spoke distribution system that included more than 140 distribution centers that each served approximately 150 stores within a 150-mile

radius. As supercenters and Sam's Clubs were also approaching saturation, however, growth had become harder and harder to sustain. Wal-Mart began to pursue other types of expansion opportunities. It expanded into smaller-format neighborhood stores, international stores (many of which were existing chains that were acquired), and was considering getting into organic foods and trendy fashions. While expansion into contiguous geographic regions (e.g., Canada and Mexico) had gone well, its success at overseas expansions was spottier. Wal-Mart's forays into Germany and South Korea, for example, resulted in large losses, and it ultimately exited the markets. Wal-Mart's entry into Japan was also not as successful as hoped, resulting in many years of losses and never gaining a large share of the market. The challenge was that many of these markets already had tough competitors by the time Wal-Mart entered—they weren't the sleepy, underserved markets that had initially helped it grow in the United States. Furthermore, Wal-Mart's IT and logistics advantages could not easily be leveraged into overseas markets—they would require massive, upfront investments to replicate, and it would be hard to break even on those investments without achieving massive scale in those markets. This raised important questions such as: "Which of Wal-Mart's advantages could be leveraged overseas and to which markets?" "Was Wal-Mart better off trying to diversify its product offerings within North America?" "Should it perhaps reconsider its growth objectives altogether?"

Source: www.walmart.com.

of products it offers customers when it entered the supermarket business and established a nationwide chain of Wal-Mart supercenters that sell groceries as well as all the clothing, toys, and electronics sold in regular Wal-Mart stores. It has also replicated its business model globally, although not always with as much success as it has had in the United States because many of its efficiencies in logistics (such as its hub-and-spoke distribution system and inventory tracked by satellite) employ fixed assets that are geographically limited (see the Strategy in Action 9.1 for more on this).

Reduced Industry Rivalry Horizontal integration can help to reduce industry rivalry in two ways. First, acquiring or merging with a competitor helps to *eliminate excess capacity* in an industry, which, as we discussed in Chapter 6, often triggers price wars. By taking excess capacity out of an industry, horizontal integration creates a more benign environment in which prices might stabilize—or even increase.

Second, by reducing the number of competitors in an industry, horizontal integration often makes it easier to implement *tacit price coordination* between rivals; that is, coordination reached without communication (explicit communication to fix prices is illegal in most countries.) In general, the larger the number of competitors in an industry, the more difficult it is to establish informal pricing agreements—such as price leadership by the dominant company—which increases the possibility that a price war will erupt. By increasing industry concentration and creating an oligopoly, horizontal integration can make it easier to establish tacit coordination among rivals.

Both of these motives seem to have been behind Oracle's many software acquisitions. There was significant excess capacity in the corporate software industry, and major competitors were offering customers discounted prices that had led to a price war and falling profit margins. Oracle hoped to eliminate excess industry capacity, which would reduce price competition.

Increased Bargaining Power Finally, horizontal integration allows some companies to obtain bargaining power over suppliers or buyers and increase profitability at their expense. By consolidating the industry through horizontal integration, a company becomes a much larger buyer of suppliers' products and uses this as leverage to bargain down the price it pays for its inputs, thereby lowering its cost structure. Wal-Mart, for example, is well known for pursuing this strategy, and it may also have been a major motivation for the proposed merger of Comcast and Time Warner described in the Opening Case. Consolidation among competitors also gives companies more bargaining power over customers: By gaining control over a greater percentage of an industry's product or output, a company can increase its power to raise prices and profits because customers have less choice of suppliers and are more dependent on the company for their products. When a company has greater ability to raise prices to buyers or bargain down the price paid for inputs, it has obtained increased market power.

All five of these motives for horizontal integration can be seen in the case of airline mergers. Mergers in the airline industry are frequently suspected of being anticompetitive; it is often assumed the primary purpose of the mergers is to reduce rivalry and increase market power over customers so that prices can be increased. Consistent with this, researchers have frequently shown the air travel prices of a merged airline rise after the merger. For example, Professors Kwoka and Shumilkina showed that after the merger of US Air and Piedmont, prices rose between 9 and 10.2% on routes in which the two firms overlapped, and between 5 to 6% on the routes in which one competed and the other firm was a potential entrant.⁸ Professors Hüscherlath and Müller similarly found that when Delta Airlines and Northwest Airlines merged in 2009, prices on their previously shared routes went up 11%.⁹ However, prices alone paint an incomplete picture of the motives for mergers and their consequences.¹⁰

The Delta-Northwest merger involved an intense integration effort. The two companies had to negotiate a new common contract with pilots and flight attendants. They merged 1,100 computer systems into about 600, and replaced more than 140,000 electronic devices, including printers, kiosks, and more.¹¹ By 2010, all of Northwest's bookings had been cancelled and transferred to newly created Delta

flights, a feat that required computer engineers to perform 8,856 separate steps. Parts inventory and maintenance processes also had to be merged, and Northwest's assets had to be rebranded as Delta, including painting the planes—a task that was not completed until 2011.¹² It was a costly, lengthy process, but managers of the companies anticipated that the deal would yield savings that would climb from \$200 million in 2009 to \$1.2 billion by 2012.¹³

The two airlines had route systems that were highly complementary—they had only 12 overlapping routes prior to the merger, accounting for just 2% of Northwest's seats and 3% of Delta's seats.¹⁴ Not surprisingly, then, the savings of the merger were not premised on layoffs or hub closures. Furthermore, on eight of the overlapping routes there were at least two other competing carriers, restricting the ability of the airlines to raise prices. Overall, low cost carriers were growing 10% annually and accounted for almost one-third of domestic flights, so competition—domestically at least—was still high.

The bigger gains appear to have been upside potential in the quality of service (i.e., product differentiation) and customer loyalty. Delta and Northwest had complementary international footprints: Delta was stronger in Europe and Latin America; Northwest had a stronger presence in Asia and a hub in Tokyo. After the merger, flights formerly branded as Northwest began to offer Delta's higher quality international service, including free alcoholic drinks on international flights, meals created by Delta's celebrity chefs, a better in-flight entertainment system, and higher-grade amenities in bathrooms and onboard kits. In the decade prior to the merger, Northwest's customer satisfaction rating was consistently below the industry average, and Delta's rating hovered around the industry average. After the merger, Delta's Customer Service rating initially fell for 2 years, and then climbed consistently from 2012 to 2017, achieving a 19% total improvement. Similarly, United, which merged with Continental in 2010, had significant gains in its customer service rating after its merger, achieving a 17% total improvement by 2017. Furthermore, for frequent business travelers, having a single airline with a more comprehensive global footprint and better business-class services made customers willing to bear moderate price increases, and enhanced customer loyalty.

Notably, as of 2018, both Delta and United still lag industry leaders Jet Blue and Southwest Airlines in customer service satisfaction, and both companies have lower net margins and return on assets than Jet Blue and Southwest Airlines, highlighting the performance pressure that major airlines are under from low-cost competitors. Collectively, this suggests that perhaps the mergers were not intended to achieve monopolistic pricing power, but rather to help them to invest in customer service improvements that would help them to achieve parity with low-cost competitors on customer satisfaction, while also increasing their differentiation from low-cost competitors through larger global footprints and enhanced service features.¹⁵ That differentiation would enable them to charge higher ticket prices.

9-3b Problems with Horizontal Integration

Although horizontal integration can strengthen a company's business model in several ways, there are problems, limitations, and dangers associated with pursuing this corporate-level strategy. Implementing a horizontal integration strategy is no easy task for managers. As discussed in Chapter 10, there are several reasons why mergers and acquisitions may fail to result in higher profitability: problems associated with merging

very different company cultures; high management turnover in the acquired company when the acquisition is a hostile one; and a tendency of managers to overestimate the potential benefits from a merger or acquisition and underestimate the problems involved in merging their operations.¹⁶

When a company uses horizontal integration to become a dominant industry competitor in the United States, it may come into conflict with the Federal Trade Commission (FTC) or the Department of Justice (DOJ), two government agencies that help to enforce antitrust laws. Antitrust authorities are concerned about the potential for abuse of market power; more competition is generally better for consumers than less competition. Antitrust authorities are likely to intervene when a few companies within one industry try to make acquisitions that will allow them to raise consumer prices above the level that would exist in a more competitive situation, and thus abuse their market power. The FTC and DOJ try to prevent dominant companies from using their market power to crush potential competitors; for example, by cutting prices when a new competitor enters the industry and forcing the competitor out of business, then raising prices after the threatening company has been eliminated.

Because of these concerns, any merger or acquisition the FTC perceives as creating too much consolidation, and the *potential* for future abuse of market power, may, for antitrust reasons, be blocked. The proposed merger between the two dominant satellite radio companies Sirius and XM was blocked for months until it became clear that customers had many other options to obtain high-quality radio programming—for example, through their computers and cell phones—so substantial competition would still exist in the industry. Similarly, as discussed in the Closing Case, in 2015 the DOJ signaled its intention to block the Comcast/Time Warner merger, leading the firms to abandon the deal.

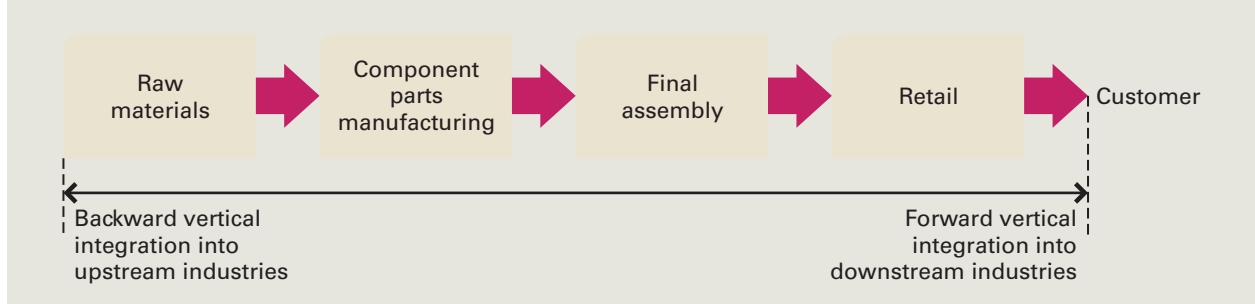
9-4 VERTICAL INTEGRATION: ENTERING NEW INDUSTRIES TO STRENGTHEN THE “CORE” BUSINESS MODEL

Many companies that use horizontal integration to strengthen their business model and improve their competitive position also use the corporate-level strategy of vertical integration for the same purpose. When pursuing vertical integration, however, a company is entering new industries to support the business model of its “core” industry, that is, the industry which is the primary source of its competitive advantage and profitability. At this point, therefore, a company must formulate a multibusiness model that explains how entry into a new industry using vertical integration will enhance its long-term profitability. The model that justifies the pursuit of vertical integration is based on a company entering industries that *add value* to its core products because this increases product differentiation and/or lowers its cost structure, thus increasing its profitability.

A company pursuing a strategy of **vertical integration** expands its operations either backward into an industry that produces inputs for the company’s products (*backward vertical integration*), or forward into an industry that uses, distributes, or sells the company’s products (*forward vertical integration*). To enter an industry, it may establish its

vertical integration

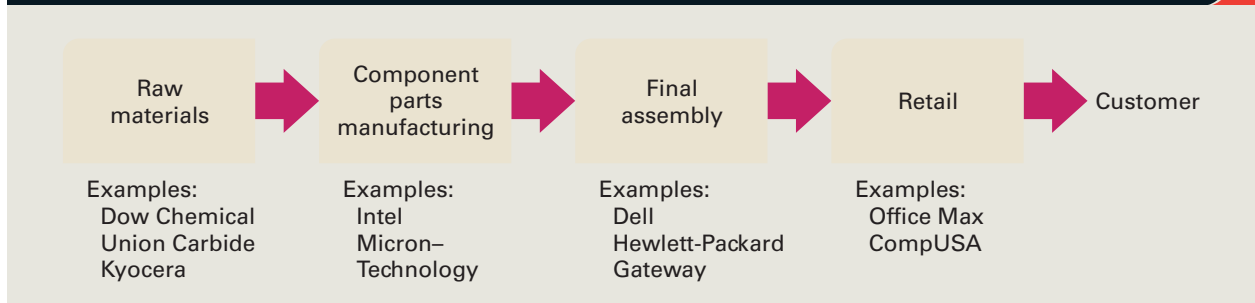
When a company expands its operations either backward into an industry that produces inputs for the company’s products (backward vertical integration) or forward into an industry that uses, distributes, or sells the company’s products (forward vertical integration).

Figure 9.1 Stages in the Raw-Materials-to-Customer Value-Added Chain

own operations and build the value chain needed to compete effectively, or it may acquire a company that is already in the industry. A steel company that supplies its iron ore needs from company-owned iron ore mines illustrates backward integration. An auto manufacturer that operates its own dealerships illustrates forward integration. For example, Tesla sells its cars primarily through its own network of retail outlets, often located in high-traffic locations such as shopping malls. IBM is a highly vertically integrated company; it integrated backward into the chip and memory disk industry to produce the components that work inside its mainframes and servers, and integrated forward into the computer software and consulting services industries.

Figure 9.1 illustrates four *main* stages in a typical raw-materials-to-customer value-added chain. For a company based in the final assembly stage, backward integration means moving into component parts manufacturing and raw materials production. Forward integration means moving into distribution and sales (retail). At each stage in the chain *value is added* to the product, transforming it in such a way that it is worth more to the company at the next stage in the chain and, ultimately, to the customer. It is important to note that each stage of the value-added chain involves a separate industry, or industries, in which many different companies compete. Moreover, within each industry, each company has a value chain composed of the value creation activities we discussed in Chapter 3: R&D, production, marketing, customer service, and so on. In other words, we can think of a value chain that runs *across* industries, and embedded within that are the value chains of companies *within* each industry.

As an example of the value-added concept, consider how companies in each industry involved in the production of a PC contribute to the final product (Figure 9.2).

Figure 9.2 The Raw-Materials-to-Customer Value-Added Chain in the PC Industry

The first stage in the chain includes raw-materials companies that make specialty ceramics, chemicals, and metal, such as Kyocera of Japan, which manufactures the ceramic substrate for semiconductors. Companies at the first stage in the chain sell their products to the makers of PC component products, such as Intel and AMD, which transform the ceramics, chemicals, and metals they purchase into PC components such as microprocessors, disk drives, and memory chips. In the process, companies *add value* to the raw materials they purchase. At the third stage, the manufactured components are sold to PC makers such as Apple, Dell, and HP, and these companies decide which components to purchase and assemble to *add value* to the finished PCs (that they make or outsource to a contract manufacturer). At stage four, the finished PCs are then either sold directly to the final customer over the Internet, or sold to retailers such as Best Buy and Staples, which distribute and sell them to the final customer. Companies that distribute and sell PCs also *add value* to the product because they make the product accessible to customers and provide customer service and support.

Thus, companies in different industries add value at each stage in the raw-materials-to-customer chain. Viewed in this way, vertical integration presents companies with a choice about within which industries in the raw-materials-to-customer chain to operate and compete. This choice is determined by the degree to which establishing operations at a given stage in the value chain will increase product differentiation or lower costs—and therefore increase profitability—as we discuss in the following section.

9-4a Increasing Profitability Through Vertical Integration

As noted earlier, a company pursues vertical integration to strengthen the business model of its original or core business and improve its competitive position.¹⁷ Vertical integration increases product differentiation, lowers costs, or reduces industry competition when it (1) facilitates investments in efficiency-enhancing, specialized assets, (2) protects product quality, and (3) results in improved scheduling.

Facilitating Investments in Specialized Assets A specialized asset is one designed to perform a specific task, and the value of which is significantly reduced in its next-best use.¹⁸ The asset may be a piece of equipment that has a firm-specific use or the knowhow or skills that a company or employees have acquired through training and experience. Companies invest in specialized assets because these assets allow them to lower their cost structure or to better differentiate their products, which facilitates premium pricing. A company might invest in specialized equipment to lower manufacturing costs, as Toyota does, for example; or it might invest in an advanced technology that allows it to develop better-quality products than its rivals, as Apple does. Thus, specialized assets can help a company achieve a competitive advantage at the business level.

Just as a company invests in specialized assets in its own industry to build competitive advantage, it is often necessary that suppliers invest in specialized assets to produce the inputs that a specific company needs. By investing in these assets, a supplier can make higher-quality inputs that provide its customers with a differentiation advantage, or inputs at a lower cost so it can charge its customers a lower price to keep their business. However, it is often difficult to persuade companies in adjacent stages of the value chain to invest in specialized assets. Often, to realize the benefits associated with such investments, a company must vertically integrate and enter into adjacent industries and invest its own resources. Why does this happen?

Imagine that Ford has developed a unique, energy-saving, electrical engine system that will dramatically increase fuel efficiency and differentiate Ford's cars from those of its rivals, giving it a major competitive advantage. Ford must decide whether to make the system in-house (vertical integration) or contract with a specialist outsourcing manufacturer to make the new engine system. Manufacturing these new systems requires a substantial investment in specialized equipment that can be used only for this purpose. In other words, because of its unique design, the equipment cannot be used to manufacture any other type of electrical engine for Ford or any other car-maker. Thus, this is an investment in specialized assets.

Consider this situation from the perspective of the outside supplier deciding whether or not to make this investment. The supplier might reason that once it has made the investment, it will become dependent on Ford for business because *Ford is the only possible customer for the electrical engine made by this specialized equipment*. The supplier realizes that this puts Ford in a strong bargaining position, and that Ford might use its buying power to demand lower prices for the engines. Given the risks involved, the supplier declines to make the investment in specialized equipment.

Now consider Ford's position. Ford might reason that if it outsources production of these systems to an outside supplier, it might become too dependent on that supplier for a vital input. Because specialized equipment is required to produce the engine systems, Ford cannot switch its order to other suppliers. Ford realizes that this increases the bargaining power of the supplier, which then might demand higher prices.

The situation of *mutual dependence* that would be created by the investment in specialized assets makes Ford hesitant to allow outside suppliers to make the product and makes suppliers hesitant to undertake such a risky investment. The problem is a lack of trust—neither Ford nor the supplier can trust the other to operate fairly in this situation. The lack of trust arises from the risk of **holdup**—that is, being taken advantage of by a trading partner *after* the investment in specialized assets has been made.¹⁹ Because of this risk, Ford reasons that the only cost-effective way to get the new engine systems is to invest in specialized assets and manufacture the engine in-house.

To generalize from this example, if achieving a competitive advantage requires one company to make investments in specialized assets so it can trade with another, *the risk of holdup* may serve as a deterrent, and the investment may not take place. Consequently, the potential for higher profitability from specialization will be lost. To prevent such loss, companies vertically integrate into adjacent stages in the value chain. Historically, the problems surrounding specific assets have driven automobile companies to vertically integrate backward into the production of component parts, steel companies to vertically integrate backward into the production of iron, computer companies to vertically integrate backward into chip production, and aluminum companies to vertically integrate backward into bauxite mining. Often such firms practice **tapered integration**, whereby the firm makes some input and buys some input. Purchasing part or most of its needs for a given input from suppliers enables the firm to tap the advantages of the market (e.g., choosing from suppliers that are competing to improve quality or lower the cost of the product). At the same time, meeting some of its needs for input through internal production improves the firm's bargaining power by reducing the likelihood of holdup by its supplier. A firm that is engaged in production of an input is also better able to evaluate the cost and quality of external suppliers of that input.²⁰

holdup

When a company is taken advantage of by another company it does business with after it has made an investment in expensive specialized assets to better meet the needs of the other company.

tapered integration

When a firm uses a mix of vertical integration and market transactions for a given input. For example, a firm might operate limited semiconductor manufacturing while also buying semiconductor chips on the market. Doing so helps to prevent supplier holdup (because the firm can credibly commit to not buying from external suppliers) and increases its ability to judge the quality and cost of purchased supplies.

Enhancing Product Quality By entering industries at other stages of the value-added chain, a company can often enhance the quality of the products in its core business and strengthen its differentiation advantage. For example, the ability to control the reliability and performance of complex components such as engine and transmission systems may increase a company's competitive advantage in the luxury-sedan market and enable it to charge a premium price. Conditions in the banana industry also illustrate the importance of vertical integration in maintaining product quality. Historically, a problem facing food companies that import bananas has been the variable quality of delivered bananas, which often arrive on the shelves of U.S. supermarkets too ripe or not ripe enough. To correct this problem, major U.S. food companies such as Del Monte have integrated backward and now own banana plantations, putting them in control of the banana supply. As a result, they can distribute and sell bananas of a standard quality at the optimal time to better satisfy customers. Knowing they can rely on the quality of these brands, customers are willing to pay more for them. Thus, by vertically integrating backward into plantation ownership, banana companies have built customer confidence, which has in turn enabled them to charge a premium price for their product.

The same considerations can promote forward vertical integration. Ownership of retail outlets may be necessary if the required standards of after-sales service for complex products are to be maintained. For example, in the 1920s, Kodak owned the retail outlets that distributed its photographic equipment because the company felt that few existing retail outlets had the skills necessary to sell and service its complex equipment. By the 1930s, new retailers had emerged that could provide satisfactory distribution and service for Kodak products, so it left the retail industry.

McDonald's has also used vertical integration to protect product quality and increase efficiency. In the 1990s, McDonald's faced a problem: After decades of rapid growth, the fast-food market was beginning to show signs of saturation. McDonald's responded to the slowdown by rapidly expanding abroad. In 1980, 28% of the chain's new restaurant openings were abroad; in 1990, it was 60%, and by 2000, 70%. In 2014, McDonald's had 14,350 restaurants in the United States, and 21,908 restaurants in 110 countries outside the United States.²¹ Replication of its value creation skills was the key to successful global expansion and spurred the growth of McDonald's in the countries and regions in which it operates. McDonald's U.S. success was built on a formula of close relations with suppliers, nationwide marketing might, and tight control over store-level operating procedures.

The biggest problem McDonald's has faced is replicating its U.S. supply chain in other countries; its domestic suppliers are fiercely loyal to the company because their fortunes are closely linked to its success. McDonald's maintains very rigorous specifications for all the raw ingredients it uses—the key to its consistency and quality control. Outside of the United States, however, McDonald's has found suppliers far less willing to make the investments required to meet its specifications. In Great Britain, for example, McDonald's had problems getting local bakeries to produce the hamburger bun. After experiencing quality problems with two local bakeries, McDonald's had to vertically integrate backward and build its own bakeries to supply its British stores. When McDonald's decided to operate in Russia, it found that local suppliers lacked the capability to produce ingredients of the quality it demanded. It was then forced to vertically integrate through the local food industry on an epic scale, importing potato seeds and bull semen and indirectly managing dairy farms, cattle ranches,

and vegetable plots. It also needed to construct the world's largest food-processing plant, at great cost. In South America, McDonald's purchased huge ranches in Argentina upon which it could raise its own cattle. In short, vertical integration has allowed McDonald's to protect product quality and reduce its global cost structure.²²

Improved Scheduling Sometimes important strategic advantages can be obtained when vertical integration makes it quicker, easier, and more cost-effective to plan, coordinate, and schedule the transfer of a product such as raw materials or component parts between adjacent stages of the value-added chain.²³ Such advantages can be crucial when a company wants to realize the benefits of just-in-time (JIT) inventory systems. For example, in the 1920s, Ford profited from the tight coordination and scheduling that backward vertical integration made possible. Ford integrated backward into steel foundries, iron ore shipping, and iron ore production—it owned mines in Upper Michigan. Deliveries at Ford were coordinated to such an extent that iron ore unloaded at Ford's steel foundries on the Great Lakes was turned into engine blocks within 24 hours, which lowered Ford's cost structure.

9-4b Problems with Vertical Integration

Vertical integration can often be used to strengthen a company's business model and increase profitability. However, the opposite can occur when vertical integration results in (1) an increasing cost structure, (2) disadvantages that arise when technology is changing fast, (3) disadvantages that arise when demand is unpredictable, and (4) mismatches in optimal scale. Sometimes these disadvantages are so great that vertical integration, rather than increasing profitability, may actually reduce it—in which case a company engages in **vertical disintegration** and exits industries adjacent to its core industry in the industry value chain. For example, Ford, which was highly vertically integrated, sold all its companies involved in mining iron ore and making steel when more efficient and specialized steel producers emerged that were able to supply lower-priced steel.

vertical disintegration

When a company decides to exit industries, either forward or backward in the industry value chain, to its core industry to increase profitability.

Increasing Cost Structure Although vertical integration is often undertaken to lower a company's cost structure, it can raise costs if, over time, a company makes mistakes such as continuing to purchase inputs from company-owned suppliers when low-cost independent suppliers that can supply the same inputs exist. For decades, for example, GM's company-owned suppliers made more than 60% of the component parts for its vehicles; this figure was far higher than that for any other major carmaker, which is why GM became such a high-cost carmaker. In the 2000s, it vertically disintegrated by selling off many of its largest component operations, such as Delphi, its electrical components supplier. Thus, vertical integration can be a major disadvantage when company-owned suppliers develop a higher cost structure than those of independent suppliers. Why would a company-owned supplier develop such a high cost structure?

In this example, company-owned or in-house suppliers know that they can always sell their components to the car-making divisions of their company—they have a “captive customer.” Because company-owned suppliers do not have to compete with independent, outside suppliers for orders, they have much less *incentive* to look for new ways to reduce operating costs or increase component quality. Indeed, in-house suppliers simply pass on cost increases to the car-making divisions in the

transfer pricing

The price that one division of a company charges another division for its products, which are the inputs the other division requires to manufacture its own products.

form of higher **transfer prices**, the prices one division of a company charges other divisions for its products. Unlike independent suppliers, which constantly need to increase their efficiency to protect their competitive advantage, in-house suppliers face no such competition and the resulting rising cost structure reduces a company's profitability.

The term *bureaucratic costs* refers to the costs of solving the transaction difficulties that arise from managerial inefficiencies and the need to manage the handoffs or exchanges between business units to promote increased differentiation, or to lower a company's cost structure. Bureaucratic costs become a significant component of a company's cost structure because considerable managerial time and effort must be spent to reduce or eliminate managerial inefficiencies such as those that result when company-owned suppliers lose their incentive to increase efficiency or innovation.

Technological Change When technology is changing fast, vertical integration may lock a company into an old, inefficient technology and prevent it from changing to a new one that would strengthen its business model.²⁴ Consider Sony, which had integrated backward to become the leading manufacturer of now-outdated cathode ray tubes (CRTs) used in TVs and computer monitors. Because Sony was locked into the outdated CRT technology, it was slow to recognize that the future was in liquid crystal display (LCD) flat screens and it did not exit the CRT business. Sony's resistance to change in technology forced it to enter into a strategic alliance with Samsung to supply the LCD screens that are used in its BRAVIA TVs. As a result, Sony lost its competitive advantage and experienced a major loss in TV market share. Thus, vertical integration can pose a serious disadvantage when it prevents a company from adopting new technology, or changing its suppliers or distribution systems to match the requirements of changing technology.

Demand Unpredictability Suppose the demand for a company's core product, such as cars or washing machines, is predictable, and the company knows how many units it needs to make each month or year. Under these conditions, vertical integration allows a company to schedule and coordinate efficiently the flow of products along the industry value-added chain, which may result in major cost savings. However, suppose the demand for cars or washing machines wildly fluctuates and is unpredictable. If demand for cars suddenly plummets, the carmaker may find itself burdened with warehouses full of component parts it no longer needs, which is a major drain on profitability—something that has hurt major carmakers during the recent recession. Thus, vertical integration can be risky when demand is unpredictable because it is hard to manage the volume or flow of products along the value-added chain.

For example, a PC maker might vertically integrate backward to acquire a supplier of memory chips so that it can make exactly the number of chips it needs each month. However, if demand for PCs falls because of the popularity of mobile computing devices, the PC maker finds itself locked into a business that is now inefficient because it is not producing at full capacity, and therefore its cost structure starts to rise. In general, high-speed environmental change (e.g., technological change, changing customer demands, and major shifts in institutional norms or competitive dynamics) provides a disincentive for integration, as the firm's asset investments are at greater risk of rapid obsolescence.²⁵ It is clear that strategic managers must carefully assess the advantages and disadvantages of expanding the boundaries of their company by entering adjacent industries, either backward (upstream) or forward (downstream), in the industry

value-added chain. Moreover, although the decision to enter a new industry to make crucial component parts may have been profitable in the past, it may make no economic sense today because so many low-cost, global, component parts suppliers exist that compete for the company's business. The risks and returns on investing in vertical integration must be continually evaluated, and companies should be as willing to vertically disintegrate as to vertically integrate to strengthen their core business model.

Mismatches in Optimal Scale Even in situations where it appears that vertical integration might improve product quality or provide other benefits, it can be inefficient to vertically integrate if the new business has a higher minimum efficient scale than could be reasonably utilized by the current business. Consider, for example, a company like Lime, which operates a dockless electric scooter sharing service. Lime leaves electric scooters in locations where it believes customers want to use them, and customers use an application on their smartphone to unlock the scooter and pay for the rental. The battery on a typical Lime electric scooter has about a 25-mile range, and requires many hours to fully charge. Lime pays “juicers”—people who sign up to be independent contractors—to pick up the scooters, charge them overnight, and drop them off in locations designated by Lime. Because many people are riding Lime's scooters during the day, often for commuting purposes, their batteries are discharged much more quickly than the average consumer's scooter. Thus, many scooters spend a large portion of the day sitting idle because their batteries are dead. For Lime, a scooter with a fast-charging battery with a longer range would significantly enhance the value of service while also streamlining its operations. However, it is not feasible for Lime to backward vertically integrate into manufacturing scooters or batteries because production because both have very large fixed costs, and their minimum efficient scale (i.e., the size at which they could compete efficiently against competitors) is very large. A minimum, efficient, scale scooter manufacturing plant, for example, would produce more scooters than Lime needs, meaning that it would have to find other buyers of its longer-range scooters, which would likely include competing electric scooter services. Instead, Lime opts to buy scooters that are not optimized for its purposes.

9-5 ALTERNATIVES TO VERTICAL INTEGRATION: COOPERATIVE RELATIONSHIPS

Is it possible to obtain the differentiation and cost-savings advantages associated with vertical integration without having to bear the problems and costs associated with this strategy? In other words, is there another corporate-level strategy that managers can use to obtain the advantages of vertical integration while allowing other companies to perform upstream and downstream activities? Today, companies have found that they can realize many of the benefits associated with vertical integration by entering into *long-term cooperative relationships* with companies in industries along the value-added chain, also known as **quasi integration**. Such moves could include, for example, sharing the expenses of investment in production assets or inventory, or making long-term supply or purchase guarantees.

quasi integration

The use of long-term relationships, or investment in some activities normally performed by suppliers or buyers, in place of full ownership of operations that are backward or forward in the supply chain.

9-5a Short-Term Contracts and Competitive Bidding

Many companies use short-term contracts that last for a year or less to establish the price and conditions under which they will purchase raw materials or components from suppliers or sell their final products to distributors or retailers. A classic example is the carmaker that uses a *competitive bidding strategy*, in which independent component suppliers compete to be chosen to supply a particular component, such as brakes, made to agreed-upon specifications, at the lowest price. For example, GM typically solicits bids from global suppliers to produce a particular component and awards a 1-year contract to the supplier that submits the lowest bid. At the end of the year, the contract is once again put out for competitive bid, and once again the lowest-cost supplier is most likely to win the bid.

The advantage of this strategy for GM is that suppliers are forced to compete over price, which drives down the cost of its components. However, GM has no long-term commitment to outside suppliers—and it drives a hard bargain. For this reason, suppliers are unwilling to make the expensive, long-term investments in specialized assets that are required to produce higher-quality or better-designed component parts over time. In addition, suppliers will be reluctant to agree upon the tight scheduling that makes it possible to use a JIT inventory system because this may help GM lower its costs but will increase a supplier's costs and reduce its profitability.

As a result, short-term contracting does not result in the specialized investments that are required to realize differentiation and cost advantages *because it signals a company's lack of long-term commitment to its suppliers*. Of course, this is not a problem when there is minimal need for cooperation, and specialized assets are not required to improve scheduling, enhance product quality, or reduce costs. In this case, competitive bidding may be optimal. However, when there is a need for cooperation—something that is becoming increasingly significant today—the use of short-term contracts and competitive bidding can be a serious drawback.

9-5b Strategic Alliances and Long-Term Contracting

strategic alliances

Long-term agreements between two or more companies to jointly develop new products or processes that benefit all companies that are a part of the agreement.

Unlike short-term contracts, **strategic alliances** between buyers and suppliers are long-term, cooperative relationships; both companies agree to make specialized investments and work jointly to find ways to lower costs or increase product quality so that they both gain from their relationship. A strategic alliance becomes a *substitute* for vertical integration because it creates a relatively stable, long-term partnership that allows both companies to obtain the same kinds of benefits that result from vertical integration. However, it also avoids the problems (bureaucratic costs) that arise from managerial inefficiencies that result when a company owns its own suppliers, such as those that arise because of a lack of incentives, or when a company becomes locked into an old technology even when technology is rapidly changing.

Consider the cooperative relationships that many Japanese carmakers have with their component suppliers (the *keiretsu* system), often established decades ago. Japanese carmakers and suppliers cooperate to find ways to maximize the value added they can obtain from being a part of adjacent stages of the value chain; for example, by jointly implementing JIT inventory system or sharing future component-parts designs to improve quality and lower assembly costs. As part of this process, suppliers make substantial investments in specialized assets to better serve the needs of a particular carmaker, and the cost savings that result are shared. Thus, Japanese carmakers have

been able to capture many of the benefits of vertical integration without having to enter the component industry.

Similarly, component suppliers also benefit because their business and profitability grow as the companies they supply grow, and they can invest their profits in investing in ever more specialized assets.²⁶ An interesting example of this is the computer chip outsourcing giant Taiwan Semiconductor Manufacturing Company (TSMC), which makes chips for many companies such as NVIDIA, Acer, and AMD. The cost of investing in the machinery necessary to build a state-of-the-art chip factory can exceed \$10 billion. TSMC is able to make this huge (risky) investment because it has developed cooperative, long-term relationships with its computer-chip partners. All parties recognize that they will benefit from this outsourcing arrangement, which does not preclude hard bargaining between TSMC and the chip companies, because all parties want to maximize their profits and reduce their risks.

9-5c Modularity and Platform Competition

As noted in Chapter 7, in many industries, a product is only valuable if there are a range of complements available for it. A smartphone operating system, for example, is only as good as the applications available, and a music streaming service is only as valuable as the number and quality of tracks it offers. A firm must decide which of these to produce itself (treating them as features), which to buy and include with the product (treating them as supplies), and which to count on the market providing (treating them as third-party complements). This is often a difficult decision; it may be impractical for a firm to attempt to meet these needs itself, but if the market does not provide adequate complements, its product may fail. In such a case, firms will often use *modularity* and contracts with third-party complements providers to create a *platform ecosystem* where many different firms contribute to the product system.²⁷

To understand **modularity**, consider a product like a bicycle: A bicycle is a bundle of components that includes a frame, a gear shifting system, a headset, and more. Some of these components can be bought separately and assembled by the user, and some are typically bought preassembled. Products may be made increasingly modular both by expanding the range of compatible components (increasing the range of possible product configurations), and by uncoupling integrated functions within components (making the product modular at a finer level) (see Figure 9.3). For example, smartphone manufacturers might originally only offer proprietary phones where they have produced both the hardware and software, and integrate them tightly into a single product configuration (Figure 9.3, panel A). However, greater market demand for flexibility might induce manufacturers to start offering phones with a few different configurations. If customers prefer to be able to combine phones with accessories or applications from other producers, smartphone makers may “open” their systems up, creating a **standardized interface** that enables other developers to create products that are compatible with the phones (Figure 9.3, panel B). Smartphone makers may even decide to uncouple their operating systems from the hardware so that consumers can use the operating system on devices made by other manufacturers (Figure 9.3, panel C). In each of these stages, the product has become increasingly modular.

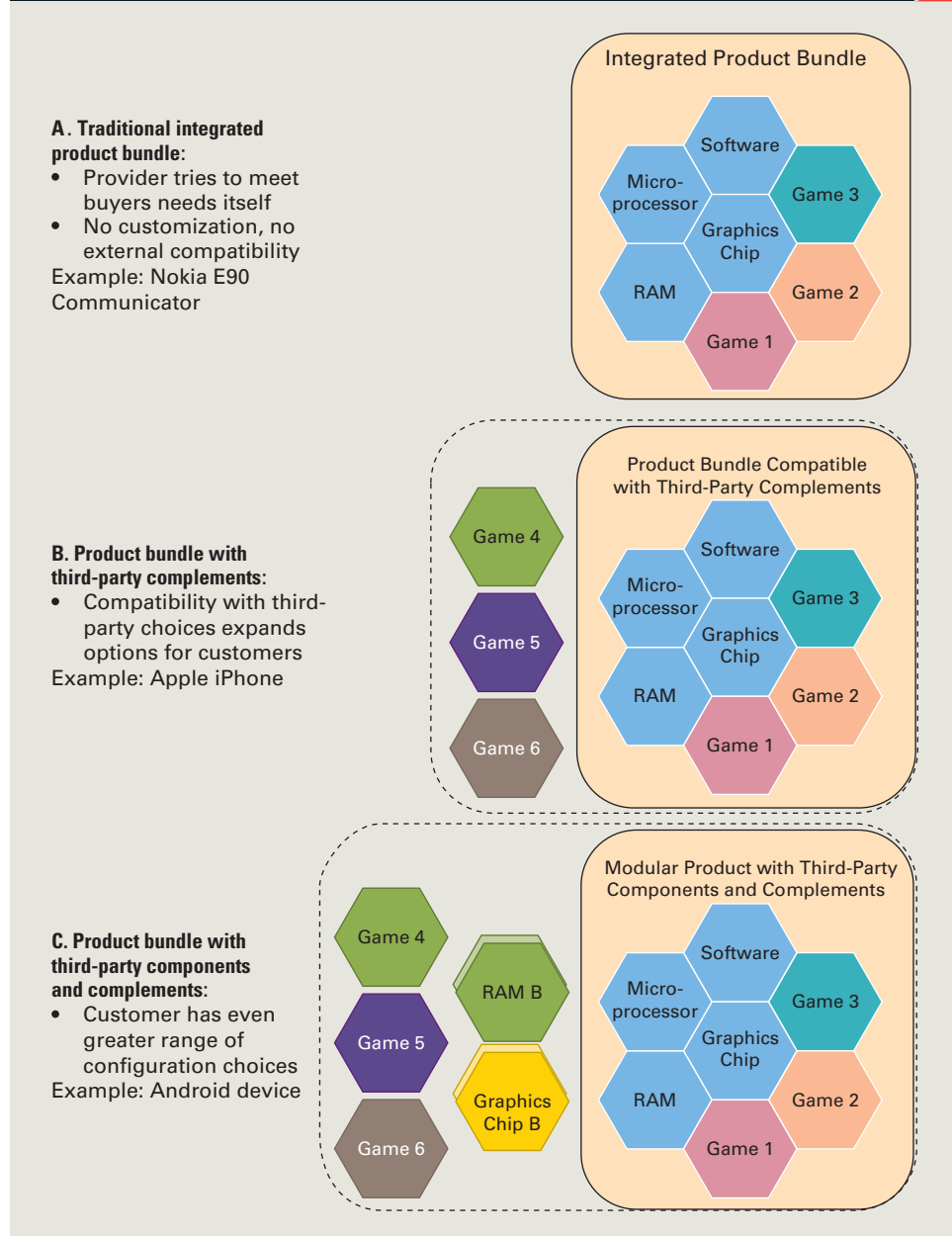
The majority of products are modular at some level. For example, when you buy a car, you can often choose an engine size, upholstery options, automatic steering or transmission, stereo system, tires, roof racks, security systems, etc., but the automaker assembles the configuration for you.

modularity

The degree to which a system's components can be separated and recombined.

standardized interface

A point of interconnection between two systems or parts of a system that adheres to a standard to ensure those systems or parts can connect or exchange information, energy, or other resources, e.g. a USB slot on a computer enables it to communicate and power a range of peripherals; USB is a type of standardized interface.

Figure 9.3 Modularity and Platform Ecosystems

Tightly integrated (i.e., nonmodular) product systems and modular systems have different advantages. A tightly integrated product system might have components that are customized to work together, which may enable a level of performance that more standardized components cannot achieve. The producer of a tightly integrated system also has more control over the end product, which can enable it to better monitor quality and reliability. For years, this was the reason Steve Jobs gave for not making

Apple computers as modular as Windows-based computers—he believed that by controlling all of the components and most of the software, Apple computers could achieve greater functionality and reliability.²⁸ An integrated product may also be more attractive to a customer that does not want to choose or assemble components.

Modular products, on the other hand, often offer more choices over function, design, scale, and other features, enabling the customer to choose a product system that more closely suits their needs and preferences.²⁹ Second, because components are re-used in different combinations, this can achieve product variety while still allowing scale economies in manufacturing the individual components. This is known as “economies of substitution.”³⁰

Modularity becomes increasingly valuable in a product system when there are diverse technological options available to be recombined and heterogeneous customer preferences.³¹ For example, there is a very wide range of applications available for smartphones, and customers are very heterogeneous in the applications they want on their smartphones. This increases the value of being able to pick and choose your own customized mix of applications that go on your smartphone. This example also reveals how pressure for modularity can lead to platform ecosystems.

In a **platform ecosystem**, some core part of a product (such as a videogame console or music streaming service) mediates the relationship between a wide range of other components or complements (such as videogames or music) and prospective end-users.³² A platform ecosystem’s boundaries can be well defined, with a stable set of members dedicated wholly to that platform, or they can be amorphous and changing, with members entering and exiting freely, and participating in multiple platforms simultaneously. For example, consider the difference between the television/movie streaming services HBO on Demand and Amazon Prime. HBO on Demand exists to serve only HBO content up to consumers. The shows available are tightly controlled, and there is limited entry and exit of show producers. The Amazon Prime ecosystem is much more open. In fact, just about any content producer—including individual, independent filmmakers—can make their content available on Amazon Prime.

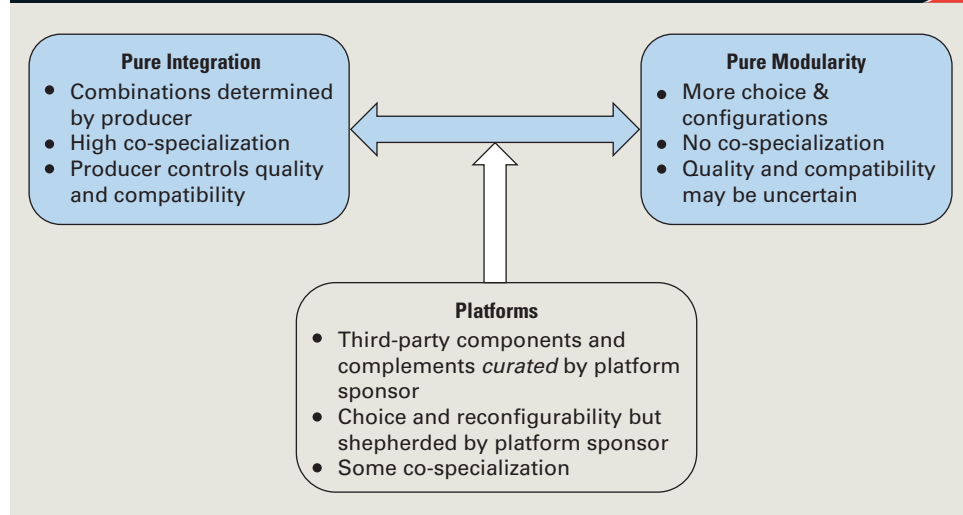
Because it is the overall appeal of the ecosystem that attracts end-users to the platform, the success of individual members depends, at least in part, upon the success of other members of the ecosystem—even those with which they may be simultaneously competing. Furthermore, in many platforms there are switching costs that make it difficult or costly to change ecosystems. Platforms and their complements providers often make investments in co-specialization or sign exclusivity agreements that bind them into stickier, longer-term relationships than the market contracts used in typical reseller arrangements. A video game that has been made for the Microsoft Xbox, for example, cannot be played on a PlayStation console unless a new version of it is made (and the game producer may have signed a contract with Microsoft that prohibits this).

A platform ecosystem is thus characterized by relationships that are neither as independent as arms-length market contracts, nor as dependent as those within a hierarchical organization. It is, in essence, a hybrid organizational form.³³ It strikes a compromise between the loose coupling of a purely modular system, and the tight coupling of a traditional integrated product. It enables customers to mix-and-match some components and complements, while still enabling some co-specialization and curation of the complements and components available for the system (see Figure 9.4).

Once we understand that platforms are like a compromise between pure modularity and pure integration, it becomes easier to understand when platforms will be

platform ecosystem

“Ecosystem,” a contraction of “ecological” and “system,” refers to a system where elements share some form of mutual dependence. A platform in this context is a stable core that mediates the relationship between a range of components, complements, and end users. Thus “platform ecosystem” refers to a system of mutually dependent entities mediated by a stable core.

Figure 9.4 Platforms as a Compromise Between Pure Modularity and Pure Integration

desirable in a market. First, platforms will be more valuable than a tightly integrated product when (a) customers are diverse and want more choices than a single firm can provide, (b) when third-party options are diverse and high quality, (c) when compatibility with third-party products can be made seamless without integration, and/or (d) when the platform sponsor is powerful enough that it can retain control over quality and the overall product architecture without producing the complements itself. Looking at it from the other direction, platforms will be more valuable than a purely modular system when (a) complements are nonroutine purchases with uncertainty (and thus the customer prefers to have some shepherding by the platform sponsor), (b) when some integration between the platform and its complements provides performance advantages, and/or (c) when important components of the ecosystem require subsidization (i.e., the market is unlikely to provide all the complements the end customer needs at adequate quality or value).

Videogame systems are an iconic example of platform ecosystems. Consoles need to launch with high-quality games. Since it is difficult to induce game developers to make games for a console that has not yet been widely adopted, most game console producers must produce games themselves (or subsidize their production) to ensure that high-quality games are available when the console launches. On the other hand, end users want more games than just those produced by the console producer, so console producers like Microsoft, Sony, and Nintendo also license third-party developers to produce games for their consoles. They carefully screen the licensed games for quality and compatibility, and they may require the game developers to sign exclusivity agreements or to customize the games for the console. The console maker may also manage the end-users' awareness and perception of the games in the ecosystem by giving "Best of" awards to particular games, by bundling particular games with the console at point of purchase, or by featuring particular games in its marketing. These strategies enable the console producer to actively manage the overall value created by its ecosystem.³⁴

9-5d Building Long-Term Cooperative Relationships

How does a company create a long-term strategic alliance with another company when the fear of holdup exists, and the possibility of being cheated arises if one company makes a specialized investment with another company? How do companies such as GM or Nissan manage to develop profitable, enduring relationships with their suppliers?

There are several strategies companies can adopt to promote the success of a long-term, cooperative relationship and lessen the chance that one company will renege on its agreement and cheat the other. One strategy is for the company that makes the specialized investment to demand a *hostage* from its partner. Another is to establish a *credible commitment* from both companies that will result in a trusting, long-term relationship.³⁵

Hostage Taking **Hostage taking** is essentially a means of guaranteeing that each partner will keep its side of the bargain. The cooperative relationship between Boeing and Northrop Grumman illustrates this type of situation. Northrop is a major sub-contractor for Boeing's commercial airline division, providing many components for its aircraft. To serve Boeing's special needs, Northrop made substantial investments in specialized assets, and, in theory, because of this investment, has become dependent on Boeing—which can threaten to change orders to other suppliers as a way of driving down Northrop's prices. In practice, Boeing is highly unlikely to change suppliers because it is, in turn, a major supplier to Northrop's defense division and provides many parts for its Stealth aircraft; it also has made major investments in specialized assets to serve Northrop's needs. Thus, the companies are *mutually dependent*; each company holds a hostage—the specialized investment the other has made. Thus, Boeing is unlikely to renege on any pricing agreements with Northrop because it knows that Northrop would respond the same way.

hostage taking

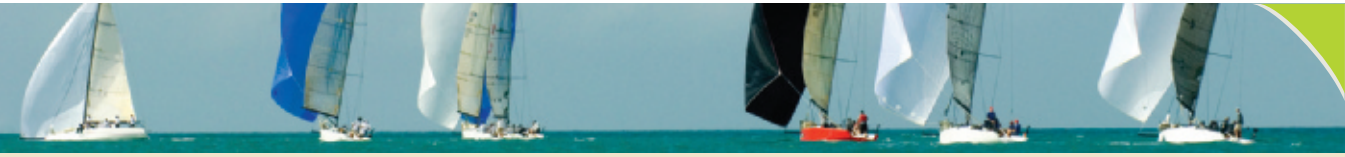
A means of exchanging valuable resources to guarantee that each partner to an agreement will keep its side of the bargain.

Credible Commitments A **credible commitment** is a believable promise or pledge to support the development of a long-term relationship between companies. Consider the way GE and IBM developed such a commitment. GE is a major supplier of advanced semiconductor chips to IBM, and many of the chips are customized to IBM's requirements. To meet IBM's specific needs, GE has had to make substantial investments in specialized assets that have little other value. As a consequence, GE is dependent on IBM and faces a risk that IBM will take advantage of this dependence to demand lower prices. In theory, IBM could back up its demand by threatening to switch its business to another supplier. However, GE reduced this risk by having IBM enter into a contractual agreement that committed IBM to purchase chips from GE for a 10-year period. In addition, IBM agreed to share the costs of the specialized assets needed to develop the customized chips, thereby reducing the risks associated with GE's investment. Thus, by publicly committing itself to a long-term contract and putting money into the chip development process, IBM made a *credible commitment* that it would continue to purchase chips from GE. When a company violates a credible commitment with its partners, the results can be dramatic, as discussed in Strategy in Action 9.2.

credible commitment

A believable promise or pledge to support the development of a long-term relationship between companies.

Maintaining Market Discipline Just as a company pursuing vertical integration faces the problem that its company-owned suppliers might become inefficient, a company that forms a strategic alliance with an independent component supplier runs the risk that its alliance partner might become inefficient over time, resulting in higher component costs or lower quality. This also happens because the outside supplier knows it does not need



9.2 STRATEGY IN ACTION

eBay's Changing Commitment to Its Sellers

Since its founding in 1995, eBay has cultivated good relationships with the millions of sellers that advertise their goods for sale on its website. Over time, however, to increase its revenues and profits, eBay has steadily increased the fees it charges sellers to list their products on its sites, to insert photographs, to use its PayPal online payment service, and for other additional services. Although this has caused grumbling among sellers because it reduces their profit margins, eBay increasingly engages in extensive advertising to attract millions more buyers to its website, so sellers can receive better prices and increase their total profits. As a result, they remained largely satisfied with eBay's fee structure.

These policies changed when a new CEO, John Donohue, took the place of eBay's long-time CEO, Meg Whitman, who had built the company into a dot.com giant. By 2008, eBay's profits had not increased rapidly enough to keep its investors happy, and its stock price plunged. To increase performance, one of Donohue's first moves was to announce a major overhaul of eBay's fee structure and feedback policy. The new fee structure would reduce upfront seller listing costs but increase back-end commissions on completed sales and payments. For smaller sellers that already had thin profit margins, these fee hikes were painful. In addition, in the future, eBay announced it would block sellers from leaving negative feedback about buyers—feedback such as buyers didn't pay for the goods they purchased, or buyers took too long to pay for goods. The feedback system that eBay had originally developed had been a major source of its success; it allowed buyers to be certain they were dealing with reputable sellers, and vice versa. All sellers and buyers have feedback scores that provide them with a reputation as good—or bad—individuals with whom to do business, and these scores helped reduce the risks involved in online transactions. Donohue claimed this change was implemented in order to improve the buyer's experience because many

buyers had complained that if they left negative feedback on a seller, the seller would in turn leave negative feedback for the buyer.

Together, however, throughout 2009, these changes resulted in conflict between eBay and its millions of sellers, who perceived they were being harmed by these changes. Their bad feelings resulted in a revolt. Blogs and forums all over the Internet were filled with messages claiming that eBay had abandoned its smaller sellers and was pushing them out of business in favor of high-volume "powersellers" who contributed more to eBay's profits. Donohue and eBay received millions of hostile e-mails, and sellers threatened they would do business elsewhere, such as on Amazon.com and Yahoo!, two companies that were both trying to break into eBay's market. Sellers also organized a 1-week boycott of eBay during which they would list no items with the company to express their dismay and hostility! Many sellers did shut down their eBay online storefronts and moved to Amazon.com, which claimed in 2011 that its network of sites had overtaken eBay in monthly unique viewers or "hits" for the first time. The bottom line was that the level of commitment between eBay and its sellers had fallen dramatically; the bitter feelings produced by the changes eBay had made were likely to result in increasing problems that would hurt its future performance.

Realizing that his changes had backfired, Donohue reversed course and eliminated several of eBay's fee increases and revamped its feedback system; sellers and buyers can now respond to one another's comments in a fairer way. These changes did improve hostility and smooth over the bad feelings between sellers and eBay, but the old "community relationship" it had enjoyed with sellers in its early years largely disappeared. As this example suggests, finding ways to maintain cooperative relationships—such as by testing the waters in advance and asking sellers for their reactions to fee and feedback changes—could have avoided many of the problems that arose.

Source: www.ebay.com.

to compete with other suppliers for the company's business. Consequently, a company seeking to form a mutually beneficial, long-term, strategic alliance needs to possess some kind of power that it can use to discipline its partner should the need arise.

A company holds two strong cards over its supplier partner. First, all contracts, including long-term contracts, are periodically renegotiated, usually every 3 to 5 years, so the supplier knows that if it fails to live up to its commitments, its partner may refuse to renew the contract. Second, many companies that form long-term relationships with suppliers use a **parallel sourcing policy**—that is, they enter into long-term contracts with at least *two* suppliers for the *same* component (this is Toyota's policy, for example).³⁶ This arrangement protects a company against a supplier that adopts an uncooperative attitude, because the supplier knows that if it fails to comply with the agreement, the company can switch *all* its business to its other supplier partner. When both the company and its suppliers recognize that the parallel sourcing policy allows a supplier to be replaced at short notice, most suppliers behave because the policy brings market discipline into their relationship.

parallel sourcing policy

A policy in which a company enters into long-term contracts with at least two suppliers for the same component to prevent any incidents of opportunism.

The growing importance of JIT inventory systems as a way to reduce costs and enhance quality and differentiation is increasing the pressure on companies to form strategic alliances in a wide range of industries. The number of strategic alliances formed each year—especially global strategic alliances—is increasing, and the popularity of vertical integration is falling because so many low-cost global suppliers exist in countries such as Malaysia, Korea, and China.

9-6 STRATEGIC OUTSOURCING

Vertical integration and strategic alliances are alternative ways of managing the value chain *across industries* to strengthen a company's core business model. However, just as low-cost suppliers of component parts exist, so today many *specialized companies* exist that can perform one of a company's *own value-chain activities* in a way that contributes to a company's differentiation advantage or that lowers its cost structure. For example, Apple found that using Foxconn factories in China to assemble its iPhones enabled it to not only benefit by lower costs, but to also much more rapidly incorporate design changes and scale up production.

Strategic outsourcing is the decision to allow one or more of a company's value-chain activities or functions to be performed by independent specialist companies that focus all their skills and knowledge on just one kind of function, such as the manufacturing function, or on just one kind of activity that a function performs. For example, many companies outsource the management of their pension systems while keeping other human resource management (HRM) activities within the company. When a company chooses to outsource a value-chain activity, it is choosing to focus on a *fewer* number of value creation activities to strengthen its business model.

strategic outsourcing

The decision to allow one or more of a company's value-chain activities to be performed by independent, specialist companies that focus all their skills and knowledge on just one kind of activity to increase performance.

There has been a clear move among many companies to outsource activities that managers regard as being “noncore” or “nonstrategic,” meaning they are not a source of a company's distinctive competencies and competitive advantage.³⁷ The vast majority of companies outsource manufacturing or some other value-chain activity to domestic or overseas companies today; some estimates are that over 60% of all global product manufacturing is outsourced to manufacturing specialists because of pressures to reduce costs. Some well-known companies that outsource include Nike, which does not make its athletic shoes; Gap Inc., which does not make its jeans and clothing; and Microsoft,

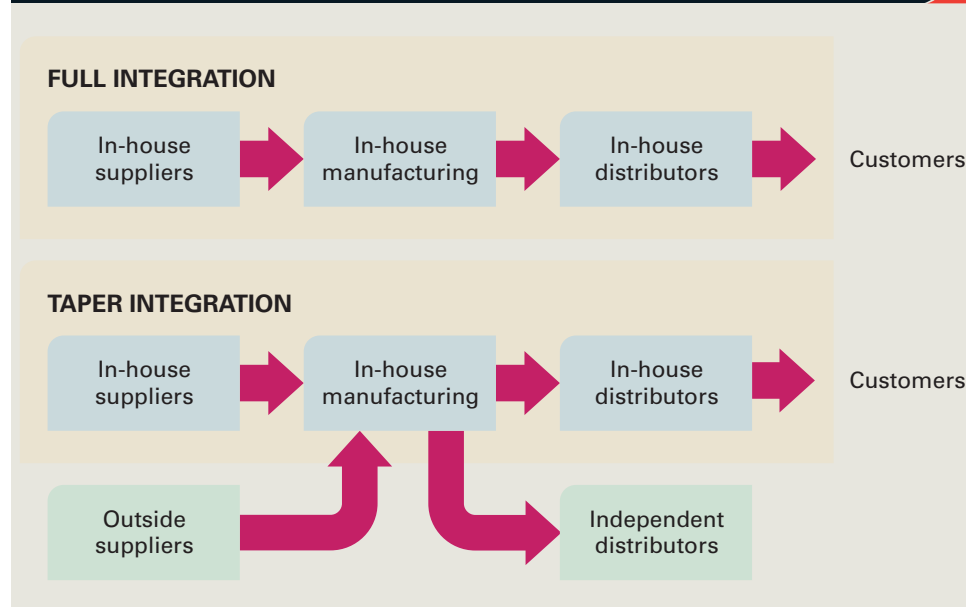
which does not make its Xbox consoles. These products are made under contract at low-cost, global locations by contract manufacturers that specialize in low-cost assembly.

Although manufacturing is the most common form of strategic outsourcing, as we noted earlier, many other kinds of noncore activities are also outsourced. Microsoft has long outsourced its entire customer technical support operation to an independent company, as does Dell. Both companies have extensive customer support operations in India staffed by skilled operatives who are paid a fraction of what their U.S. counterparts earn. British Petroleum outsourced almost all of its human resource function to Exult, a San Antonio company, in a 5-year deal worth \$600 million; a few years later, Exult won a 10-year, \$1.1-billion contract to handle HRM activities for Bank of America's 150,000 employees. Similarly, American Express outsourced its entire IT function to IBM in a 7-year deal worth \$4 billion. In 2006, IBM announced it was outsourcing its purchasing function to an Indian company to save \$2 billion a year, and it has steadily increased its use of outsourcing ever since. For example, in 2009, IBM announced it would lay off 5,000 IT employees in the United States and move their jobs to India.³⁸

Companies engage in strategic outsourcing to strengthen their business models and increase their profitability. The process of strategic outsourcing typically begins with strategic managers identifying the value-chain activities that form the basis of a company's competitive advantage; these are obviously kept within the company to protect them from competitors. Managers then systematically review noncore functions to assess whether independent companies that specialize in those activities can perform them more effectively and efficiently. Because these companies specialize in particular activities, they can perform them in ways that lower costs or improve differentiation. If managers determine that there are differentiation or cost advantages, these activities are outsourced to those specialists.

This is illustrated in Figure 9.5 which shows the primary value-chain activities and boundaries of a company before and after it has pursued strategic outsourcing.

Figure 9.5 Strategic Outsourcing of Primary Value Creation Functions



In this example, the company decided to outsource its production and customer service functions to specialist companies, leaving only R&D and marketing and sales within the company. Once outsourcing has been executed, the relationships between the company and its specialists are then often structured as long-term, contractual relationships, with rich information sharing between the company and the specialist organization to which it has contracted the activity. The term **virtual corporation** has been coined to describe companies that have pursued extensive strategic outsourcing.³⁹

virtual corporation

When companies pursued extensive strategic outsourcing to the extent that they only perform the central value creation functions that lead to competitive advantage.

9-6a Benefits of Outsourcing

Strategic outsourcing has several advantages. It can help a company (1) lower its cost structure, (2) increase product differentiation,⁴⁰ and (3) focus on the distinctive competencies that are vital to its long-term competitive advantage and profitability.

Lower Cost Structure Outsourcing will reduce costs when the price that must be paid to a specialist company to perform a particular value-chain activity is less than what it would cost the company to perform that activity in-house. Specialists are often able to perform an activity at a lower cost than the company because they are able to realize scale economies or other efficiencies not available to the company. For example, performing HRM activities such as managing benefit and pay systems requires a significant investment in sophisticated HRM IT; purchasing these IT systems represents a considerable fixed cost for a single company. But, by aggregating the HRM IT needs of many individual companies, companies that specialize in HRM such as Exult and Paychex can obtain huge economies of scale in IT that no single company could hope to achieve. Some of these cost savings are then passed to the client companies in the form of lower prices, which reduces their cost structure.

A similar dynamic is at work in the contract manufacturing business. Manufacturing specialists like Foxconn, Flextronics, and Jabil Circuit make large capital investments to build efficient-scale manufacturing facilities, but then are able to spread those capital costs over a huge volume of output and drive down unit costs so that they can make a specific product—an Apple iPod or Motorola XOOM, for example—at a lower cost than the company.

Specialists are also likely to obtain the cost savings associated with learning effects much more rapidly than a company that performs an activity just for itself (see Chapter 4 for a review of learning effects). For example, because Flextronics is manufacturing similar products for several different companies, it is able to build up *cumulative* volume more rapidly, and it learns how to manage and operate the manufacturing process more efficiently than any of its clients could. This drives down the specialists' cost structure and also allows them to charge client companies a lower price for a product than if they made that product in-house.

Specialists are also often able to perform activities at lower costs than a specific company because of lower wage rates in those locations. For example, many workers at the Foxconn factory that assembles iPhones in China earn less than \$17 a day; moving production of iPhones to the United States would, according to estimates, raise the cost of an iPhone by \$65.⁴¹ Similarly, Nike outsources the manufacture of its running shoes to companies based in China because of much lower wage rates. Even though wages have doubled in China since 2010, a Chinese-based specialist can assemble shoes (a very labor-intensive activity) at a much lower cost than could be

done in the United States. Although Nike could establish its own operations in China to manufacture running shoes, it would require a major capital investment and limit its ability to switch production to an even lower-cost location later—for example, Vietnam; many companies are moving to Vietnam because wage rates are lower there. So, for Nike and most other consumer goods companies, outsourcing manufacturing activities lowers costs and gives companies the flexibility to switch to a more favorable location if labor costs change is the most efficient way to handle production.

Enhanced Differentiation A company may also be able to differentiate its final products better by outsourcing certain noncore activities to specialists. For this to occur, the *quality* of the activity performed by specialists must be greater than if that same activity was performed by the company. On the reliability dimension of quality, for example, a specialist may be able to achieve a lower error rate in performing an activity precisely because it focuses solely on that activity and has developed a strong, distinctive competency in it. Again, this is one advantage claimed for contract manufacturers. Companies like Flextronics have adopted Six-Sigma methodologies (see Chapter 4) and driven down the defect rate associated with manufacturing a product. This means they can provide more reliable products to their clients and differentiate their products on the basis of their superior quality.

A company can also improve product differentiation by outsourcing to specialists when they stand out on the excellence dimension of quality. For example, the excellence of Dell's U.S. customer service is a differentiating factor, and Dell outsources its PC repair and maintenance function to specialist companies. A customer who has a problem with a product purchased from Dell can get excellent help over the phone, and if there is a defective part in the computer, a maintenance person will be dispatched to replace the part within a few days. The excellence of this service differentiates Dell and helps to guarantee repeat purchases, which is why HP has worked hard to match Dell's level of service quality. In a similar way, carmakers often outsource specific vehicle component design activities such as microchips or headlights, to specialists that have earned a reputation for design excellence in this particular activity.

Focus on the Core Business A final advantage of strategic outsourcing is that it allows managers to focus their energies and their company's resources on performing the core activities that have the most potential to create value and competitive advantage. In other words, companies can enhance their core competencies and are able to push out the value frontier and create more value for their customers. For example, Cisco Systems remains the dominant competitor in the Internet router industry because it has focused on building its competencies in product design, marketing and sales, and supply-chain management. Companies that focus on the core activities essential for competitive advantage in their industry are better able to drive down the costs of performing those activities and thus better differentiate their final products.

9-6b Risks of Outsourcing

Although outsourcing noncore activities has many benefits, there are also risks associated with it such as holdup and the possible loss of important information when an activity is outsourced. Managers must assess these risks before they decide to outsource a particular activity, although, as we discuss the following section, these risks can be reduced when the appropriate steps are taken.

Holdup In the context of outsourcing, holdup refers to the risk that a company will become too dependent upon the specialist provider of an outsourced activity, and that the specialist will use this fact to raise prices beyond some previously agreed-upon rate. As with strategic alliances, the risk of holdup can be reduced by outsourcing to several suppliers and pursuing a parallel sourcing policy, as Toyota and Cisco do. Moreover, when an activity can be performed well by any one of several different providers, the threat that a contract will not be renewed in the future is normally sufficient to keep the chosen provider from exercising bargaining power over the company. For example, although IBM enters into long-term contracts to provide IT services to a wide range of companies, it would be unadvisable for those companies to attempt to raise prices after the contract has been signed because it knows full well that such an action would reduce its chance of getting the contract renewed in the future. Moreover, because IBM has many strong competitors in the IT services business, such as Accenture, Capgemini, and HP, it has a very strong incentive to deliver significant value to its clients.

Increased Competition As firms employ contract manufacturers for production, they help to build an industrywide resource that lowers barriers to entry in that industry. In industries that have efficient, high-quality contract manufacturers, large firms may find that their size no longer affords them protection against competitive pressure; their high investments in fixed assets can become a constraint rather than a source of advantage.⁴² Furthermore, firms that use contract manufacturing pay, in essence, for the contract manufacturer to progress down its own learning curve. Over time, the contract manufacturer's capabilities improve, putting it at a greater manufacturing advantage over the firm. Contract manufacturers in many industries increase the scope of their activities over time, adding a wider range of services (e.g., component purchasing, redesign-for-manufacturability, testing, packaging, and after-sales service) and may eventually produce their own end products in competition with their customers. Contracts to manufacture goods for U.S. and European electronics manufacturers, for example, helped to build the electronics manufacturing giants that exist today in Japan and Korea.

Loss of Information and Forfeited Learning Opportunities A company that is not careful can lose important competitive information when it outsources an activity. For example, many computer hardware and software companies have outsourced their customer technical support function to specialists. Although this makes good sense from a cost and differentiation perspective, it may also mean that a critical point of contact with the customer, and a source of important feedback, is lost. Customer complaints can be useful information and valuable inputs into future product design, but if those complaints are not clearly communicated to the company by the specialists performing the technical support activity, the company can lose the information. Similarly, a firm that manufactures its own products also gains knowledge about how to improve design in order to lower the costs of manufacturing or produce more reliable products. Thus, a firm that forfeits the development of manufacturing knowledge could unintentionally forfeit opportunities for improving its capabilities in product design. The firm risks becoming "hollow."⁴³ These are not arguments against outsourcing; rather, they are arguments for ensuring that there is appropriate communication between the outsourcing specialist and the company. At Dell, for example, a great deal of attention is paid to making sure that the specialist responsible for providing technical support and onsite maintenance collects and communicates all relevant data regarding product failures and other problems to Dell, so that Dell can design better products.

KEY TERMS

horizontal	holdup	289	modularity	295	credible	
integration	tapered integration	289	standardized		commitment	299
acquisition	vertical		interface	295	parallel sourcing	
merger	disintegration	291	platform		policy	301
product bundling	transfer pricing	292	ecosystem	297	strategic outsourcing	301
cross-selling	quasi integration	293	hostage taking	299	virtual corporation	303
vertical integration	strategic alliances	294				

TAKEAWAYS FOR STRATEGIC MANAGERS

1. A corporate strategy should enable a company, or one or more of its business units, to perform one or more of the value creation functions at a lower cost or in a way that allows for differentiation and a premium price.
2. The corporate-level strategy of horizontal integration is pursued to increase the profitability of a company's business model by (a) reducing costs, (b) increasing the value of the company's products through differentiation, (c) replicating the business model, (d) managing rivalry within the industry to reduce the risk of price warfare, and (e) increasing bargaining power over suppliers and buyers.
3. There are two drawbacks associated with horizontal integration: (a) the numerous pitfalls associated with making mergers and acquisitions and (b) the fact that the strategy can bring a company into direct conflict with antitrust authorities.
4. The corporate-level strategy of vertical integration is pursued to increase the profitability of a company's "core" business model in its original industry. Vertical integration can enable a company to achieve a competitive advantage by helping build barriers to entry, facilitating investments in specialized assets, protecting product quality, and helping to improve scheduling between adjacent stages in the value chain.
5. The disadvantages of vertical integration include (a) increasing bureaucratic costs if a company-owned or in-house supplier becomes lazy or inefficient, (b) potential loss of focus on those resources and capabilities that create the most value for the firm, and (c), reduced flexibility to adapt to a fast-changing environment. Entering into a long-term contract can enable a company to realize many of the benefits associated with vertical integration without having to bear the same level of bureaucratic costs. However, to avoid the risks associated with becoming too dependent upon its partner, it needs to seek a credible commitment from its partner or establish a mutual hostage-taking situation.
6. Firms whose products require a wide range of high-quality complements may induce complements to be made by third-party complements providers. Complements providers may enter into a contract with the platform provider (e.g., a license agreement), and the platform provider manages the overall ecosystem to help ensure it creates value for the end customer.
7. The strategic outsourcing of noncore value creation activities may allow a company to lower its costs, better differentiate its products, and make better use of scarce resources, while also enabling it to respond rapidly to changing market conditions. However, strategic outsourcing may have a detrimental effect if the company outsources important value creation activities or becomes too dependent upon the key suppliers of those activities.

DISCUSSION QUESTIONS

1. Under what conditions might horizontal integration be inconsistent with the goal of maximizing profitability?
2. What is the difference between a company's internal value chain and the industry value chain? What is the relationship between vertical integration and the industry value chain?
3. Why was it profitable for GM and Ford to integrate backward into component-parts manufacturing in the past, and why are both companies now buying more of their parts from outside suppliers?
4. When will an industry tend to become dominated by platform ecosystems? What will determine which platform ecosystems are more successful in an industry than others?
5. What value creation activities should a company outsource to independent suppliers? What are the risks involved in outsourcing these activities?
6. What steps would you recommend that a company take to build mutually beneficial, long-term, cooperative relationships with its suppliers?

CLOSING CASE

The Proposed Merger of Comcast and Time Warner Cable

In February 2014, Comcast and Time Warner announced their intention to merge—a deal worth about \$45 billion. The merger would form the largest cable TV and Internet provider in the United States and enable the company to control 27 of the top 30 markets in the United States, and three-fourths of the overall cable market. The merger first had to be approved, however, by the Department of Justice (to assess antitrust concerns) and the Federal Communications Commission (the FCC, which evaluates media deals to assess their influence on the public interest).

Comcast and Time-Warner argued that the deal would not significantly influence competition in the cable industry because the companies operated in nonoverlapping geographic markets, so customers would not be losing an option for getting cable service. They also argued that the merger would enable the companies to make investments that would provide customers with faster broadband, greater network reliability and security, better in-home Wi-Fi, and greater Video on Demand choices. As argued by David Cohen, Comcast's executive vice president, in front of a Senate panel: "I can make you and the members of this committee one absolute commitment,

which is that there is nothing in this transaction that will cause anybody's cable bills to go up."

Opponents of the merger, however, argued that the size and scale of the merged company would make the company dangerously powerful (particularly given that Comcast had recently acquired NBC Universal). Whereas the merger might not change the cable options available for end consumers, it definitely would change the options available for content providers such as Disney and Viacom, or on-demand programming providers such as Netflix, Cinema Now, Hulu, and others. The merged company's overwhelming bargaining power over suppliers could also create cost advantages other TV or Internet providers might be unable to match, thereby enabling it to squeeze competitors out of the market. For example, satellite operator Dish Network argued that the combined company would be able to use its size to force providers of content to lower their prices, and that companies such as Dish Network would be at a competitive disadvantage. Dish also argued that the merged company might undermine video services such as Netflix or Cinema Now by altering streaming speeds either at the "last mile" of the

Internet (where it is delivered into people's homes) or at interconnection points between Internet providers. Netflix noted that Comcast had already required the Netflix to pay "terminating access fees" to ensure that customers did not get a downgraded signal. If the cable companies downgraded the signal for on-demand providers, customers would abandon services like Netflix and turn to on-demand options the cable operators themselves were providing. Senator Al Franken pointed out that when Comcast had acquired NBC Universal in 2010, it had defended that vertical integration move by referring to Time Warner as a fierce competitor. "Comcast can't have it both ways," Franken argued. "It can't say that the existence of competition among distributors, including Time Warner Cable, was a reason to approve the NBC deal in 2010 and then turn around a few years later and say the absence of competition with Time Warner Cable is reason to approve this deal."

For Brian Roberts, CEO and chairman of Comcast, the merger would be yet another milestone in the megadeal acquisition spree he has used to grow the company into a \$68-billion media behemoth.

The deal was a more nuanced proposition for Robert Marcus, who had been CEO at Time Warner Cable for less than 2 months when the deal was announced: He would get a \$79.9-million severance payoff to walk away. The investment bankers advising the deal also stood to rake in \$140 million in fees. After a year of reviewing the proposed merger, the Department of Justice announced that it planned to file an antitrust lawsuit against the merger, citing the reduction of competition in the broadband and cable industries that would result. Thus, on April 24, 2015, Comcast announced that it would no longer seek to acquire Time Warner Cable.

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CASE DISCUSSION QUESTIONS

1. What do you think are the advantages and disadvantages of vertical integration between content producers and distributors?
2. Do you think both of these companies were above minimum efficient scale? If so, what does that suggest about whether and where they would reap savings from the merger?
3. Do you think this merger would have been good for consumers? Why or why not?

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Work," *New York Times*, January 21, 2012, p. 1.

⁴¹Schilling and Steensma, "The Use of Modular Organizational Forms."

⁴²R. Venkatesan, "Strategic Sourcing: To Make or Not to Make," *Harvard Business Review*, November–December 1992, pp. 98–107.

⁴³G. McDermott, R. Mudambi, and R. Parente, "Strategic Modularity at the Architecture of Multinational Firms," *Global Strategy Journal* 3 (2013): 1–7; and MC Becker and F. Zirpoli, "Organizing New Product Development: Knowledge Hollowing-Out and Knowledge Integration—the FIAT auto case," *International Journal of Operations & Production Management* 23 (2003): 1033–1061.

CHAPTER

10

CORPORATE-LEVEL STRATEGY: RELATED AND UNRELATED DIVERSIFICATION

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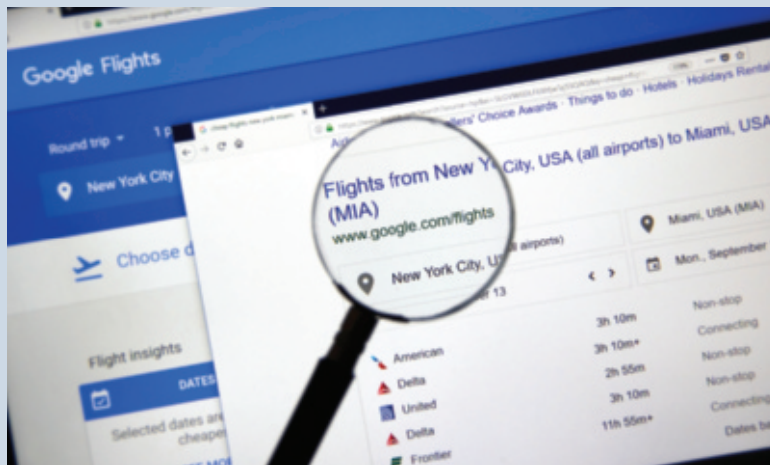


OPENING CASE

Google's Acquisition of ITA Software

On July 10th, 2010, Google announced it would be making a big move into travel search by acquiring ITA Software, a Cambridge Massachusetts-based flight information software company, for about \$700 million. ITA's flight search, pricing and reservation programs were considered the most advanced in the industry, and ITA was licensing its software to major travel search companies like Orbitz, Kayak, TripAdvisor, and Bing Travel.

Travel search companies like Expedia and Orbitz enable direct booking through their sites and charge a referral fee to the airlines. Other sites (like Kayak) just provide search and refer customers to other sites to book. These companies make their revenues from paid



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LEARNING OBJECTIVES

- 10.1 Differentiate between multibusiness models based on related and unrelated diversification
- 10.2 Explain the five primary ways in which diversification can increase company profitability
- 10.3 Discuss the conditions that lead managers to pursue related diversification versus unrelated diversification, and explain why some companies pursue both strategies
- 10.4 Describe the three methods companies use to enter new industries—internal new venturing, acquisitions, and joint ventures—and discuss the advantages and disadvantages associated with each method

advertising from hotels and other travel services. Airlines naturally preferred customers to book directly on their own sites so that they could avoid paying fees, and discount airlines who refused to pay fees often would not be included in search results from direct booking sites like Expedia and Orbitz. Google's flight search, like Kayak's, would direct customers directly to airline reservation sites; it would charge no booking fees.

At the time of the announcement Google was not competing in flight search—this represented an extension to its core internet search business. However, Google had a tremendous advantage in customer reach. Google has the number one search engine in the world, and many people begin their travel planning by searching destinations on Google, putting Google in a prime position to be the first stop for flight search.

In the announcement, Google noted, "The acquisition will benefit passengers, airlines and online travel agencies by making it easier for users to comparison shop for flights and airfares and by driving more potential customers to airlines' and online travel agencies' websites. Google won't be setting airfare prices and has no plans to sell airline tickets to consumers." Google also promised to continue to honor the existing relationships ITA Software had to provide flight search information to other travel search companies.

The deal underwent intense regulatory scrutiny because even though Google did not compete in flight search at the time of the acquisition, the deal would pair the world's largest internet search company with the dominant flight software company. Other online travel agencies were rightfully worried. On April 8th, 2011, however, the U.S. Department of Justice said the deal would be permitted so long as Google agreed to continue licensing ITA's QPX software (software that gathers pricing data from airlines) to other airfare websites on "commercially reasonable terms" for at least five years.

Google launched Google Flights on September 13th, 2011. They also announced that in the long run, they planned to create a system that organizes your entire travel experience (e.g., book your trip, deliver your bags to your hotel, reroute you automatically if there is a problem with your connection). For Google, knowing more about your travel plans and experiences enables them to serve up more targeted advertising. Together the companies could develop a flight search service that surpassed what either could do alone, however it required investments and exchange of proprietary information.

By 2017 Google's travel advertising revenue exceeded that of Expedia, and by August of 2018 the share of referrals to major airlines that came from Google exceeded those that came from Kayak. Initially Google's flight search gains were primarily in the U.S. market while companies like Momondo and Skyscanner dominated in other markets. However, by 2018 the reach of Google Flights was being felt everywhere. As noted by Hugo Burge, CEO of UK-headquartered Momondo Group, "Certainly, we have always seen Google—after the purchase of ITA—as having its best product in the USA, which might explain its faster growth there." Burge adds, "However, Google has been playing catch-up with its product rollout in the rest of the world and now has made significant gains in Europe with strong ongoing momentum . . . Google should be seen as one of the key global players within online

travel—it has the advantage of global reach, an unparalleled traffic base and access to enormous amounts of data.”

Could Google and ITA have developed these services through a market relationship like a license or strategic alliance? Not likely. The asymmetry in size, power, and what each partner contributed would have put ITA at risk: In a partnership, Google might have been able to assimilate ITA’s proprietary technology and over time developed its own competing alternative. ITA, on the other hand, could not credibly threaten to counter Google’s advantage in capturing buyers. The benefits of collaborating were potentially large, but the risk of doing so via an arms-length contract were even larger. Thus, ITA agreed to be acquired by Google so that their interests would be irrevocably aligned.

Sources: Google press announcement, July 10, 2010; A. Efrati and G. Chon, “Google’s Empire Expands to Travel,” *The Wall Street Journal*, July 2, 2010; H. Grigoris, “Google Pulls Flight API Search, Putting Its Competition in a Tight Spot,” *Digital Trends*, November 1, 2017; D. Schaal, “Google Flights Is Making Gains with Consumers,” *Skift*, January 31, 2017; K. May, “Google Breathes Down the Neck of Kayak in Clicks Sent to Airlines,” *Phocuswire*, September 5, 2017; D. Seviitt, “Google Flights Continued: Closing the Delta,” *Market Intelligence Insights*, August 28, 2018; S. O’Neill, “Google is one step closer to its user-centric vision of travel booking,” February 6, 2018; M. A. Schilling, “Potential Sources of Value in Mergers and Their Indicators,” *Antitrust Bulletin* (2018) 26: pp. 183–197.

10-1 OVERVIEW

Diversification can create, and destroy, value. As shown in the Opening Case, diversification enabled Google to leverage its strength in general online search to provide exceptional online travel booking, and the Closing Case illustrates how Louis Vuitton uses diversification to leverage its expertise, distribution reach, influence, and capital resources to help new brands grow more profitably than they would grow on their own. However, diversification can also lead a firm away from its key strengths, reduce the firm’s transparency in reporting its results, and make it more difficult for managers to provide adequate oversight within the organization. Diversification can be very alluring to managers, and it is easy to overestimate potential synergies. It is much harder to realize them.¹

In this chapter, we continue to discuss both the challenges and opportunities created by corporate-level strategies of related and unrelated diversification. A diversification strategy is based upon a company’s decision to enter one or more new industries to take advantage of its existing distinctive competencies and business model. We examine the different kinds of multibusiness models upon which related and unrelated diversification are based. Then, we discuss three different ways companies can implement a diversification strategy: internal new ventures, acquisitions, and joint ventures. By the end of this chapter, you will understand the advantages and disadvantages associated with strategic managers’ decisions to diversify and enter new markets and industries.

10-2 INCREASING PROFITABILITY THROUGH DIVERSIFICATION

diversification

The process of entering new industries, distinct from a company's core or original industry, to make new kinds of products for customers in new markets.

diversified company

A company that makes and sells products in two or more different or distinct industries.

Diversification is the process of entering new industries, distinct from a company's core or original industry, to make new kinds of products that can be sold profitably to customers in these new industries. A multibusiness model based on diversification aims to find ways to use a company's existing strategies and distinctive competencies to make products that are highly valued by customers in the new industries it enters. A **diversified company** is one that makes and sells products in two or more different or distinct industries (industries *not* in adjacent stages of an industry value chain, as in vertical integration). As in the case of the corporate strategies discussed in Chapter 9, a diversification strategy should enable a company or its individual business units to perform one or more value-chain functions: (1) at a lower cost, (2) in a way that allows for greater differentiation and gives the company better pricing options, or (3) in a way that helps the company manage industry rivalry better—in order to increase profitability.

Most companies consider diversification when they are generating *free cash flow*; that is, cash in excess of that required to fund new investments in the company's current business and meet existing debt commitments.² In other words, free cash flow is cash beyond that needed to make profitable new investments in the existing business. When a company's successful business model is generating free cash flow and profits, managers must decide whether to return that cash to shareholders in the form of higher dividend payouts or to invest it in diversification.

The free cash flow of a firm technically belongs to the company's owners—its shareholders. So, for diversification to create value, a company's return on investing free cash flow to pursue diversification opportunities—that is, its future ROIC—*must exceed* the value shareholders would reap by returning the cash to them. When a firm does not pay out its free cash flow to its shareholders, the shareholders bear an opportunity cost equal to their next best use of those funds (i.e., another investment that pays a similar return at a similar risk, an investment that pays a higher return at a higher risk, or an investment that pays a lower return but at a lower risk). Thus, a diversification strategy must pass the “better off” test: The firm must be more valuable than it was before the diversification, and that value must not be fully capitalized by the cost of the diversification move (i.e., the cost of entry into the new industry must be taken into account when assessing the value created by the diversification). Thus, managers might defer paying dividends now to invest in diversification, but they should do so only when this is expected to create even greater cash flow (and thus higher dividends) in the future.

There are four primary ways in which pursuing a multibusiness model based on diversification can increase company profitability. Diversification can increase profitability when strategic managers (1) transfer competencies between business units in different industries, (2) leverage competencies to create business units in new industries, (3) share resources between business units to realize synergies or economies of scope, or (4) utilize *general* organizational competencies that increase the performance of *all* a company's business units.

10-2a Transferring Competencies Across Businesses

Transferring competencies involves taking a distinctive competency developed by a business unit in one industry and implanting it in a business unit operating in another industry. The second business unit is often one a company has acquired. Companies that base their diversification strategy on transferring competencies aim to use one or more of their existing distinctive competencies in a value-chain activity—for example, in manufacturing, marketing, materials management, or research and development (R&D)—to significantly strengthen the business model of the acquired business unit or company. For example, over time, Philip Morris developed distinctive competencies in product development, consumer marketing, and brand positioning that had made it a leader in the tobacco industry. Sensing a profitable opportunity, it acquired Miller Brewing, which at the time was a relatively small player in the brewing industry. Then, to create valuable new products in the brewing industry, Philip Morris transferred some of its best marketing experts to Miller, where they applied the skills acquired at Philip Morris to turn around Miller's lackluster brewing business (see Figure 10.1). The result was the creation of Miller Light, the first “light” beer, and a marketing campaign that helped to push Miller from number 6 to number 2 in market share in the brewing industry.

Companies that base their diversification strategy on transferring competencies tend to acquire new businesses *related* to their existing business activities because of commonalities between one or more of their value-chain functions. A **commonality** is a skill or attribute that, when shared or used by two or more business units, allows both businesses to operate more effectively and efficiently and create more value for customers.

For example, Miller Brewing was related to Philip Morris's tobacco business because it was possible to create important marketing commonalities; both beer and tobacco are mass-market consumer goods in which brand positioning, advertising, and

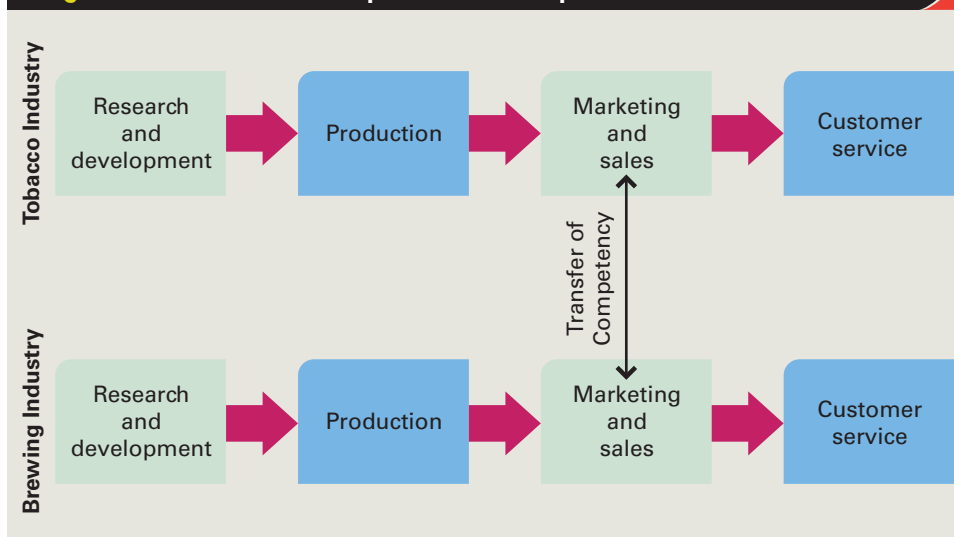
transferring competencies

The process of taking a distinctive competency developed by a business unit in one industry and implanting it in a business unit operating in another industry.

commonality

A skill or competency that, when shared by two or more business units, allows them to operate more effectively and create more value for customers.

Figure 10.1 Transfer of Competencies at Philip Morris



product development skills are crucial to create successful new products. In general, such competency transfers increase profitability when they either (1) lower the cost structure of one or more of a diversified company's business units or (2) enable one or more of its business units to better differentiate their products, both of which give business-unit pricing options to lower a product's price to increase market share, or to charge a premium price.

To increase profitability, transferred competencies must involve value-chain activities that become an important source of a specific business unit's competitive advantage in the future. In other words, the distinctive competency being transferred must have real strategic value. However, all too often, companies assume that *any* commonality between their value chains is sufficient for creating value. When they attempt to transfer competencies, they find the anticipated benefits are not forthcoming because the different business units did not share some important attribute in common. For example, Coca-Cola acquired Minute Maid, the fruit juice maker, to take advantage of commonalities in global distribution and marketing, and this acquisition has proved to be highly successful. On the other hand, Coca-Cola once acquired the movie studio Columbia Pictures because it believed it could use its marketing prowess to produce blockbuster movies. This acquisition was a disaster that cost Coca-Cola billions in losses, and Columbia was eventually sold to Sony, which was then able to base many of its successful PlayStation games on the hit movies the studio produced.

10-2b Leveraging Competencies to Create a New Business

leveraging competencies

The process of taking a distinctive competency developed by a business unit in one industry and using it to create a new business unit in a different industry.

By **leveraging competencies**, a company can develop a new business in a different industry. For example, Apple leveraged its competencies in personal computer (PC) hardware and software to enter the smartphone industry. Once again, the multibusiness model is based on the premise that the set of distinctive competencies that are the source of a company's competitive advantage in one industry might be applied to create a differentiation or cost-based competitive advantage for a new business unit or division in a different industry. For example, Canon used its distinctive competencies in precision mechanics, fine optics, and electronic imaging to produce laserjet printers, which, for Canon, was a new business in a new industry. Its competencies enabled it to produce high-quality (differentiated) laser printers that could be manufactured at a low cost, which created its competitive advantage, and made Canon a leader in the printer industry.

Many companies base their diversification strategy on leveraging their competencies to create new business units in different industries. Microsoft leveraged its long-time experience and relationships in the computer industry, skills in software development, and its expertise in managing industries characterized by network externalities to create new business units in industries such as videogames (with its Xbox videogame consoles and game), online portals and search engines (e.g., MSN and Bing), and tablet computers (the Surface).

economies of scope

The synergies that arise when one or more of a diversified company's business units are able to lower costs or increase differentiation because they can more effectively pool, share, and utilize expensive resources or capabilities.

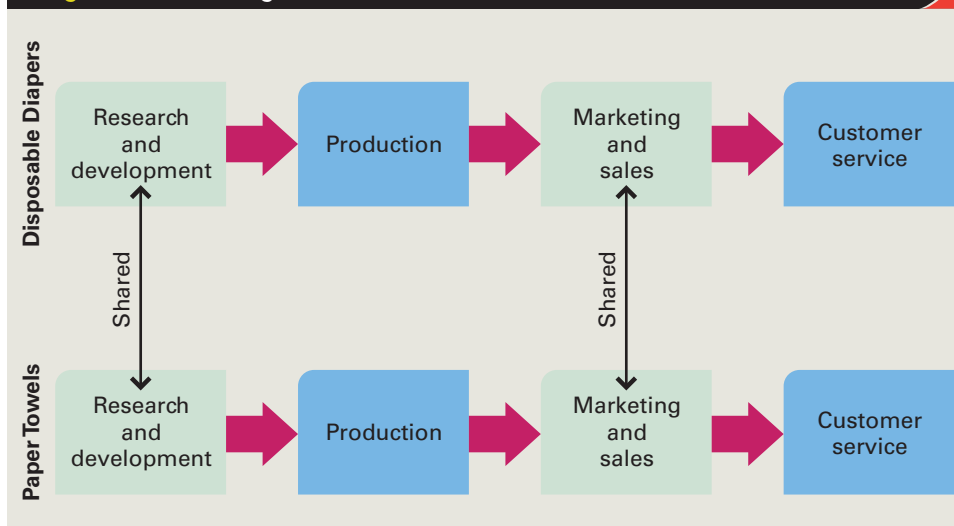
10-2c Sharing Resources and Capabilities

A third way in which two or more business units that operate in different industries can increase a diversified company's profitability is when the shared resources and capabilities result in economies of scope, or synergies.³ **Economies of scope** arise when

one or more of a diversified company's business units are able to realize cost-saving or differentiation synergies because they can more effectively pool, share, and utilize expensive resources or capabilities such as skilled people, equipment, manufacturing facilities, distribution channels, advertising campaigns, and R&D laboratories. If business units in different industries can share a common resource or function, they can collectively lower their cost structure; the idea behind synergies is that $2 + 2 = 5$, not 4, in terms of value created.⁴ As shown in the Closing Case, LVMH can utilize its distribution channels and its influence with fashion editors to help newer brands reach a global market more quickly and cost effectively. Similarly, GE can leverage its consumer-products advertising, sales, and service activities across a wide range of products such as light bulbs, appliances, air conditioners, and furnaces, thereby reducing the average cost of these activities for each product line. There are two major sources of cost reductions.

There are two major sources of cost reductions. First, when companies can share resources or capabilities across business units, it lowers their cost structure compared to a company that operates in only one industry and bears the full costs of developing resources and capabilities. For example, P&G makes disposable diapers, toilet paper, and paper towels, which are all paper-based products that customers value for their ability to absorb fluids without disintegrating. Because these products need the same attribute—absorbency—P&G can share the R&D costs associated with developing and making even more advanced absorbent, paper-based products across the three distinct businesses (only two are shown in Figure 10.2). Similarly, because all of these products are sold to retailers, P&G can use the same sales force to sell its whole array of products (see Figure 10.2). In contrast, P&G competitors that make only one or two of these products cannot share these costs across industries, so their cost structures are higher. As a result, P&G has lower costs; it can use its marketing function to better differentiate its products, and it achieves a higher ROIC than companies that operate only in one or a few industries—which are unable to obtain economies of scope from the ability to share resources and obtain synergies across business units.

Figure 10.2 Sharing Resources at Proctor & Gamble



Similarly, Nike, which began strictly as a maker of running shoes, realized that its brand image, and its relationships with athletes and sports events, could be profitably leveraged into other types of athletic footwear, athletic apparel, and accessories such as sunglasses and headphones. Those products were more differentiated because of the Nike brand name and had better exposure because Nike was able to place them in suitable endorsement spots via its relationships with athletes and events, and Nike is able to amortize the cost of its brand-building activities across a wider range of products, thus achieving economies of scope.

To reiterate, diversification to obtain economies of scope is possible only when there are *significant* commonalities between one or more value-chain functions in a company's different business units or divisions that result in synergies which increase profitability. In addition, managers must be aware that the costs of coordination necessary to achieve synergies or economies of scope within a company may sometimes be *higher* than the value that can be created by such a strategy.⁵ For example, from 1990 to 2010, Citibank transitioned from being wholly focused on retail consumer banking to a “financial supermarket” by diversifying into insurance, mortgage banking, stock brokering, and more, believing that it would achieve major cost savings from consolidating operations across its acquisitions, and revenue-increasing opportunities from cross-selling. In reality, the coordination costs that Citi bore (in the form of massive losses due to inadequate oversight over its investment activities) vastly exceeded the synergies it gained, and proved devastating for the firm. Citibank subsequently dismantled its financial supermarket, selling off Smith Barney, Phibro, Diner's Club, Primerica, and more. The Citi example illustrates that diversification based on obtaining economies of scope should be pursued only when the sharing of competencies will result in *significant* synergies that will achieve a competitive advantage for one or more of a company's new or existing business units, and when those advantages will exceed the costs and risks created.

The Citi case also illustrates that one of the sources of economies of scope that firms seek through diversification is through product bundling. Product bundling allows a company to satisfy customers' needs for a complete package of related products, potentially leveraging the advantage the firm has in one part of the bundle to other parts of the bundle while achieving economies of scope in building and maintaining the customer relationship. Customers often want the convenience and reduced price of a bundle of related products. For example, end consumers may prefer to buy their internet, cable television, and phone service from a single provider that will give them a single point of contact for customer service and a discount for buying a bundled package. Industrial customers similarly prefer to deal with fewer suppliers. For example, in the medical equipment industry, many companies that in the past made one kind of product such as operating theater equipment, ultrasound devices, or magnetic imaging or X-ray equipment, have now merged with or been acquired by other companies to allow a larger, diversified company to provide hospitals with a complete range of medical equipment. This industry consolidation has also been driven by hospitals and health maintenance organizations (HMOs) that wish to obtain the convenience and lower prices that often follow from forming a long-term contract with a single supplier.

It is important to note, however, that product bundling often does not require joint ownership. In many instances, bundling can be achieved through market contracts. For example, McDonald's does not need to manufacture toys in order to bundle them into Happy Meals—it can buy them through a supply contract. Disney does need to own airline services to offer a package deal on a vacation—an alliance contract will serve just as well. For product bundling to serve as a justification for diversification,

there must be a strong need for coordination between the producers of the different products that cannot be overcome through market contracts.

10-2d Utilizing General Organizational Competencies

General organizational competencies transcend individual functions or business units and are found at the top or corporate level of a multibusiness company. Typically, **general organizational competencies** are the result of the skills of a company's top managers and functional experts. When these general competencies are present—and many times they are not—they help each business unit within a company perform at a higher level than it could if it operated as a separate or independent company. This increases the profitability of the entire corporation.⁶ Three general organizational competencies help a company increase its performance and profitability: (1) entrepreneurial capabilities, (2) organizational design capabilities, and (3) strategic capabilities.

general organizational competencies

Competencies that result from the skills of a company's top managers and that help every business unit within a company perform at a higher level than it could if it operated as a separate or independent company.

Entrepreneurial Capabilities A company that generates significant excess cash flow can take advantage of it only if its managers are able to identify new opportunities and act on them to create a stream of new and improved products, in its current industry and in new industries. Companies such as Apple, 3M, Google, and Samsung are able to promote entrepreneurship because they have an organizational culture that stimulates managers to act entrepreneurially.⁷ As a result, they create new, profitable business units more quickly than do other companies, and this allows them to take advantage of profitable opportunities for diversification. We discuss one of the strategies required to generate new, profitable businesses later in this chapter: internal new venturing. For now, it is important to note that, to promote entrepreneurship, a company must (1) encourage managers to take risks, (2) give managers the time and resources to pursue novel ideas, (3) not punish managers when a new idea fails, and (4) make sure that the company's free cash flow is not wasted in pursuing too many risky ventures that have a low probability of generating a profitable return on investment. Strategic managers face a significant challenge in achieving all four of these objectives. On the one hand, a company must encourage risk taking; on the other hand, it must limit the number of risky ventures in which it engages.

Companies that possess strong entrepreneurial capabilities achieve this balancing act. For example, 3M's goal of generating 40% of its revenues from products introduced within the past 4 years focuses managers' attention on the need to develop new products and enter new businesses. 3M's long-standing commitment to help its customers solve problems also ensures that ideas for new businesses are customer focused. The company's celebration of employees who have created successful new businesses reinforces the norm of entrepreneurship and risk taking. Similarly, there is a norm that failure should not be punished but instead viewed as a learning experience.

Capabilities in Organizational Design **Organizational design skills** are a result of managers' ability to create a structure, culture, and control systems that motivate and coordinate employees to perform at a high level. Organizational design is a major factor that influences a company's entrepreneurial capabilities; it is also an important determinant of a company's ability to create the functional competencies that give it a competitive advantage. The way strategic managers make organizational design decisions, such as how much autonomy to give to managers lower in the hierarchy, what kinds of norms and values should be developed to create an entrepreneurial culture,

organizational design skills

The ability of a company's managers to create a structure, culture, and control systems that motivate and coordinate employees to perform at a high level.

and even how to design its headquarters to encourage the free flow of ideas, is an important determinant of a diversified company's ability to profit from its multibusiness model. Effective organizational structure and controls create incentives that encourage business-unit (divisional) managers to maximize the efficiency and effectiveness of their units. Moreover, good organizational design helps prevent strategic managers from missing out on profitable new opportunities, as happens when employees become so concerned with protecting their company's competitive position in *existing* industries that they lose sight of new or improved ways to do business and gain profitable opportunities to enter new industries.

Chapters 11 and 12 of this book look at organizational design in depth. To profit from pursuing the corporate-level strategy of diversification, a company must be able to continuously manage and change its structure and culture to motivate and coordinate its employees to work at a high level and develop the resources and capabilities upon which its competitive advantage depends. The need to align a company's structure with its strategy is a complex, never-ending task, and only top managers with superior organizational design skills can do it.

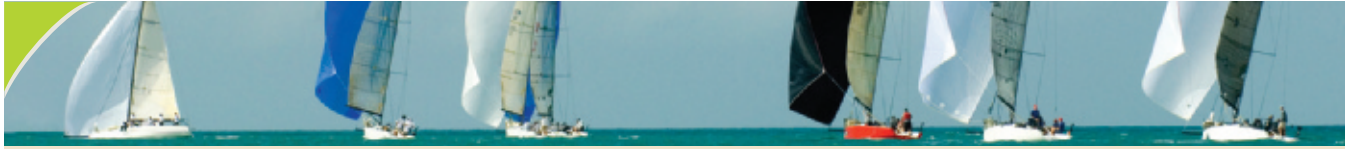
Superior Strategic Management Capabilities For diversification to increase profitability, a company's top managers must have superior capabilities in strategic management. They must possess the intangible, hard-to-define governance skills that are required to manage different business units in a way that enables these units to perform better than they would if they were independent companies.⁸ These governance skills are a rare and valuable capability. However, certain CEOs and top managers seem to have them; they have developed the aptitude of managing multiple businesses simultaneously and encouraging the top managers of those business units to devise strategies that achieve superior performance. Examples of CEOs famous for their superior strategic management capabilities include Jeffrey Immelt at GE, Steve Jobs at Apple, and Larry Ellison at Oracle.

An especially important governance skill in a diversified company is the ability to diagnose the underlying source of the problems of a poorly performing business unit, and then to understand how to proceed to solve those problems. This might involve recommending new strategies to the existing top managers of the unit, or knowing when to replace them with a new management team that is better able to fix the problems. Top managers who have such governance skills tend to be very good at probing business-unit managers for information and helping them think through strategic problems, as the example of United Technologies Corporation (UTC) discussed in Strategy in Action 10.1 suggests.

Related to strategic management skills is the ability of the top managers of a diversified company to identify inefficient, poorly managed companies in other industries and then acquire and restructure them to improve their performance—and thus the profitability of the total corporation. This is known as a **turnaround strategy**.⁹ There are several ways to improve the performance of an acquired company. First, the top managers of the acquired company are replaced with a more aggressive top-management team. Second, the new top-management team sells off expensive assets such as underperforming divisions, executive jets, and elaborate corporate headquarters; it also terminates staff to reduce the cost structure. Third, the new management team devises new strategies to improve the performance of the operations of the acquired business and improve its efficiency, quality, innovativeness, and customer responsiveness.

turnaround strategy

When managers of a diversified company identify inefficient, poorly managed companies in other industries and then acquire and restructure them to improve their performance—and thus the profitability of the total corporation.



10.1 STRATEGY IN ACTION

United Technologies Has an “ACE” in Its Pocket

United Technologies Corporation (UTC), based in Hartford, Connecticut, is a *conglomerate*, a company that owns a wide variety of other companies that operate separately in many different businesses and industries. UTC has businesses in two main groups, aerospace and building systems. Its aerospace group includes Sikorsky aircraft, Pratt & Whitney Engines, and UTC Aerospace systems, which was formed through the merger of Hamilton Sundstrand and Goodrich. Its building systems group includes Otis elevators and escalators; Carrier and Noresco heating and air-conditioning solutions; fire-detection and security businesses that include Chubb, Kidde, Edwards, Fenwal, Marioff, Supra, and Interlogix; and business that develop business automation systems (such as automatically controlled lighting and temperature) including AutomatedLogic, Onity, Lenel, and UTEC. Today, investors frown upon companies like UTC that own and operate companies in widely different industries. There is a growing perception that managers can better manage a company's business model when the company operates as an independent or stand-alone entity. How can UTC justify holding all these companies together in a conglomerate? Why would this lead to a greater increase in total profitability than if they operated as independent companies? In the last decade, the boards of directors and CEOs of many conglomerates such as Tyco and Textron have realized that by holding diverse companies together they were reducing, not increasing, the profitability of their companies. As a result, many conglomerates have been broken up, and their individual companies spun off to allow them to operate as separate, independent entities.

UTC's CEO George David claims that he has created a unique, sophisticated, multibusiness model that adds value across UTC's diverse businesses. David joined Otis Elevator as an assistant to its CEO in 1975, but within a year, UTC acquired Otis. The 1970s was a decade when a “bigger is better” mindset ruled corporate America, and mergers and acquisitions of all

kinds were seen as the best way to grow profits. UTC sent David to manage its South American operations and later gave him responsibility for its Japanese operations. Otis had formed an alliance with Matsushita to develop an elevator for the Japanese market, and the resulting “Elevonic 401,” after being installed widely in Japanese buildings, proved to be a disaster. It broke down far more often than elevators made by other Japanese companies, and customers were concerned about the reliability and safety of this model.

Matsushita was extremely embarrassed about the elevator's failure and assigned one of its leading total quality management (TQM) experts, Yuzuru Ito, to head a team of Otis engineers to find out why it performed so poorly. Under Ito's direction, all employees—managers, designers, and production workers—who had produced the elevator analyzed why it was malfunctioning. This intensive study led to a total redesign of the elevator, and when the new, improved elevator was launched worldwide, it met with great success. Otis's share of the global elevator market dramatically increased, and David was named president of UTC in 1992. He was given the responsibility to cut costs across the entire corporation, including its important Pratt & Whitney division, and his success in reducing UTC's cost structure and increasing its ROIC led to his appointment as CEO in 1994.

Now responsible for all of UTC's diverse companies, David decided that the best way to increase UTC's profitability, which had been declining, was to find ways to improve efficiency and quality in *all* its constituent companies. He convinced Ito to move to Hartford and take responsibility for championing the kinds of improvements that had by now transformed the Otis division. Ito began to develop UTC's TQM system, also known as “Achieving Competitive Excellence,” or ACE.

ACE is a set of tasks and procedures used by employees, from the shop floor to top management, to analyze all aspects of the way a product is made. The

(continued)

goal is to find ways to improve *quality and reliability*, to *lower the costs* of making a product, and, especially, to find ways to make the next generation of a particular product perform better—in other words, to encourage *technological innovation*. David makes every employee in every function at every level personally responsible for achieving the incremental, step-by-step gains that result in state-of-the-art, innovative, efficient products that allow a company to dominate its industry.

David calls these techniques “process disciplines,” and he has used them to increase the performance of all UTC companies. Through these techniques, he has created the extra value for UTC that justifies it owning and operating such a diverse set of businesses. David’s success can be seen in the performance that his company has achieved in the decade since he took control: he has quadrupled UTC’s earnings per share, and its sales and profits have soared. UTC has been in the top three performers of the companies that make up the Dow Jones industrial average for most of the 2000s, and the company has consistently outperformed GE, another huge conglomerate, in its return to investors.

Source: <http://utc.com>.

David and his managers believe that the gains that can be achieved from UTC’s process disciplines are never-ending because its own R&D—in which it invests more than \$2.5 billion a year—is constantly producing product innovations that can help all its businesses. Recognizing that its skills in creating process improvements are specific to manufacturing companies, UTC’s strategy is to only acquire companies that make products that can benefit from the use of its ACE program—hence its Chubb acquisition. At the same time, David invests only in companies that have the potential to remain leading companies in their industries and can therefore charge above-average prices. His acquisitions strengthen the competencies of UTC’s existing businesses. For example, he acquired Sundstrand, a leading aerospace and industrial systems company, and combined it with UTC’s Hamilton Aerospace Division to create Hamilton Sundstrand, which is now a major supplier to Boeing and makes products that command premium prices. In October 2011, UTC acquired Goodrich, a major supplier of airline components, for over \$22 billion in order to strengthen its aircraft division.

Fourth, to motivate the new top-management team and the other employees of the acquired company to work toward such goals, a companywide, pay-for-performance bonus system linked to profitability is introduced to reward employees at all levels for their hard work. Fifth, the acquiring company often establishes “stretch” goals for employees at all levels; these are challenging, hard-to-obtain goals that force employees at all levels to work to increase the company’s efficiency and effectiveness. The members of the new top-management team clearly understand that if they fail to increase their division’s performance and meet these stretch goals within some agreed-upon amount of time, they will be replaced. In sum, corporate managers of the acquiring company establish a system of rewards and sanctions that incentivize new top managers of the acquired unit to develop strategies to improve their unit’s operating performance.

10-3 TWO TYPES OF DIVERSIFICATION

The last section discussed five principal ways in which companies use diversification to transfer and implant their business models and strategies into other industries and so increase their long-term profitability. The two corporate strategies of *related diversification* and *unrelated diversification* can be distinguished by how they attempt to realize the five profit-enhancing benefits of diversification.¹⁰

10-3a Related Diversification

Related diversification is a corporate-level strategy based on the goal of establishing a business unit (division) in a new industry that is *related* to a company's existing business units by some form of commonality or linkage between the value-chain functions of the existing and new business units. As you might expect, the goal of this strategy is to obtain benefits from transferring competencies, leveraging competencies, sharing resources, and bundling products, as just discussed.

The multibusiness model of related diversification is based on taking advantage of strong technological, manufacturing, marketing, and sales commonalities between new and existing business units that can be successfully “tweaked” or modified to increase the competitive advantage of one or more business units. Figure 10.3 illustrates the commonalities or linkages possible among the different functions of three different business units or divisions. The greater the number of linkages that can be formed among business units, the greater the potential to realize the profit-enhancing benefits of the five reasons to diversify discussed previously.

Another advantage of related diversification is that it can allow a company to use any general organizational competency it possesses to increase the overall performance of *all* its different industry divisions. For example, strategic managers may strive to create a structure and culture that encourages entrepreneurship across divisions, as Google, Apple, and 3M have done; beyond these general competences, these companies all have a set of distinctive competences that can be shared among their different business units and that they continuously strive to improve.

related diversification

A corporate-level strategy based on the goal of establishing a business unit in a new industry that is related to a company's existing business units by some form of commonality or linkage between their value-chain functions.

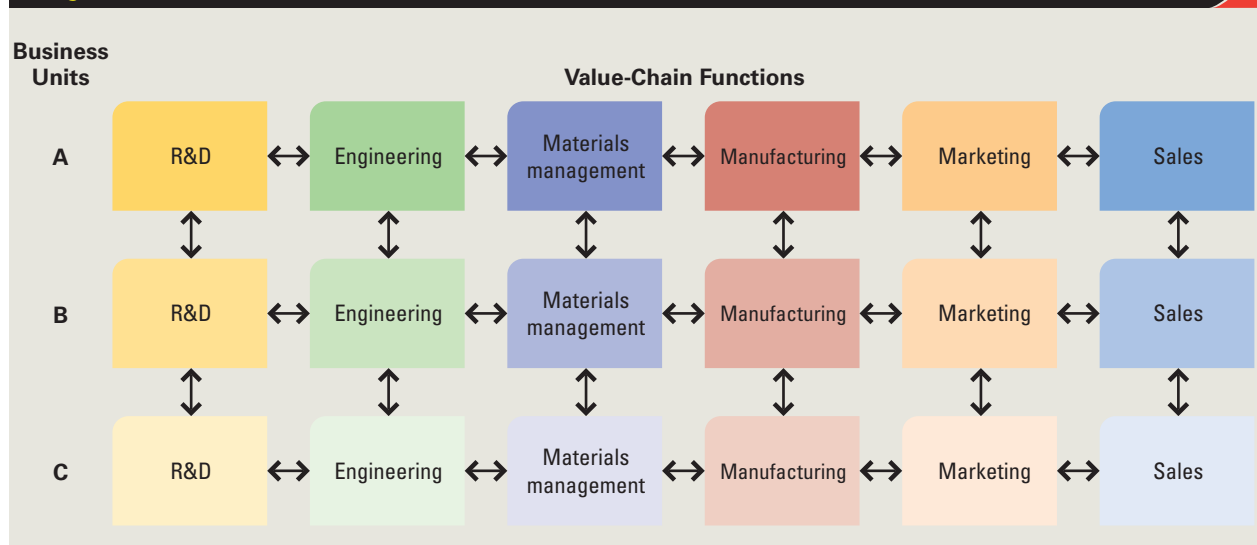
unrelated diversification

A corporate-level strategy based on a multibusiness model that uses general organizational competencies to increase the performance of all the company's business units.

10-3b Unrelated Diversification

Unrelated diversification is a corporate-level strategy whereby firms own unrelated businesses and attempt to increase their value through an internal capital market, the

Figure 10.3 Commonalities Between the Value Chains of Three Business Units



internal capital market

A corporate-level strategy whereby the firm's headquarters assesses the performance of business units and allocates money across them. Cash generated by units that are profitable but have poor investment opportunities within their business is used to cross-subsidize businesses that need cash and have strong promise for long-run profitability.

use of general organizational competencies, or both. Business organizations that operate in many diverse industries are often called *conglomerates*. An **internal capital market** refers to a situation whereby corporate headquarters assesses the performance of business units and allocates money across them. Cash generated by units that are profitable but have poor investment opportunities within their business is used to cross-subsidize businesses that need cash and have strong promise for long-run profitability. A large, diverse firm may have free cash generated from its internal businesses, or readier access to cheap cash on the external capital market, than an individual business unit might have. For example, GE's large capital reserves and excellent credit rating enable it to provide funding to advanced-technology businesses within its corporate umbrella (e.g., solar power stations, subsea oil-production equipment, avionics, photonics) that would otherwise pay a high price (either in interest payments or equity shares) for funding due to their inherent uncertainty.

The benefits of an internal capital market are limited, however, by the efficiency of the external capital market (banks, stockholders, venture capitalists, angel investors, and so on). If the external capital market were perfectly efficient, managers could not create additional value by cross-subsidizing businesses with internal cash. An internal capital market is, in essence, an arbitrage strategy whereby managers make money by making better investment decisions within the firm than the external capital market would, often because they possess superior information. The amount of value that can be created through an internal capital market is thus directly proportional to the inefficiency of the external capital market. In the United States, where capital markets have become fairly efficient due to (1) reporting requirements mandated by the Securities and Exchange Commission (SEC), (2) large numbers of research analysts, (3) an extremely large and active investment community, (4) strong communication systems, and (5) strong contract law, it is not common to see firms create significant value through an internal capital market. As a result, few large conglomerates have survived, and many of those that do survive trade at a discount (that is, their stock is worth less than the stock of more specialized firms operating in the same industries). On the other hand, in a market with a less efficient capital market, conglomerates may create significant value. Tata Group, for example, is an extremely large, diverse, business-holding group in India. Founded during the 1800s, it took on many projects that its founders felt were crucial to India's development (for example, developing a rail transportation system, hotels, and power production). The lack of a well-developed investment community and poor contract law to protect investors and bankers meant that funds were often unavailable to entrepreneurs in India, or were available only at a very high cost. Tata Group was thus able to use cross-subsidization to fund projects much more cheaply than independent businesses could. Furthermore, the reputation of the company served as a strong guarantee that it would fulfill its promises (which was particularly important in the absence of strong contract law), and its long, deep relationships with the government gave it an advantage in securing licenses and permits.

Companies pursuing a strategy of unrelated diversification have *no* intention of transferring or leveraging competencies between business units or sharing resources other than cash and general organizational competencies. If the strategic managers of conglomerates have the special skills needed to manage many companies in diverse industries, the strategy can result in superior performance and profitability; often they do not have these skills, as is discussed later in the chapter. Companies such as UTC (discussed in Strategy in Action 10.1) have top managers who do possess these special skills.

10-4 THE LIMITS AND DISADVANTAGES OF DIVERSIFICATION

Many companies, such as 3M, Samsung, UTC, and Cisco, have achieved the benefits of pursuing either or both of the two diversification strategies just discussed, and they have sustained their profitability over time. On the other hand, GM, Tyco, Textron, and Philips failed miserably and became unprofitable when they pursued diversification. There are three principal reasons why a business model based on diversification may lead to a loss of competitive advantage: (1) changes in the industry or inside a company that occur over time, (2) diversification pursued for the wrong reasons, and (3) excessive diversification that results in increasing bureaucratic costs.

10-4a Changes in the Industry or Company

Diversification is a complex strategy. To pursue it, top managers must have the ability to recognize profitable opportunities to enter new industries and implement the strategies necessary to make diversification profitable. Over time, a company's top-management team often changes; sometimes its most able executives join other companies and become CEOs, and sometimes successful CEOs retire or step down. When the managers who possess the hard-to-define skills leave, they often take their vision with them. A company's new leaders may lack the competency or commitment necessary to pursue diversification successfully over time; thus, the cost structure of the diversified company increases and eliminates any gains the strategy may have produced.

In addition, the environment often changes rapidly and unpredictably over time. When new technology blurs industry boundaries, it can destroy the source of a company's competitive advantage. For example, by 2011, it was clear that Apple's iPhone and iPad had become a direct competitor with Nintendo's and Sony's mobile gaming consoles. When such a major technological change occurs in a company's core business, the benefits it has previously achieved from transferring or leveraging distinctive competencies disappear. The company is then saddled with a collection of businesses that have all become poor performers in their respective industries because they are not based on the new technology—something that has happened to Sony. Thus, a major problem with diversification is that the future success of a business is hard to predict when this strategy is used. For a company to profit from it over time, managers must be as willing to divest business units as they are to acquire them. Research suggests managers do not behave in this way, however.

10-4b Diversification for the Wrong Reasons

As we have discussed, when managers decide to pursue diversification, they must have a clear vision of how their entry into new industries will allow them to create new products that provide more value for customers and increase their company's profitability. Over time, however, a diversification strategy may result in falling profitability for reasons noted earlier, but managers often refuse to recognize that their strategy is failing. Although they know they should divest unprofitable businesses, managers "make up" reasons to keep their collection of businesses together.

In the past, for example, one widely used (and false) justification for diversification was that the strategy would allow a company to obtain the benefits of risk pooling. The idea behind risk pooling is that a company can reduce the risk of its revenues and profits rising and falling sharply (something that sharply lowers its stock price) if it acquires and operates companies in several industries that have different business cycles. The business cycle is the tendency for the revenues and profits of companies in an industry to rise and fall over time because of “predictable” changes in customer demand. For example, even in a recession, people still need to eat—the profits earned by supermarket chains will be relatively stable; sales at Safeway, Kroger, and also at “dollar stores,” rise as shoppers attempt to get more value for their dollars. At the same time, a recession can cause demand for cars and luxury goods to plunge. Many CEOs argue that diversifying into industries that have different business cycles would allow the sales and revenues of some of their divisions to rise, while sales and revenues in other divisions would fall. A more stable stream of revenue and profits is the net result over time. An example of risk pooling occurred when U.S. Steel diversified into the oil and gas industry in an attempt to offset the adverse effects of cyclical downturns in the steel industry.

This argument ignores two important facts. First, stockholders can eliminate the risk inherent in holding an individual stock by diversifying their own portfolios, and they can do so at a much lower cost than a company can. Thus, for a publicly-held firm, attempts to pool risks through diversification represent an unproductive use of resources; instead, profits should be returned to shareholders in the form of increased dividends. Second, research suggests that corporate diversification is not an effective way to pool risks because the business cycles of different industries are *inherently difficult to predict*, so it is likely that a diversified company will find that an economic downturn affects *all* its industries simultaneously. If this happens, the company’s profitability plunges.¹¹

When a company’s core business is in trouble, another mistaken justification for diversification is that entry into new industries will rescue the core business and lead to long-term growth and profitability. Kodak made this mistake. In the 1980s, increased competition from low-cost, Japanese competitors such as Fuji, combined with the beginnings of the digital revolution, soon led Kodak’s revenues and profits to plateau and then fall. Its managers should have done all they could to reduce its cost structure; instead, they took its huge free cash flow and spent tens of billions of dollars to enter new industries such as health care, biotechnology, and computer hardware in a desperate and mistaken attempt to find ways to increase profitability.

This was a disaster because every industry Kodak entered was populated by strong companies such as 3M, Canon, and Xerox. Also, Kodak’s corporate managers lacked any general competencies to give their new business units a competitive advantage. Moreover, the more industries Kodak entered, the greater the range of threats the company encountered, and the more time managers had to spend dealing with these threats. As a result, they could spend much less time improving the performance of their core film business, which continued to decline.

In reality, Kodak’s diversification was solely for growth, but *growth does not create value for stockholders*; growth is the by-product, not the objective, of a diversification strategy. However, in desperation, companies diversify for reasons of growth alone rather than to gain any well-thought-out, strategic advantage.¹² In fact, many studies suggest that too much diversification may reduce rather than improve company profitability.¹³ That is, the diversification strategies many companies pursue may *reduce* value instead of creating it.¹⁴

10-4c The Bureaucratic Costs of Diversification

A major reason why diversification often fails to boost profitability is that, very often, the *bureaucratic costs* of diversification exceed the benefits created by the strategy (that is, the increased profit that results when a company makes and sells a wider range of differentiated products and/or lowers its cost structure). As we mentioned in the previous chapter, **bureaucratic costs** are the costs associated with solving the transaction difficulties that arise between a company's business units and between business units and corporate headquarters, as the company attempts to obtain the benefits from transferring, sharing, and leveraging competencies. They also include the costs associated with using general organizational competencies to solve managerial and functional inefficiencies. The level of bureaucratic costs in a diversified organization is a function of two factors: the number of business units in a company's portfolio, and the degree to which coordination is required between these different business units to realize the advantages of diversification.

bureaucratic costs

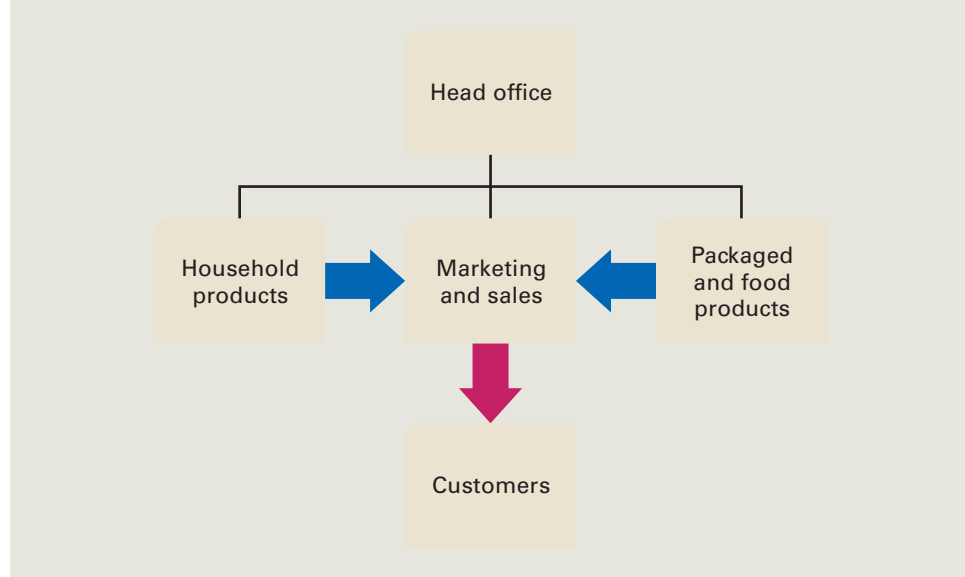
The costs associated with solving the transaction difficulties between business units and corporate headquarters as a company obtains the benefits from transferring, sharing, and leveraging competencies.

Number of Businesses The greater the number of business units in a company's portfolio, the more difficult it is for corporate managers to remain informed about the complexities of each business. Managers simply do not have the time to assess the business model of each unit. This problem occurred at GE in the 1970s, when its growth-hungry CEO, Reg Jones, acquired many new businesses. As he commented:

I tried to review each plan [of each business unit] in great detail. This effort took untold hours and placed a tremendous burden on the corporate executive office. After a while I began to realize that no matter how hard we would work, we could not achieve the necessary in-depth understanding of the 40-odd business unit plans.¹⁵

The inability of top managers in extensively diversified companies to maintain control over their multibusiness models over time often leads them to base important resource-allocation decisions on a superficial analysis of each business unit's competitive position. For example, a promising business unit may be starved of investment funds, while other business units receive far more cash than they can profitably reinvest in their operations. Furthermore, because they are distant from the day-to-day operations of the business units, corporate managers may find that business-unit managers try to hide information on poor performance to save their own jobs. For example, business-unit managers might blame poor performance on difficult competitive conditions, even when it is the result of their inability to craft a successful business model. As such organizational problems increase, top managers must spend an enormous amount of time and effort to solve them. This increases bureaucratic costs and cancels out the profit-enhancing advantages of pursuing diversification, such as those obtained from sharing or leveraging competencies.

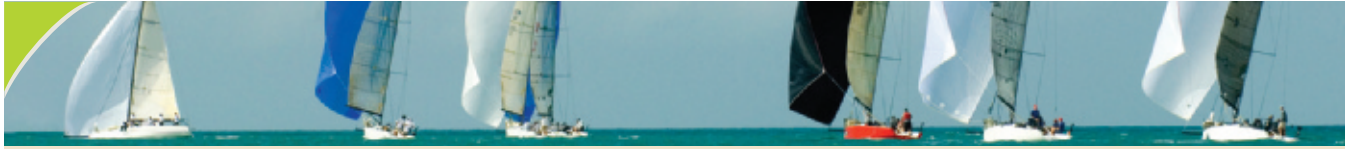
Coordination Among Businesses The amount of coordination required to realize value from a diversification strategy based on transferring, sharing, or leveraging competencies is a major source of bureaucratic costs. The bureaucratic mechanisms needed to oversee and manage the coordination and handoffs between units, such as cross-business-unit teams and management committees, are a major source of these costs. A second source of bureaucratic costs arises because of the enormous amount of managerial time and effort required to accurately measure the performance and unique profit contribution of a business unit that is transferring or sharing resources with another. Consider a company that has two business units, one making

Figure 10.4 Coordination Among Related Business Units

household products (such as liquid soap and laundry detergent) and another making packaged food products. The products of both units are sold through supermarkets. To lower the cost structure, the parent company pools the marketing and sales functions of each business unit, using an organizational structure similar to that illustrated in Figure 10.4. The company is organized into three divisions: a household products division, a food products division, and a marketing division.

Although such an arrangement may significantly lower operating costs, it can also give rise to substantial control problems, and hence bureaucratic costs. For example, if the performance of the household products business begins to slip, identifying who is to be held accountable—managers in the household products division or managers in the marketing division—may prove difficult. Indeed, each may blame the other for poor performance. Although such problems can be resolved if corporate management performs an in-depth audit of both divisions, the bureaucratic costs (managers' time and effort) involved in doing so may once again cancel out any value achieved from diversification. The need to reduce bureaucratic costs is evident from the experience of Pfizer, as discussed in Strategy in Action 10.2.

In sum, although diversification can be a highly profitable strategy to pursue, it is also the most complex and difficult strategy to manage because it is based on a complex, multibusiness model. Even when a company has pursued this strategy successfully in the past, changing conditions both in the industry environment and within a company can quickly reduce its profit-creating advantages. For example, such changes may result in one or more business units losing their competitive advantage. Or, changes may cause the bureaucratic costs associated with pursuing diversification to rise sharply and cancel out its advantages. Thus, the existence of bureaucratic costs places a limit on the amount of diversification that a company can profitably pursue. It makes sense for a company to diversify only when the profit-enhancing advantages of this strategy exceed the bureaucratic costs of managing the increasing number of business units required when a company expands and enters new industries.



10.2 STRATEGY IN ACTION

How Bureaucratic Costs Rose Then Fell at Pfizer

Pfizer is one of the largest global pharmaceuticals companies in the world, with sales of almost \$53 billion in 2017. Its research scientists have innovated some of the most successful, profitable drugs in the world, such as the first cholesterol reducer, Lipitor. In the 2000s, however, Pfizer encountered major problems in its attempt to innovate new blockbuster drugs while its current blockbuster drugs, such as Lipitor, lost their patent protection. Whereas Lipitor once earned \$13 billion in profits per year, its sales were now fast declining. By 2012, Lipitor was only bringing in \$3.9 billion. Pfizer desperately needed to find ways to make its product development pipeline work. One manager, Martin Mackay, believed he knew how to do it.

When Pfizer's R&D chief retired, Mackay, his deputy, made it clear to CEO Jeffrey Kindler that he wanted the job. Kindler made it equally clear he thought the company could use some new talent and fresh ideas to solve its problems. Mackay realized he had to quickly devise a convincing plan to change the way Pfizer's scientists worked to develop new drugs, gain Kindler's support, and get the top job. He created a detailed plan for changing the way Pfizer's thousands of researchers made decisions, ensuring that the company's resources, talent, and funds would be put to their best use. After Kindler reviewed the plan, he was so impressed he promoted Mackay to the top R&D position. What was Mackay's plan?

As Pfizer had grown over time as a result of mergers with two large pharmaceutical companies, Warner Lambert and Pharmacia, Mackay noted how decision-making problems and conflict between the managers of Pfizer's different drug divisions had increased. As it grew, Pfizer's organizational structure had become taller and taller, and the size of its headquarters staff grew. With more managers and levels in the company's hierarchy there was a great need for committees to integrate across activities. However, in meetings, different groups of managers fought to promote the development

of the drugs in which they had the most interest, and increasingly came into conflict with one another in efforts to ensure they got the resources needed to develop these drugs. In short, Mackay felt that too many managers and committees were resulting in too much conflict, and that the company's performance was suffering as a result. In addition, Pfizer's success depended upon innovation, but conflict had resulted in a bureaucratic culture that reduced the quality of decision making, creating more difficulty when identifying promising new drugs—and increasing bureaucratic costs.

Mackay's bold plan to reduce conflict and bureaucratic costs involved slashing the number of management layers between top managers and scientists from 14 to 7, which resulted in the layoff of thousands of Pfizer's managers. He also abolished the product development committees whose wrangling he believed was slowing down the process of transforming innovative ideas into blockbuster drugs. After streamlining the hierarchy, he focused on reducing the number of bureaucratic rules scientists had to follow, many of which were unnecessary and promoted conflict. He and his team eliminated every kind of written report that was slowing the innovation process. For example, scientists had been in the habit of submitting quarterly and monthly reports to top managers explaining each drug's progress; Mackay told them to choose one report or the other.

As you can imagine, Mackay's efforts caused enormous upheaval in the company, as managers fought to keep their positions and scientists fought to protect the drugs they had in development. However, a resolute Mackay pushed his agenda through with the support of the CEO, who defended his efforts to create a new R&D product development process that empowered Pfizer's scientists and promoted innovation and entrepreneurship. Pfizer's scientists reported that they felt "liberated" by the new work flow; the level of conflict decreased, and they felt hopeful that new drugs would be produced more quickly.

Source: www.pfizer.com.

10-5 CHOOSING A STRATEGY

10-5a Related Versus Unrelated Diversification

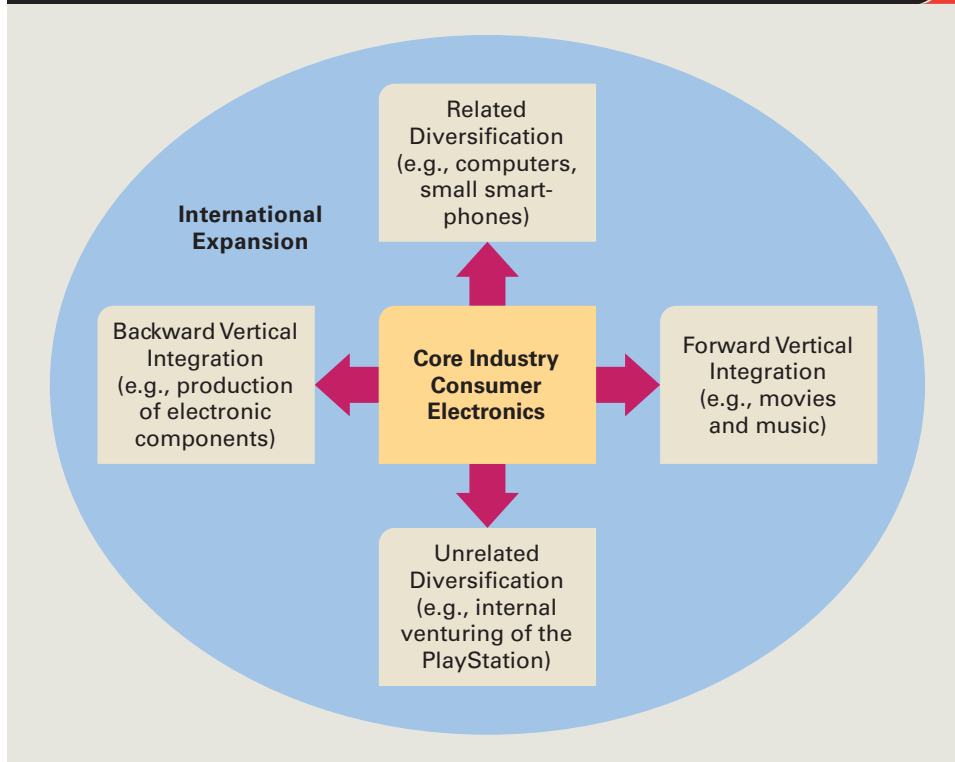
Because related diversification involves more sharing of competencies, one might think it can boost profitability in more ways than unrelated diversification, and is therefore the better diversification strategy. However, some companies can create as much or more value from pursuing unrelated diversification, so this strategy must also have some substantial benefits. An unrelated company does *not* need to achieve coordination between business units; it must cope only with the bureaucratic costs that arise from the number of businesses in its portfolio. In contrast, a related company must achieve coordination *among* business units if it is to realize the gains that come from utilizing its distinctive competencies. Consequently, it has to cope with the bureaucratic costs that arise *both* from the number of business units in its portfolio *and* from coordination among business units. Although it is true that related diversified companies can create value and profit in more ways than unrelated companies, they also have to bear higher bureaucratic costs to do so. These higher costs may cancel out the greater benefits, making the strategy no more profitable than one of unrelated diversification.

How, then, does a company choose between these strategies? The choice depends upon a comparison of the benefits of each strategy against the bureaucratic costs of pursuing it. It pays for a company to pursue related diversification when (1) the company's competencies can be applied across a greater number of industries and (2) the company has superior strategic capabilities that allow it to keep bureaucratic costs under close control—perhaps by encouraging entrepreneurship, or by developing a value creating organizational culture.

Using the same logic, it pays for a company to pursue unrelated diversification when (1) each business unit's functional competencies have few useful applications across industries, but the company's top managers are skilled at raising the profitability of poorly run businesses and (2) the company's managers use their superior strategic management competencies to improve the competitive advantage of their business units and keep bureaucratic costs under control. Well-managed companies such as UTC (as discussed in Strategy in Action 10.1) have managers who can successfully pursue unrelated diversification and reap its rewards.

10-5b The Web of Corporate-Level Strategy

Finally, it is important to note that although some companies may choose to pursue a strategy of related or unrelated diversification, there is nothing that stops them from pursuing both strategies at the same time. The purpose of corporate-level strategy is to increase long-term profitability. A company can pursue multiple strategies as long as strategic managers have weighed the advantages and disadvantages of those strategies and arrived at a multibusiness model that justifies them. Figure 10.5 illustrates how Sony developed a web of corporate strategies to compete in many industries—a program that proved a mistake, reduced its differentiation advantage, and increased its cost structure in the 2000s.

Figure 10.5 Sony's Web of Corporate-Level Strategy

Sony's core business is electronic products, and in the past it was well known for innovative products that made it a leading, global brand. To protect the quality of its electronic products, Sony decided to manufacture a high percentage of the component parts for its televisions, DVD players, and other units, and it pursued a strategy of backward vertical integration. Sony also engaged in forward vertical integration by opening a chain of Sony stores in shopping malls (to compete with Apple), and it diversified into complements by acquiring Columbia Pictures and MGM. Sony also shared and leveraged its distinctive competencies by developing its own business units to operate in the computer and smartphone industries, a strategy of related diversification. Finally, it decided to enter the home videogame industry, and developed PlayStation to compete with Nintendo.

Sony's profitability fell dramatically because its multibusiness model led it to diversify into too many industries, in each of which the focus was upon innovating high-quality products. As a result, its cost structure increased so much it swallowed up all the profits its businesses were generating. Sony's strategy of individual-business-unit autonomy also resulted in each unit pursuing its own goals at the expense of the company's multibusiness model—which escalated bureaucratic costs and drained its profitability. Divisions did not share their knowledge and expertise, and this incongruence allowed competitors such as Samsung to supersede Sony, especially with smartphones and flatscreen, LCD TV products.

10-6 ENTERING NEW INDUSTRIES: INTERNAL NEW VENTURES

We have discussed the sources of value managers seek through corporate-level strategies of related and unrelated diversification (and the challenges and risks these strategies also impose). Now we turn to the three main methods managers employ to enter new industries: internal new ventures, acquisitions, and joint ventures. In this section, we consider the pros and cons of using internal new ventures. In the following sections, we look at acquisitions and joint ventures.

10-6a The Attractions of Internal New Venturing

internal new venturing

The process of transferring resources to, and creating a new business unit or division in, a new industry to innovate new kinds of products.

Internal new venturing is typically used to implement corporate-level strategies when a company possesses one or more distinctive competencies in its core business model that can be leveraged or recombined to enter a new industry. **Internal new venturing** is the process of transferring resources to, and creating a new business unit or division in, a new industry. Internal venturing is used often by companies that have a business model based upon using their technology or design skills to innovate new kinds of products and enter related markets or industries. Thus, technology-based companies that pursue related diversification—for example, DuPont, which has created new markets with products such as cellophane, nylon, Freon, and Teflon—are most likely to use internal new venturing. 3M has a near-legendary knack for creating new or improved products from internally generated ideas, and then establishing new business units to create the business model that enables it to dominate a new market. Similarly, HP entered into the computer and printer industries by using internal new venturing.

A company may also use internal venturing to enter a newly emerging or embryonic industry—one in which no company has yet developed the competencies or business model to give it a dominant position in that industry. This was Monsanto's situation in 1979, when it contemplated entering the biotechnology field to produce herbicides and pest-resistant crop seeds. The biotechnology field was young at that time, and there were no incumbent companies focused on applying biotechnology to agricultural products. Accordingly, Monsanto internally ventured a new division to develop the required competencies necessary to enter and establish a strong competitive position in this newly emerging industry.

10-6b Pitfalls of New Ventures

Despite the popularity of internal new venturing, there is a high risk of failure. Research suggests that somewhere between 33 and 60% of all new products that reach the marketplace do not generate an adequate economic return,¹⁶ and that most of these products were the result of internal new ventures. Three reasons are often put forward to explain the relatively high failure rate of internal new ventures: (1) market entry on too small a scale, (2) poor commercialization of the new-venture product, and (3) poor corporate management of the new-venture division.¹⁷

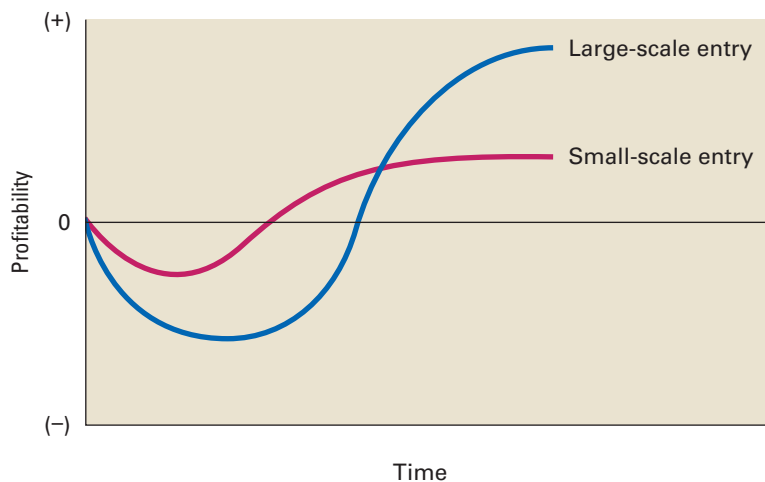
Scale of Entry Research suggests that large-scale entry into a new industry is often a critical precondition for the success of a new venture. In the short run, this means that

a substantial capital investment must be made to support large-scale entry; thus, there is a risk of major losses if the new venture fails. But, in the long run—which can be as long as 5 to 12 years (depending on the industry)—such a large investment results in far greater returns than if a company chooses to enter on a small scale to limit its investment and reduce potential losses.¹⁸ Large-scale entrants can more rapidly realize scale economies, build brand loyalty, and gain access to distribution channels in the new industry, all of which increase the probability of new-venture success. In contrast, small-scale entrants may find themselves handicapped by high costs due to lack of scale economies and lack of market presence, which limits the entrant's ability to build brand loyalty and gain access to distribution channels. These scale effects are particularly significant when a company is entering an established industry in which incumbent companies possess scale economies, brand loyalty, and access to distribution channels. In that case, the new entrant must make a major investment to succeed.

Figure 10.6 plots the relationship between scale of entry and profitability over time for successful small-scale and large-scale ventures. The figure shows that successful small-scale entry is associated with lower initial losses, but in the long term, large-scale entry generates greater returns. However, because of the high costs and risks associated with large-scale entry, many companies make the mistake of choosing a small-scale entry strategy, which often means they fail to build the market share necessary for long-term success.

Commercialization Many internal new ventures are driven by the opportunity to use a new or advanced technology to make better products and outperform competitors in a market. To succeed commercially, the products under development must be tailored to meet the needs of customers. New ventures often fail because the company ignores these needs; its managers become so focused on the technological possibilities of the new product that customer requirements are forgotten.¹⁹ Thus, a new venture may fail because it is marketing a product based on a technology for which there is no demand, or the company fails to correctly position or differentiate the product in the market to attract customers.

Figure 10.6 Scale of Entry and Profitability



For example, consider the desktop PC marketed by NeXT, a company started by Apple founder Steve Jobs. The NeXT system failed to gain market share because the PC incorporated an array of expensive technologies that consumers simply did not want, such as optical disk drives and hi-fidelity sound. The optical disk drives, in particular, turned off customers because it was difficult to move work from PCs with floppy drives to NeXT machines with optical drives. In other words, NeXT failed because its founder was so dazzled by leading-edge technology that he ignored customer needs. However, Jobs redeemed himself and was named “CEO of the Decade” by *Fortune* magazine in 2010, after he successfully commercialized Apple’s iPod, which dominates the MP3 player market. Also, the iPhone set the standard in the smartphone market, and the iPad quickly dominated the tablet computer market following its introduction in 2010.

Poor Implementation Managing the new-venture process, and controlling the new-venture division, creates many difficult managerial and organizational problems.²⁰ For example, one common mistake companies make to try to increase their chances of introducing successful products is to establish too many internal new-venture divisions at the same time. Managers attempt to spread the risks of failure by having many divisions, but this places enormous demands upon a company’s cash flow. Sometimes, companies are forced to reduce the funding each division receives to keep the entire company profitable, and this can result in the most promising ventures being starved of the cash they need in order to succeed.²¹ Another common mistake is when corporate managers fail to do the extensive advanced planning necessary to ensure that the new venture’s business model is sound and contains all the elements that will be needed later if it is to succeed. Sometimes corporate managers leave this process to the scientists and engineers championing the new technology. Focused on the new technology, managers may innovate new products that have little strategic or commercial value. Corporate managers and scientists must work together to clarify how and why a new venture will lead to a product that has a competitive advantage, and jointly establish strategic objectives and a timetable to manage the venture until the product reaches the market.

The failure to anticipate the time and costs involved in the new-venture process constitutes a further mistake. Many companies have unrealistic expectations regarding the time frame and expect profits to flow in quickly. Research suggests that some companies operate with a philosophy of killing new businesses if they do not turn a profit by the end of the third year, which is unrealistic given that it can take 5 years or more before a new venture generates substantial profits.

10-6c Guidelines for Successful Internal New Venturing

To avoid these pitfalls, a company should adopt a well-thought-out, structured approach to manage internal new venturing. New venturing is based on R&D. It begins with the *exploratory research* necessary to advance basic science and technology (the “R” in R&D) and *development research* to identify, develop, and perfect the commercial applications of a new technology (the “D” in R&D). Companies with strong track records of success at internal new venturing excel at both kinds of R&D; they help to advance basic science and discover important commercial applications for it.²² To advance basic science, it is important for companies to

have strong links with universities, where much of the scientific knowledge that underlies new technologies is discovered. It is also important to make sure that research funds are being controlled by scientists who understand the importance of both “R” and “D” research. If the “D” is lacking, a company will probably generate few successful commercial ventures no matter how well it does basic research. Companies can take several steps to ensure that good science ends up with good, commercially viable products.

First, many companies must place the funding for research into the hands of business-unit managers who have the skill or knowhow to narrow down and then select the optimal set of research projects—those that have the best chance of a significant commercial payoff. Second, to make effective use of its R&D competency, top managers must work with R&D scientists to continually develop and improve the business model and strategies that guide their efforts, and make sure that all its scientists and engineers understand what they have to do to make it succeed.²³

Third, a company must foster close links between R&D and marketing to increase the probability that a new product will be a commercial success in the future. When marketing works to identify the most important customer requirements for a new product and then communicates these requirements to scientists, it ensures that research projects meet the needs of their intended customers. Fourth, a company should also foster close links between R&D and manufacturing to ensure that it has the ability to make a proposed new product in a cost-effective way. Many companies successfully integrate the activities of the different functions by creating cross-functional project teams to oversee the development of new products from their inception to market introduction. This approach can significantly reduce the time it takes to bring a new product to market. For example, while R&D is working on design, manufacturing is setting up facilities, and marketing is developing a campaign to show customers how much the new product will benefit them.

Finally, because large-scale entry often leads to greater long-term profits, a company can promote the success of internal new venturing by “thinking big.” A company should construct efficient-scale manufacturing facilities and allocate marketing a large budget to develop a future product campaign that will build market presence and brand loyalty quickly and well in advance of that product’s introduction. Also, corporate managers should not panic when customers are slow to adopt the new product; they need to accept the fact there will be initial losses and recognize that as long as market share is expanding, the product will eventually succeed.

10-7 ENTERING NEW INDUSTRIES: ACQUISITIONS

In Chapter 9, we explained that acquisitions are the main vehicle that companies use to implement a horizontal integration strategy. Acquisitions are also a principal way companies enter new industries to pursue vertical integration and diversification, so it is necessary to understand both the benefits and risks associated with using acquisitions to implement a corporate-level strategy.

10-7a The Attraction of Acquisitions

In general, acquisitions are used to pursue vertical integration or diversification when a company lacks the distinctive competencies necessary to compete in a new industry, and so uses its financial resources to purchase an established company that has those competencies. A company is particularly likely to use acquisitions when it needs to move rapidly to establish a presence in an industry, commonly an embryonic or growth industry. Entering a new industry through internal venturing is a relatively slow process; acquisition is a much quicker way for a company to establish a significant market presence. A company can purchase a leading company with a strong competitive position in months, rather than waiting years to build a market leadership position by engaging in internal venturing. Thus, when speed is particularly important, acquisition is the favored entry mode. Intel, for example, used acquisitions to build its communications chip business because it sensed that the market was developing very quickly, and that it would take too long to develop the required competencies.

In addition, acquisitions are often perceived as being less risky than internal new ventures because they involve less commercial uncertainty. Because of the risks of failure associated with internal new venturing, it is difficult to predict its future success and profitability. By contrast, when a company makes an acquisition, it gains a company with an already established reputation, and it knows the magnitude of the company's market share and profitability.

Finally, acquisitions are an attractive way to enter an industry that is protected by high barriers to entry. Recall from Chapter 2 that barriers to entry arise from factors such as product differentiation, which leads to brand loyalty, and high market share, which leads to economies of scale. When entry barriers are high, it may be very difficult for a company to enter an industry through internal new venturing because it will have to construct large-scale manufacturing facilities and invest in a massive advertising campaign to establish brand loyalty—difficult goals that require huge capital expenditures. In contrast, if a company acquires another company already established in the industry, possibly the market leader, it can circumvent most entry barriers because that company has already achieved economies of scale and obtained brand loyalty. In general, the higher the barriers to entry, the more likely it is that acquisitions will be the method used to enter the industry.

10-7b Acquisition Pitfalls

For these reasons, acquisitions have long been the most common method that companies use to pursue diversification. Numerous research studies have been conducted to assess whether, on average, acquisitions create or destroy shareholder value. These studies have used a wide range of methodological approaches (e.g., event studies, large panel analyses, case studies), samples (e.g., acquisitions in particular industries, acquisitions where both the acquirer and target are publicly-held U.S. firms, acquisitions that vary in the share that is taken by the acquirer), and performance measures (e.g., stock price reactions, long-run cumulative abnormal returns, accounting performance, productivity, patenting outcomes). The research falls well short of a consensus on the effect of acquisitions, however a very large number of studies conclude that many acquisitions fail to increase the profitability of the acquiring company and may result in losses. For example, one study of 700 large acquisitions found that although 30% of these resulted

in higher profits, 31% led to losses, and the remainder had little impact.^{24,25} Another study of the postacquisition performance of acquired companies found that their profitability and market share often decline, suggesting that many acquisitions destroy rather than create value.²⁶

Acquisitions may fail to raise the performance of the acquiring companies for four reasons²⁷: (1) companies frequently experience management problems when they attempt to integrate a different company's organizational structure and culture into their own; (2) companies often overestimate the potential economic benefits from an acquisition; (3) acquisitions tend to be so expensive that they do not increase future profitability; (4) companies are often negligent in screening their acquisition targets and fail to recognize important problems with their business models; and (5) managers may have incentives to make acquisitions even when they do not increase shareholder value (i.e., "agency problems").

Integrating the Acquired Company Once an acquisition has been made, the acquiring company must integrate the acquired company and combine it with its own organizational structure and culture. Integration involves the adoption of common management and financial control systems, the joining together of operations from the acquired and the acquiring company, the establishment of bureaucratic mechanisms to share information and personnel, and the need to create a common culture.²⁸ Experience has shown that many problems can occur as companies attempt to integrate their activities. When the processes and cultures of two companies are very different, integration can be extremely challenging. For example, when Daimler Benz acquired Chrysler, the two companies discovered that the more formal and hierarchical culture at Daimler chafed Chrysler employees, who were used to a looser, more entrepreneurial culture. Furthermore, though Daimler had hoped to benefit from Chrysler's more rapid new-product development processes, they soon realized that to do so they would have to adopt a more modular approach to developing cars, for instance by re-using platforms across different car models. This contrasted sharply with Daimler's historic emphasis on holistic "ground up" development of car designs. In the end, few of the anticipated advantages of the acquisition materialized. After paying roughly \$36 billion for Chrysler (through a stock swap), Daimler ended up having to *pay out* another \$650 million to Cerberus Capital Management to shed the Chrysler group.²⁹

Many acquired companies experience high management turnover because their employees do not like the acquiring company's way of operating—its structure and culture.³⁰ Research suggests that the loss of management talent and expertise, and the damage from constant tension between the businesses, can materially harm the performance of the acquired unit.³¹ Moreover, companies often must take on an enormous amount of debt to fund an acquisition, and they are frequently unable to pay it once the management problems (and sometimes the weaknesses) of the acquired company's business model surface.

Overestimating Economic Benefits Even when companies find it easy to integrate their activities, they often overestimate the combined businesses' future profitability. Managers often overestimate the competitive advantages that will derive from the acquisition and so pay more for the acquired company than it is worth. One reason is that top managers typically overestimate their own general competencies

to create valuable new products from an acquisition (this is known as the “hubris hypothesis”).³² The very fact that they have risen to the top of a company gives some managers an exaggerated sense of their own capabilities and a self-importance that distorts their strategic decision making. Coca-Cola’s acquisition of several midsized winemakers illustrates this. Reasoning that a beverage is a beverage, Coca-Cola’s then-CEO decided he would be able to mobilize his company’s talented marketing managers to develop the strategies needed to dominate the U.S. wine industry. After purchasing three wine companies and enduring 7 years of marginal profits because of failed marketing campaigns, he subsequently decided that wine and soft drinks are very different products; in particular, they have different kinds of appeal, pricing systems, and distribution networks. Coca-Cola eventually sold the wine operations to Joseph E. Seagram and took a substantial loss.³³

The Expense of Acquisitions Perhaps the most important reason for the failure of acquisitions is that acquiring a company with stock that is publicly traded tends to be very expensive—and the expense of the acquisition can more than wipe out the value of the stream of future profits that are expected from the acquisition. One reason is that the top managers of a company that is “targeted” for acquisition are likely to resist any takeover attempt unless the acquiring company agrees to pay a substantial premium above its current market value. These premiums are often 30 to 50% above the usual value of a company’s stock. Similarly, the stockholders of the target company are unlikely to sell their stock unless they are paid major premiums over market value prior to a takeover bid. Collectively, this means that it is far easier to overpay for an acquisition target than to “get a bargain,” and research shows that managers do regularly overpay for acquisitions.³⁴

To pay such high premiums, the acquiring company must be certain it can use its acquisition to generate the stream of future profits that justifies the high price of the target company. This is frequently difficult to do given how fast the industry environment can change and other problems discussed earlier such as integrating the acquired company. This is a major reason why acquisitions are frequently unprofitable for the acquiring company.

The reason why the acquiring company must pay such a high premium is that the stock price of the acquisition target increases enormously during the acquisition process as investors speculate on the final price the acquiring company will pay to capture it. In the case of a contested bidding contest, where two or more companies simultaneously bid to acquire the target company, its stock price may surge. Also, when many acquisitions are occurring in one industry, investors speculate that the value of the remaining industry companies that have *not* been acquired has increased, and that a bid for these companies will be made at some future point. This also drives up their stock price and increases the cost of making acquisitions. This happened in the telecommunications sector when, to make sure they could meet the needs of customers who were demanding leading-edge equipment, many large companies went on acquisition “binges.” Nortel and Alcatel-Lucent engaged in a race to purchase smaller, innovative companies that were developing new telecommunications equipment. The result was that the stock prices for these companies were bid up by investors, and they were purchased at a hugely inflated price. When the telecommunications boom turned to bust, the acquiring companies found that they had vastly overpaid for their acquisitions and had to take enormous accounting

write-downs. Nortel was forced to declare bankruptcy and sold off all its assets, and the value of Alcatel-Lucent's stock plunged almost 90%.

Inadequate Pre-acquisition Screening As the problems of these companies suggest, top managers often do a poor job of pre-acquisition screening—that is, evaluating how much a potential acquisition may increase future profitability. Researchers have discovered that one important reason for the failure of an acquisition is that managers make the decision to acquire other companies without thoroughly analyzing potential benefits and costs.³⁵ In many cases, after an acquisition has been completed, many acquiring companies discover that instead of buying a well-managed business with a strong business model, they have purchased a troubled organization. Obviously, the managers of the target company may manipulate company information or the balance sheet to make their financial condition look much better than it is. The acquiring company must be wary and complete extensive research. In 2009, IBM was in negotiations to purchase chip-maker Sun Microsystems. After spending 1 week examining its books, IBM reduced its offer price by 10% when its negotiators found its customer base was not as solid as they had expected. Sun Microsystems was eventually sold to Oracle in 2010 for \$7.4 billion. For the next 5 years, Sun Microsystems was a drain on Oracle's profit, but Ellison persevered in investing in Sun's technologies, and by 2015 it appeared his investment finally might be paying off.³⁶

Agency Problems It is important to note that managers may make acquisitions for reasons that have nothing to do with shareholder value. This is called an “agency problem,” and will be discussed further in Chapter 11. It is well established, for example, that the pay, perquisites, and other benefits managers receive are strongly related to firm size.³⁷ Furthermore, managers often have a very large portion of their personal wealth tied to the firm they manage. This means they may be extremely underdiversified. Their solution might be to diversify the firm, even if that is not in the interests of other shareholders (who may more easily and inexpensively diversify by holding shares in other firms).

10-7c Guidelines for Successful Acquisition

To avoid these pitfalls and make successful acquisitions, companies need to follow an approach to targeting and evaluating potential acquisitions that is based on four main steps: (1) target identification and pre-acquisition screening, (2) bidding strategy, (3) integration, and (4) learning from experience.³⁸

Identification and Screening Thorough pre-acquisition screening increases a company's knowledge about a potential takeover target and lessens the risk of purchasing a problem company—one with a weak business model. It also leads to a more realistic assessment of the problems involved in executing an acquisition so that a company can plan how to integrate the new business and blend organizational structures and cultures. The screening process should begin with a detailed assessment of the strategic rationale for making the acquisition, an identification of the kind of company that would make an ideal acquisition candidate, and an extensive analysis of the strengths and weaknesses of the prospective company's business model compared to other possible acquisition targets.

Indeed, an acquiring company should select a set of top potential acquisition targets and evaluate each company using a set of criteria that focus on revealing (1) its financial position, (2) its distinctive competencies and competitive advantage, (3) changing industry boundaries, (4) its management capabilities, and (5) its corporate culture. Such an evaluation helps the acquiring company perform a detailed strength, weakness, opportunities, and threats (SWOT) analysis that identifies the best target, for example, by measuring the potential economies of scale and scope that can be achieved between the acquiring company and each target company. This analysis also helps reveal potential problems that might arise when it is necessary to integrate the corporate cultures of the acquiring and acquired companies. For example, managers at Microsoft and SAP, the world's leading provider of enterprise resource planning (ERP) software, met to discuss a possible acquisition by Microsoft. Both companies decided that despite the strong, strategic rationale for a merger—together they could dominate the software computing market, satisfying the need of large global companies—they would have challenges to overcome. The difficulties of creating an organizational structure that could successfully integrate their hundreds of thousands of employees throughout the world, and blend two very different cultures, were insurmountable.

Once a company has reduced the list of potential acquisition candidates to the most favored one or two, it needs to consult expert third parties such as investment bankers like Goldman Sachs and Merrill Lynch. These companies provide valuable insights about the attractiveness of a potential acquisition, assess current industry competitive conditions, and handle the many other issues surrounding an acquisition such as how to select the optimal bidding strategy for acquiring the target company's stock and keep the purchase price as low as possible.

Bidding Strategy The objective of the bidding strategy is to reduce the price that a company must pay for the target company. The most effective way a company can acquire another is to make a friendly takeover bid, which means the two companies decide upon an amicable way to merge the two companies, satisfying the needs of each company's stockholders and top managers. A friendly takeover prevents speculators from bidding up stock prices. By contrast, in a hostile bidding environment, such as existed between Oracle and PeopleSoft, and between Microsoft and Yahoo!, the price of the target company often gets bid up by speculators who expect that the offer price will be raised by the acquirer, or by another company with a higher counteroffer.

Another essential element of a good bidding strategy is timing. For example, Hanson PLC, one of the most successful companies to pursue unrelated diversification, searched for sound companies suffering from short-term problems because of the business cycle or because performance was being seriously impacted by one underperforming division. Such companies are often undervalued by the stock market and can be acquired without paying a high stock premium. With good timing, a company can make a bargain purchase.

Integration Despite good screening and bidding, an acquisition will fail unless the acquiring company possesses the essential organizational-design skills needed to integrate the acquired company into its operations and quickly develop a viable multibusiness model. Integration should center upon the source of the

potential strategic advantages of the acquisition; for instance, opportunities to share marketing, manufacturing, R&D, financial, or management resources. Integration should also involve steps to eliminate any duplication of facilities or functions. In addition, any unwanted business units of the acquired company should be divested.

Learning from Experience Research suggests that organizations that acquire many companies over time become expert in this process and can generate significant value from their experience of the acquisition process.³⁹ Their experience enables them to develop a “playbook” they can follow to execute an acquisition efficiently and effectively. One successful company, Tyco International, never made hostile acquisitions; it audited the accounts of the target companies in detail, acquired companies to help it achieve a critical mass in an industry, moved quickly to realize cost savings after an acquisition, promoted managers one or two layers down to lead the newly acquired entity, and introduced profit-based, incentive-pay systems in the acquired unit.⁴⁰ Over time, however, Tyco tended to become too large and diversified, leading both investors and management to suspect it was not generating as much value as it could. In 2007, Tyco’s health-care and electronics divisions were spun off. In 2012, Tyco was split again into three parts that would each have their own stock: Tyco Fire and Security, ADT (which provided residential and small-business security installation), and Flow Control (which sold water and fluid valves and controls).⁴¹

10-8 ENTERING NEW INDUSTRIES: JOINT VENTURES

Joint ventures, where two or more companies agree to pool their resources to create new business, are most commonly used to enter an embryonic or growth industry. Suppose a company is contemplating the creation of a new-venture division in an embryonic industry. Such a move involves substantial risks and costs because the company must make the huge investment necessary to develop the set of value-chain activities required to make and sell products in the new industry. On the other hand, an acquisition can be a dangerous proposition because there is rarely an established leading company in an emerging industry; even if there is, it will be extremely expensive to purchase.

In this situation, a joint venture frequently becomes the most appropriate method to enter a new industry because it allows a company to share the risks and costs associated with establishing a business unit in the new industry with another company. This is especially true when the companies share *complementary* skills or distinctive competencies, because this increases the probability of a joint venture’s success. Consider the 50/50 equity joint venture formed between UTC and Dow Chemical to build plastic-based composite parts for the aerospace industry. UTC was already involved in the aerospace industry (it builds Sikorsky helicopters), and Dow Chemical had skills in the development and manufacture of plastic-based composites. The alliance called for UTC to contribute its advanced aerospace skills,

and for Dow to contribute its skills in developing and manufacturing plastic-based composites. Through the joint venture, both companies became involved in new product markets. They were able to realize the benefits associated with related diversification without having to merge their activities into one company or bear the costs and risks of developing new products on their own. Thus, both companies enjoyed the profit-enhancing advantages of entering new markets without having to bear the increased bureaucratic costs.

Although joint ventures usually benefit both partner companies, under some conditions they may result in problems. First, although a joint venture allows companies to share the risks and costs of developing a new business, it also requires that they share in the profits if it succeeds. So, if one partner's skills are more important than the other partner's skills, the partner with more valuable skills will have to "give away" profits to the other party because of the 50/50 agreement. This can create conflict and sour the working relationship as time passes. Second, the joint-venture partners may have different business models or time horizons, and problems can arise if they start to come into conflict about how to run the joint venture; these kinds of problems can disintegrate a business and result in failure.

Third, while one advantage of joint ventures is that they allow frequent and close contact between companies, which facilitates learning and transfer of knowledge, this also creates a risk that a joint venture can lead to the unintentional leak of proprietary information across companies.⁴² Even when collaboration agreements have extensive contractual clauses designed to protect the proprietary knowledge possessed by each partner or developed through the collaboration, it is still very difficult to prevent that knowledge from being expropriated. Secrecy clauses are very difficult to enforce when knowledge is dispersed over a large number of employees.⁴³ A company that enters into a joint venture thus runs the risk of giving away important, company-specific knowledge to its partner, which might then use it to compete with its other partner in the future. For example, having gained access to Dow's expertise in plastic-based composites, UTC might have dissolved the alliance and produced these materials on its own. As the previous chapter discussed, this risk could be minimized if Dow got a *credible commitment* from UTC, which is what it did. UTC had to make an expensive, asset-specific investment to make the products the joint venture was formed to create.

10-8a Restructuring

Many companies expand into new industries to increase profitability. Sometimes, however, companies needing to exit industries to increase their profitability split their existing businesses into separate, independent companies. **Restructuring** is the process of reorganizing and divesting business units and exiting industries to refocus upon a company's core business and rebuild its distinctive competencies.⁴⁴ Why are so many companies restructuring, and how do they do it?

10-8b Why Restructure?

One main reason that diversified companies have restructured in recent years is that the stock market has valued their stock at a *diversification discount*, meaning that the

restructuring

The process of reorganizing and divesting business units and exiting industries to refocus upon a company's core business and rebuild its distinctive competencies.

stock of highly diversified companies is valued lower, relative to their earnings, than the stock of less-diversified companies.⁴⁵ Investors see highly diversified companies as less attractive investments for four reasons. First, as we discussed earlier, investors often feel these companies no longer have multibusiness models that justify their participation in many different industries. Second, the complexity of the financial statements of highly diversified enterprises disguises the performance of individual business units; thus, investors cannot determine if their multibusiness models are succeeding. The result is that investors perceive the company as being riskier than companies that operate in one industry, whose competitive advantage and financial statements are more easily understood. Given this situation, restructuring can be seen as an attempt to boost returns to shareholders by splitting up a multibusiness company into separate, independent parts.

The third reason for the diversification discount is that many investors have learned from experience that managers often have a tendency to pursue too much diversification or diversify for the wrong reasons: Their attempts to diversify *reduce* profitability.⁴⁶ For example, some CEOs pursue growth for its own sake; they are empire builders who expand the scope of their companies to the point where fast-increasing bureaucratic costs become greater than the additional value that their diversification strategy creates. Restructuring thus becomes a response to declining financial performance brought about by overdiversification.

A final factor leading to restructuring is that innovations in strategic management have diminished the advantages of vertical integration or diversification. For example, a few decades ago, there was little understanding of how long-term cooperative relationships or strategic alliances between a company and its suppliers could be a viable alternative to vertical integration. Most companies considered only two alternatives for managing the supply chain: vertical integration or competitive bidding. As we discussed in Chapter 9, in many situations long-term cooperative relationships can create the most value, especially because they avoid the need to incur bureaucratic costs or dispense with market discipline. As this strategic innovation has spread throughout global business, the relative advantages of vertical integration have declined.

KEY TERMS

diversification 314	economies of scope 316	related diversification 323	bureaucratic costs 327
diversified company 314	general organizational competencies 319	unrelated diversification 323	internal new venturing 332
transferring competencies 315	organizational design skills 319	internal capital market 324	restructuring 342
commonality 315	turnaround strategy 320		
leveraging competencies 316			

TAKEAWAYS FOR STRATEGIC MANAGERS

1. Strategic managers often pursue diversification when their companies are generating free cash flow; that is, financial resources they do not need to maintain a competitive advantage in their company's core industry and so can be used to fund new, profitable, business ventures.
2. A diversified company can create value by (a) transferring competencies among existing businesses, (b) leveraging competencies to create new businesses, (c) sharing resources to realize economies of scope, (d) using product bundling, (e) taking advantage of general organizational competencies that enhance the performance of all business units within a diversified company, and (f) operating an internal capital market. The bureaucratic costs of diversification rise as a function of the number of independent business units within a company and the extent to which managers must coordinate the transfer of resources between those business units.
3. Diversification motivated by a desire to pool risks or achieve greater growth often results in falling profitability.
4. The three methods companies use to enter new industries are internal new venturing, acquisition, and joint ventures.
5. Internal new venturing is used to enter a new industry when a company has a set of valuable competencies in its existing businesses that can be leveraged or recombined to enter a new business or industry.
6. Many internal ventures fail because of entry on too small a scale, poor commercialization, and poor corporate management of the internal new venturing process. Guarding against failure involves a carefully planned approach to project selection and management, integration of R&D and marketing to improve the chance new products will be commercially successful, and entry on a scale large enough to result in competitive advantage.
7. Acquisitions are often the best way to enter a new industry when a company lacks the competencies required to compete in the new industry, and it can purchase a company that does have those competencies at a reasonable price. Acquisitions are also the method chosen to enter new industries when there are high barriers to entry and a company is unwilling to accept the time frame, development costs, and risks associated with pursuing internal new venturing.
8. Acquisitions are unprofitable when strategic managers (a) underestimate the problems associated with integrating an acquired company, (b) overestimate the profit that can be created from an acquisition, (c) pay too much for the acquired company, and (d) perform inadequate pre-acquisition screening to ensure the acquired company will increase the profitability of the whole company. Guarding against acquisition failure requires careful pre-acquisition screening, a carefully selected bidding strategy, effective organizational design to successfully integrate the operations of the acquired company into the whole company, and managers who develop a general managerial competency by learning from their experience of past acquisitions.
9. Joint ventures are used to enter a new industry when (a) the risks and costs associated with setting up a new business unit are more than a company is willing to assume on its own, and (b) a company can increase the probability that its entry into a new industry will result in a successful new business by teaming up with another company with skills and assets that complement its own.
10. Restructuring is often required to correct the problems that result from (a) a business model that no longer creates competitive advantage, (b) the inability of investors to assess the competitive advantage of a highly diversified company from its financial statements, (c) excessive diversification because top managers desire to pursue empire building that results in growth without profitability, and (d) innovations in strategic management, such as strategic alliances and outsourcing, that reduce the advantages of vertical integration and diversification.

DISCUSSION QUESTIONS

1. When is a company likely to choose (a) related diversification and (b) unrelated diversification?
2. What factors make it most likely that (a) acquisitions or (b) internal new venturing will be the preferred method to enter a new industry?
3. Imagine that IBM has decided to diversify into the telecommunications business to provide on-line cloud-computing data services and broadband access for businesses and individuals. What method would you recommend that IBM pursue to enter this industry? Why?
4. Under which conditions are joint ventures a useful way to enter new industries?
5. Identify Honeywell's portfolio of businesses, which can be found at its website (www.honeywell.com). In how many different industries is Honeywell involved? Would you describe Honeywell as a related or an unrelated diversification company? Has Honeywell's diversification strategy increased profitability over time?

CLOSING CASE

LVMH: Getting Big While Staying Beautiful

In 1854, Louis Vuitton founded a trunk-making company in Paris. He had observed that most trunks could not be easily stacked because they had rounded tops; he thus began producing trunks with flat bottoms and tops out of trianon canvas, which was lightweight and airtight. The style became extremely popular, and soon competitors were imitating his design. To deter imitation, he began creating trunks with special patterns and a logo—creating the iconic look that distinguishes Louis Vuitton products today. After his death, his son, Georges Vuitton, took over the company and began to expand it worldwide. He exhibited the trunks at the Chicago World's Fair in 1893, and toured cities such as New York, Chicago, and Philadelphia, selling the trunks to retailers. Over the next 80 years, Louis Vuitton stores opened all over the world, including Bombay (now Mumbai), London, Washington DC, Buenos Aires, Taipei, Tokyo, and Seoul. In 1987, Moët Hennessy and Louis Vuitton merged to create the LVMH group, one of the world's largest and best-known luxury goods companies.

Many brands that came to be owned by the LVMH group were even older than Louis Vuitton: Moët & Chandon, the champagne company, had been founded in 1743; Veuve Clicquot Ponsardin

dated back to 1772; Hennessy (maker of fine cognac) was originally formed in 1765, and perfumery Guerlain dated back to 1829. The oldest company in the group, Château d'Yquem, began making wine in 1593. Each company brought a legacy of craftsmanship and a loyal following of customers. However, LVMH's biggest brand by far has continued to be the Louis Vuitton brand, which accounts for about one-third of its sales and almost half of its profit.

Much of LVMH's growth into the diversified, luxury goods group that it has become can be attributed to Bernard Arnault. Arnault's career in luxury goods began in 1984, when he bought Dior in the bankruptcy sale of an industrial group. A few years later, he bought Louis Vuitton, which at the time had 125 stores. He subsequently transformed the group into a luxury conglomerate with over 60 brands. One of his first moves was to take production and distribution back from license-holders to begin restoring the exclusivity of the brands. In the years that followed, he bought Celine, Givenchy, Fendi, Kenzo, Bulgari, Sephora, Tag Heuer, and more. In 2014, LVMH also opened a stunning new arts center in Paris, the Foundation Louis Vuitton. The center, designed by world-renowned architect Frank Gehry, generated a flurry of publicity for the group.

Perhaps ironically, luxury goods benefit from economies of scale: A large luxury group can help a new brand grow faster through its distribution reach and expertise in brand management. “Key money” to open a shop on a prestigious, high-traffic location such as London’s Bond Street can cost as much as \$16 million. On top of that, a vendor must pay to outfit the shop, and may pay annual rent of \$1.5 million. A large luxury group can make such investments and wait for them to pay off; small brands usually cannot. Furthermore, large luxury groups have more bargaining power with fashion magazines, more access to important fashion shows, and more influence with “key opinion leaders.” They can also better attract and retain managers because they offer a deep, broad career path. At LVMH, for example, managers can move from fashion to wine to jewelry, and can live in a range of the world’s biggest cities, vastly increasing their experience and marketability.

According to Bain & Company, over the past 20 years, the number of luxury-goods consumers

has more than tripled to 330 million, and their spending on luxury goods has risen at double the rate of global GDP. Most new buyers are not superwealthy but rather are “merely prosperous,” earning up to \$188,000 annually. As luxury-goods makers have raced to capture this market, they have had to carefully balance growth on a global scale while preserving an artisan image and exclusivity. Expanding too fast or too far can tarnish a luxury brand by making it seem too accessible.

By 2018, LVMH was earning almost €43 billion in revenues, had a net profit margin of 13.2%, and operated 4,374 stores worldwide. LVMH had proven that a company could be big and global, yet have prestigious and exclusive brands. As noted by Arnault, “People said in 1989 that Louis Vuitton was already too big. Now it’s ten times the size.”

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CASE DISCUSSION QUESTIONS

1. What are the key resources or competencies LVMH can leverage across its businesses?
2. Could those resources or competencies be shared via a market contract instead of common ownership?
3. What are potential sources of coordination costs or risks of LVMH’s diversification?

NOTES

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4

IMPLEMENTING STRATEGY

Chapter 11 Corporate Governance, Social Responsibility, and Ethics

Chapter 12 Implementing Strategy Through Organization

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CHAPTER

11

CORPORATE GOVERNANCE, SOCIAL RESPONSIBILITY, AND ETHICS

LEARNING OBJECTIVES

- 11.1 Understand the relationship between stakeholder management and corporate performance
- 11.2 Explain why maximizing returns to stockholders is viewed as the preeminent goal in many corporations
- 11.3 Describe the various governance mechanisms that are used to align the interests of stockholders and managers
- 11.4 Explain why these governance mechanisms do not always work as intended
- 11.5 Identify the main ethical issues that arise in business, and the causes of unethical behavior
- 11.6 Identify what managers can do to improve the ethical climate of their organization and ensure that business decisions do not violate ethical principles

OPENING CASE

Volkswagen: From the “People’s Car” to Dieselgate

Volkswagen, the “People’s Car,” was founded in 1937 as part of Adolf Hitler’s vision to make an affordable car that German families could own. Hitler decreed that the car needed to be able to carry two adults and three children, travel at 60 miles per hour, and cost no more than a motorbike. The beetle-shaped car’s design and price was immediately popular, and by 1938 roughly 336,000 people had signed up to buy them via a monthly savings plan. However, by the outbreak of World War II, few cars had been built and none delivered. During the war the plant only produced military vehicles, and then it was destroyed by bombing. Under the Potsdam Agreement between the USSR, USA and UK, what was left of the plant was slated for dismantling. However, a British Officer named Major Ivan Hirst convinced his commanders that he should take charge of the plant to produce cars for the British Army. The British military continued to run the company, successfully producing “beetles” until 1949 when it handed the company back over to the German State of Lower Saxony.

In the 1950s production increased rapidly, and the company began to expand its product range by introducing the “Transporter” (pre-cursor to the VW Bus) and the Ghia Coupe.¹ In the 1960s Volkswagen took ownership of Audi and started producing its first luxury cars. It later expanded into a range of sporty cars such as the Golf, Polo, and Passat that helped fuel the brand’s popularity with a wider market. Over time Volkswagen also bought other luxury brands including Porsche, Lamborghini, Bugatti and Bentley, and by 2015 was poised to become the largest automaker in the world.

Winterkorn’s Plan

When Martin Winterkorn took the helm of Volkswagen in 2007, he created an aggressive plan for the company. One of his first initiatives was to dramatically increase the modularity of auto design at Volkswagen so

that different models across its various brands could be produced with many components in common, reducing both development and manufacturing costs and speeding up new product design. He also set a target for Volkswagen to sell 10 million cars worldwide annually by 2018 at net margins of 8% or higher (at the time Winterkorn assumed the CEO position, the company was selling 6.2 million cars annually at a net margin of 6%).

A key to hitting this ambitious target was Winterkorn's plan to triple U.S. sales, in part by introducing "clean diesel" technology. Heavy taxation on gasoline had made diesel cars very popular in Europe, where they accounted for about half of all vehicle purchases. However, historically diesel cars had not been popular with Americans and accounted for only 2.6% of cars in the U.S. in 2011.² Early diesel cars produced more particulate emissions and an odorous exhaust, earning them the reputation in the U.S. of being dirty and smelly. Volkswagen aimed to change that. In 2009, Volkswagen launched a lineup of "Clean Diesel" cars to the U.S. that purported to both meet U.S. emission standards and offer greater power and efficiency by incorporating a new Volkswagen innovation, turbocharged direct injection (TDI).³ The engines earned rave reviews, and TDI-based cars won the "Green Car of the Year" award from the *Green Car Journal* in both 2009 (Volkswagen Jetta 2.0-liter TDI clean diesel) and 2010 (Audi A3 TDI clean diesel).

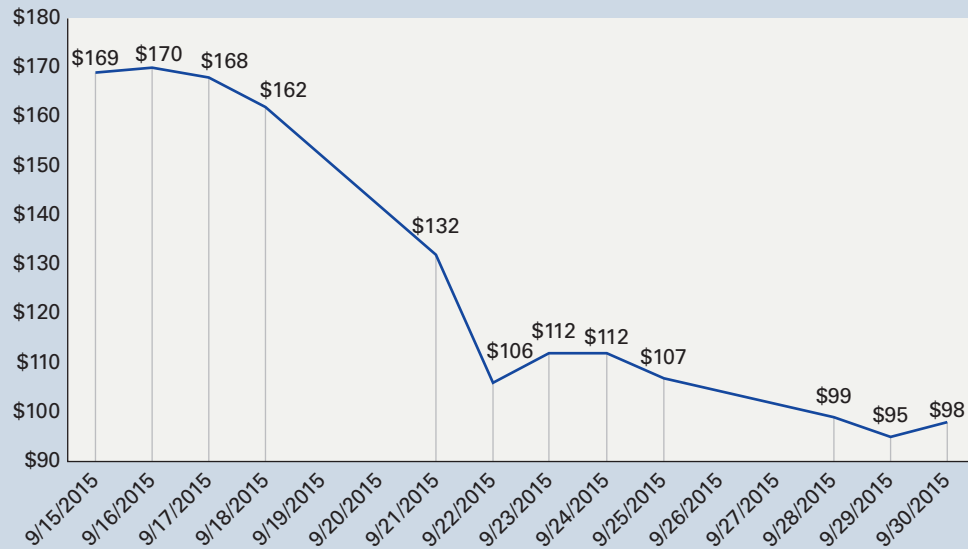
The engines, however would turn out to be too good to be true. In 2013, the International Council on Clean Transportation (ICCT) hired researchers from West Virginia University to do a standard emissions test on diesel cars. Since Volkswagen had been promoting its diesel cars as environmentally friendly and fuel efficient, it was a natural place to start. However, the researchers tested two Volkswagen models and found a huge difference in nitrogen oxide and dioxide (collectively referred to as NOx) emissions in lab tests versus actual driving conditions. They contacted the United States Environmental Protection Agency (EPA) and the California Air Resources Board, which opened an investigation.⁴

Volkswagen agreed to a voluntary recall of 500,000 cars in December 2014, claiming that the emission result was due to a technical problem that could be fixed with a software change. However, follow up tests in July 2015 showed the cars were still failing emissions standards, and none of Volkswagen's arguments could explain the discrepancy. According to Stanley Young, Spokesperson for the California Air Resources Board, "They basically ran out of excuses. They would say the tests weren't at the right temperature, or some other issue. We had them in [to our offices] several times."⁵ On September 3, 2015, the company finally admitted to rigging the emissions tests.



dpa picture alliance/Alamy Stock Photo

Closing Stock Price for Volkswagen AG, September 15-30, 2015



On September 18, 2015, the U.S. EPA told the press that Volkswagen had used software called “defeating devices” in its TDI diesel engines to cheat the emission standards tests. These devices could sense emissions testing conditions by detecting the steering, throttle, and other inputs required during an emissions test drive cycle. During the test, the device would utilize NO_x controls to make the car compliant, but when the car was on the road, the device turned off the controls permitting higher mileage and power, but also causing the car to emit up to forty times the NO_x permitted under U.S. law.⁶ Two days later Winterkorn issued a videotaped apology saying, “I personally am deeply sorry that we have broken the trust of our customers and the public,” and he added, “We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly and completely establish all of the facts of this case.”⁷

On September 22, 2015 Volkswagen revealed that roughly 11 million of its diesel vehicles worldwide had the emissions defeating devices, including Volkswagen, Audi, and Skoda cars. The company’s stock price was reeling, dropping from almost 38% from September 15th through September 22nd. Under mounting pressure, Winterkorn announced his resignation on September 23rd, 2015, asserting that he was “stunned” by the events of “the past few days,” and that he was “not aware of any wrongdoing on my part.”⁸

Mueller Takes the Wheel

On September 25, 2015, Matthias Mueller who had formerly head up Porsche became the CEO of the Volkswagen Group. He promised he would “win back trust for the Volkswagen Group—by leaving no stone unturned and with maximum transparency, as well as drawing the right conclusions from the current situation.”⁹ The company immediately created a whistleblower program for Volkswagen employees to provide information about how the tests were rigged, and promised employees that if they provided information before November 30, 2015 they would be absolved from dismissal and damages, though it could not guarantee that admitting involvement would prevent prosecution.¹⁰ The Volkswagen Group of America returned three Cars.com awards it had won for its

TDI diesel cars, and the Volkswagen Group was removed from the Dow Jones Sustainability Index, in which it had scored first place among auto manufacturers just one month previous. As the scandal continued to unfold, German newspapers revealed that internal memos within Volkswagen Group had alerted management to the emissions defeating software in both 2007 and 2011. Volkswagen did not respond to the reports.

In October of 2015, Volkswagen Group outlined a five-step plan to address the crisis:¹¹

1. It would conduct a worldwide probe to find out how the problem occurred and to hold the responsible parties accountable.
2. It would reassure the public that the vehicles were safe to drive.
3. It would develop fixes for all affected vehicles that used the 2.0-liter diesel engine.
4. It would review Volkswagen's compliance processes and standards and adopt preventative measures.
5. It would adopt regular and open communication systems with customers, dealers, employees and the public, including designated hotline, website, and letters to each customer.

Volkswagen would also attempt to repair all affected cars in Europe by the end of 2016, but it could not fix cars in the United States because it did not yet have a technology that would meet U.S. emission standards. Then, in November, things went from bad to worse. Volkswagen received notice from the U.S. EPA that some of its 3.0-liter engines were also found to have the defeat devices, including the 2014 Volkswagen Tuareg, 2015 Porsche Cayenne SUV, 2016 Audi A6 and A8 sedans, Audi A7 hatchback, and Audi Q5 SUV. Furthermore, the CO₂ emissions and fuel efficiency of roughly 800,000 other Volkswagen models had been underreported.

An interview with U.S. National Public Radio in December 2015 demonstrated Mueller's uncertainty and ambivalence about how to address the crisis:

NPR: You said this was a technical problem, but the American people feel this is not a technical problem, this is an ethical problem that's deep inside the company. How do you change that perception in the United States?

Mueller: "Frankly spoken, it was a technical problem. We made a default, we had a ... not the right interpretation of the American law. And we had some targets for our technical engineers, and they solved this problem and reached targets with some software solutions which haven't been compatible to the American law. That is the thing. And the other question you mentioned—it was an ethical problem? I cannot understand why you say that."

NPR: Because Volkswagen, in the U.S., intentionally lied to EPA regulators when they asked them about the problem before it came to light.

Mueller: We didn't lie. We didn't understand the question first. And then we worked since 2014 to solve the problem. And we did it together and it was a default of VW that it needed such a long time.

NPR: And how do you fix the perception that's here in the U.S.—how do you change American thinking about Volkswagen ...

Mueller: We don't want to change the American thinking. We have to make up our mind and we have to change our thinking. And we just do that.

NPR: How do we know when it's changed? How will we know when Volkswagen is different?

Mueller: How? So ...

NPR: What's the proof?

Mueller: I'm CEO in three months, and I'm working day and night to make a change process within Volkswagen. We started this, and it needs some time. It needs, let me say, one year ... one to three years ... For example, we have installed new board member for integrity and—Ms. [Christine] Hohmann-Dennhardt, she came from Daimler with a lot of other solutions within our company.

NPR: There were a lot of people in Congress and the [Obama] administration who are very angry with Volkswagen. What do you say to those people who are investigating and who feel like personally that the company lied to them?

Mueller: First of all, I have to apologize on behalf of Volkswagen. Second, I have to promise—and we will do the pledge—that we deliver appropriate solutions for our customers. As soon as possible.

NPR: How soon is soon?

Mueller: We have to discuss it with the EPA on Wednesday, and then we will see whether the time schedule is OK or not.

Realizing that he had not handled the situation as well as he wanted, Mueller asked to re-do the interview the next day:

NPR: When we talked yesterday, the key line seemed to be that this was a technical error. Which sounds to us in English, like, "Oops." When it wasn't an oops. It was more than a technical error. It seemed to be intentional.

Mueller: Yeah, the situation is, first of all we fully accept the violation. There is no doubt about it. Second, we have to apologize on behalf of Volkswagen for that situation we have created in front of customers, in front of dealers and, of course, to the authorities ...

NPR: People feel lied to, they feel like they've been had and all those things. There seems to be a difficulty in fixing that problem. How do you fix that problem? ...

Mueller: We have to accept that the problem was not created three months ago. It was created, let me say, 10 years ago. ... We had the wrong reaction when we got information year by year from the EPA and from the [California Air Resources Board]. ... We have to apologize for that, and we'll do our utmost to do things right for the future. ...

NPR: It's not a hill to climb; you've got a mountain range and then another mountain range and then another mountain range. How are you going to do that?

Mueller: We're doing our utmost. We have worked night and day to find solutions. Not only technical solutions. It's a lot of work for the lawyers and also for the press department.

Over the next three years, prosecutors in the United States and Germany would trace responsibility for the scheme to more than 40 people spread out over at least four cities, working for three Volkswagen brands. They would also implicate supplier Robert Bosch. In the course of their investigation, they would hear evidence that, in July 2015, Winterkorn had been informed about the defeating devices by engineers and had authorized its concealment.

Numerous fines were levied, including a U.S. District Court settlement finalized on October 25, 2016, for \$14.7 billion, requiring Volkswagen to notify all current owners and lessors of affected cars of a \$10 billion buyback program whereby TDI owners could sell their cars back to Volkswagen for a value between \$12,500 to \$44,000

depending on the model, age, and trim level (lessees would receive \$2600 to \$4900). Owners who did not sell their cars back would receive between \$5100 to \$10,000 to compensate them for diminished resale value, plus owners were entitled to have their emissions fixed for free. On January 11, 2017, the U.S. Department of Justice announced an additional \$4.3 billion in criminal and civil penalties to be paid by Volkswagen (in total the U.S. would extract roughly \$25 billion in fines from Volkswagen). Canada and South Korea would also fine the company, and though the European governments were less aggressive in seeking financial penalties, eventually Germany fined the company approximately €1.2 billion. Perhaps more significantly, a total of eight executives of Volkswagen were charged with crimes in the U.S., with several being assigned prison sentences, and Germany was investigating dozens more, leaving many wondering how far, and how high up the Volkswagen hierarchy, the punishments would go.¹²

11-1 OVERVIEW

We open this chapter with a close look at the governance mechanisms that shareholders implement to ensure that managers act in the company's interest and pursue strategies that maximize shareholder value. We also discuss how managers need to pay attention to other stakeholders such as employees, suppliers, and customers. The Opening Case shows just how dire a failure of corporate ethics and governance can become, and the Closing Case on Starbucks offers a good illustration of how some companies incorporate a wide range of stakeholder needs into their strategy. Balancing the needs of different stakeholder groups is in the long-term interests of the company's owners, its shareholders. Good governance mechanisms recognize this truth. In addition, we review the ethical implications of strategic decisions, and discuss how managers can make sure that their strategic decisions are founded upon strong ethical principles.

11-2 STAKEHOLDERS AND CORPORATE PERFORMANCE

A company's **stakeholders** are individuals or groups with an interest, claim, or stake in the company, in what it does, and in how well it performs.¹³ They include stockholders, creditors, employees, customers, the communities in which the company does business, and the general public. Stakeholders can be divided into two groups: internal stakeholders and external stakeholders (see Figure 11.1). **Internal stakeholders** are stockholders and employees, including executive officers, other managers, and board members. **External stakeholders** are all other individuals and groups that have some claim on the company. Typically, this group comprises customers, suppliers, creditors (including banks and bondholders), governments, unions, local communities, and the public.

stakeholders

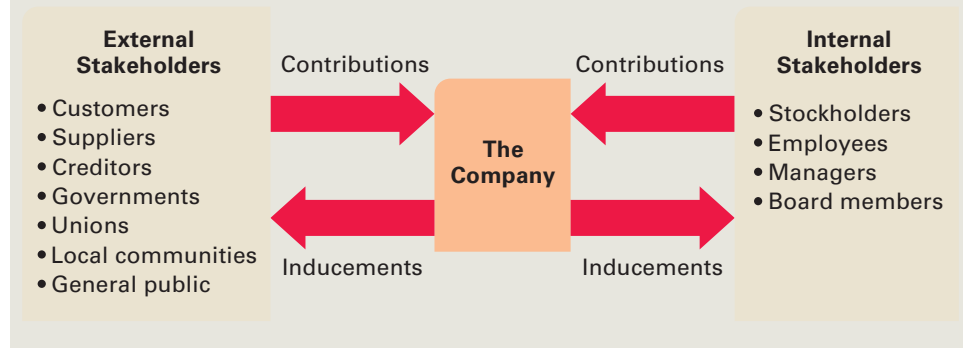
Individuals or groups with an interest, claim, or stake in the company—in what it does and in how well it performs.

internal stakeholders

Stockholders and employees, including executive officers, other managers, and board members.

external stakeholders

All other individuals and groups that have some claim on the company.

Figure 11.1 Stakeholders and the Enterprise

All stakeholders are in an exchange relationship with their company. Each stakeholder group listed in Figure 11.1 supplies the organization with important resources (or contributions), and in exchange each expects its interests to be satisfied (by inducements).¹⁴ Stockholders provide the enterprise with risk capital and expect management to attempt to maximize the return on their investment. Creditors, particularly bondholders, also provide the company with capital, in the form of debt, and they expect to be repaid on time, with interest. Employees provide labor and skills and in exchange expect commensurate income, job satisfaction, job security, and good working conditions. Customers provide a company with its revenues, and in exchange want high-quality, reliable products that represent value for money. Suppliers provide a company with inputs and in exchange seek revenues and dependable buyers. Governments provide a company with rules and regulations that govern business practice and maintain fair competition. In exchange, they want companies to adhere to these rules. Unions help to provide a company with productive employees, and in exchange they want benefits for their members in proportion to their contributions to the company. Local communities provide companies with local infrastructure, and in exchange want companies that are responsible citizens. The general public provides companies with national infrastructure, and in exchange seeks some assurance that the quality of life will be improved as a result of the company's existence.

A company must take these claims into account when formulating its strategies, or stakeholders may withdraw their support. For example, stockholders may sell their shares, bondholders may demand higher interest payments on new bonds, employees may leave their jobs, and customers may buy elsewhere. Suppliers may seek more dependable buyers, and unions may engage in disruptive labor disputes. Government may take civil or criminal action against the company and its top officers, imposing fines and, in some cases, jail terms. Communities may oppose the company's attempts to locate its facilities in their area, and the general public may form pressure groups, demanding action against companies that impair the quality of life. Any of these reactions can have a damaging impact on an enterprise. A study by Henisz, Dorobantu, and Nartey on the impact of stakeholder opposition to gold mines, for example, found that the value of cooperative relationships with external stakeholders was worth twice as much as the market value of the gold itself.¹⁵ As articulated by Yani Roditis, former COO of Gabriel Resources, "It used to be that the value of a gold mine was based on three variables: the amount of gold in the ground, the cost of extraction, and the world price of gold. Today, I can show you two mines identical on these three variables that differ in their valuation by an order of magnitude. Why? Because one has local support and the other doesn't."

11-2a Stakeholder Impact Analysis

A company cannot always satisfy the claims of all stakeholders. The goals of different groups may conflict, and, in practice, few organizations have the resources to manage all stakeholders.¹⁶ For example, union claims for higher wages can conflict with consumer demands for reasonable prices and stockholder demands for acceptable returns. Often, the company must make choices, and to do so it must identify the most important stakeholders and give highest priority to pursuing strategies that satisfy their needs. Stakeholder impact analysis can provide such identification. Typically, stakeholder impact analysis follows these steps:

1. Identify stakeholders.
2. Identify stakeholders' interests and concerns.
3. As a result, identify the claims stakeholders are likely to make on the organization.
4. Identify the stakeholders who are most important from the organization's perspective.
5. Identify the resulting strategic challenges.¹⁷

Such an analysis enables a company to identify the stakeholders most critical to its survival and to make sure that the satisfaction of their needs is paramount. Most companies that have gone through this process quickly conclude that three stakeholder groups must be satisfied above all others if a company is to survive and prosper: customers, employees, and stockholders.

11-2b The Unique Role of Stockholders

A company's stockholders are usually put in a different class from other stakeholder groups, and for good reason. Stockholders are the legal owners and the providers of **risk capital**, a major source of the capital resources that allow a company to operate. The capital that stockholders provide to a company is considered risk capital because there is no guarantee that stockholders will recoup their investments and/or earn a decent return.

risk capital

Capital that cannot be recovered if a company fails and goes bankrupt.

Recent history demonstrates all too clearly the nature of risk capital. For example, many investors who bought shares in Washington Mutual, the large, Seattle-based bank and home loan lender, believed that they were making a low-risk investment. The company had been around for decades and paid a solid dividend, which it increased every year. It had a large branch network and billions in deposits. However, during the 2000s, Washington Mutual was also making increasingly risky mortgage loans, reportedly giving mortgages to people without properly verifying if they had the funds to pay back those loans on time. By 2008, many borrowers were beginning to default on their loans, and Washington Mutual had to take multibillion-dollar write-downs on the value of its loan portfolio, effectively destroying its once-strong balance sheet. The losses were so large that customers with deposits at the bank started to worry about its stability, and they withdrew nearly \$16 billion in November 2008 from accounts at Washington Mutual. The stock price collapsed from around \$40 at the start of 2008 to under \$2 a share, and with the bank teetering on the brink of collapse, the federal government intervened, seized the bank's assets, and engineered a sale to J.P. Morgan. Washington Mutual's shareholders got absolutely nothing: They were wiped out.

Over the past decade, maximizing returns to stockholders has taken on significant importance as an increasing number of employees have become stockholders in the companies for which they work through employee stock ownership plans (ESOPs). At Wal-Mart, for example, all employees who have worked for more than 1 year are

eligible for the company's ESOP. Under an ESOP, employees are given the opportunity to purchase stock in the company, sometimes at a discount or less than the market value of the stock. The company may also contribute a certain portion of the purchase price to the ESOP. By making employees stockholders, ESOPs tend to increase the already strong emphasis on maximizing returns to stockholders, for they now help to satisfy two key stakeholder groups: stockholders and employees.

11-2c Profitability, Profit Growth, and Stakeholder Claims

Because of the unique position assigned to stockholders, managers normally seek to pursue strategies that maximize the returns that stockholders receive from holding shares in the company. As we noted in Chapter 1, stockholders receive a return on their investment in a company's stock in two ways: from dividend payments and from capital appreciation in the market value of a share (that is, by increases in stock market prices). The best way for managers to generate the funds for future dividend payments and keep the stock price appreciating is to pursue strategies that maximize the company's long-term profitability (as measured by the return on invested capital, ROIC) and grow the profits of the company over time.¹⁸

As we saw in Chapter 3, ROIC is an excellent measure of the profitability of a company. It tells managers how efficiently they are using the capital resources of the company (including the risk capital provided by stockholders) to generate profits. A company that is generating a positive ROIC is covering all of its ongoing expenses and has money left over, which is then added to shareholders' equity, thereby increasing the value of a company and thus the value of a share of stock in the company. The value of each share will increase further if a company can grow its profits over time, because then the profit that is attributable to every share (that is, the company's earnings per share) will also grow. As we have seen in this book, to grow profits, companies must do one or more of the following: (a) increase the margins earned on their products and services, (b) maintain margins and share while participating in a market that is growing, (c) maintain margins while taking market share from competitors, or (d) develop new markets through innovation, geographic expansion, or diversification.

Although managers should strive for profit growth if they are trying to maximize shareholder value, the relationship between profitability and profit growth is a complex one because attaining future profit growth may require investments that reduce the current rate of profitability. The task of managers is to find the right balance between profitability and profit growth.¹⁹ Too much emphasis on current profitability at the expense of future profitability and profit growth can make an enterprise less attractive to shareholders. Too much emphasis on profit growth can reduce the current profitability of the enterprise and have the same effect. In an uncertain world where the future is unknowable, finding the right balance between profitability and profit growth is as much art as it is science, but it is something that managers must try to do.

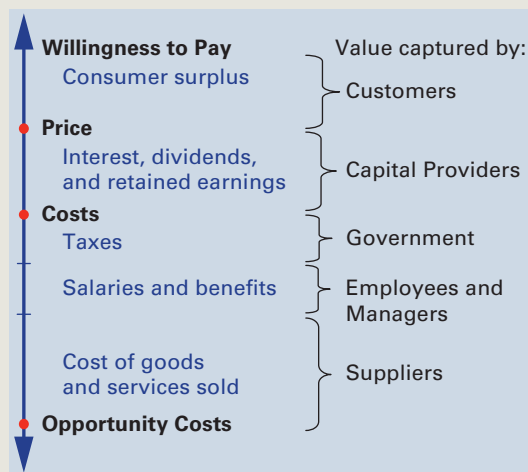
In addition to maximizing returns to stockholders, boosting a company's profitability and profit growth rate is consistent with satisfying the claims of several other key stakeholder groups. When a company is profitable and its profits continue to grow, it can pay higher salaries to productive employees and afford benefits such as health insurance coverage, all of which help to satisfy employees. In addition, companies with a high level of profitability and profit growth have no problem meeting their debt commitments, which provides creditors, including bondholders, with a measure of security. Profitable organizations are also better able to undertake philanthropic investments, which can help to satisfy some of the claims that local communities and the public place on a

company. Pursuing strategies that maximize long-term profitability and profit growth is therefore generally consistent with satisfying the claims of various stakeholder groups.

Stakeholder management requires consideration of how the firm's practices affect the cooperation of stakeholders in the short term, the benefits of building trust and a knowledge-sharing culture with stakeholders in the long run, and the firm's profitability and growth that will enable it to serve stakeholder interests in the future.²⁰ The company that overpays its employees in the current period, for example, may have very happy employees for a short while, but such action will raise the company's cost structure and limit its ability to attain a competitive advantage in the marketplace, thereby depressing its long-term profitability and hurting its ability to award future pay increases. As far as employees are concerned, the way many companies deal with this situation is to make future pay raises contingent upon improvements in labor productivity. If labor productivity increases, labor costs as a percentage of revenues will fall, profitability will rise, and the company can afford to pay its employees more and offer greater benefits.

Of course, not all stakeholder groups want the company to maximize its long-run profitability and profit growth. Suppliers are more comfortable about selling goods and services to profitable companies because they can be assured that the company will have the funds to pay for those products. Similarly, customers may be more willing to purchase from profitable companies because they can be assured that those companies will be around in the long term to provide after-sales services and support. But neither suppliers nor customers want the company to maximize its profitability at their expense. Rather, they would like to capture some of these profits from the company in the form of higher prices for their goods and services (in the case of suppliers), or lower prices for the products they purchase from the company (in the case of customers). Garcia-Castro and Aguilera capture this dynamic nicely by breaking the traditional explanation of value creation and value capture (discussed in Chapter 3) down into more fine-grained categories that show how value is created and captured by multiple stakeholders, similar to Figure 11.2.²¹

Figure 11.2 Value Creation and Capture with Multiple Stakeholder Groups



Source: Adapted from R. Garcia-Castro and R. Aguilera, "Increasing Value Creation and Appropriation in a World with Multiple Stakeholders," *Strategic Management Journal*, 36 (2015): 137–147

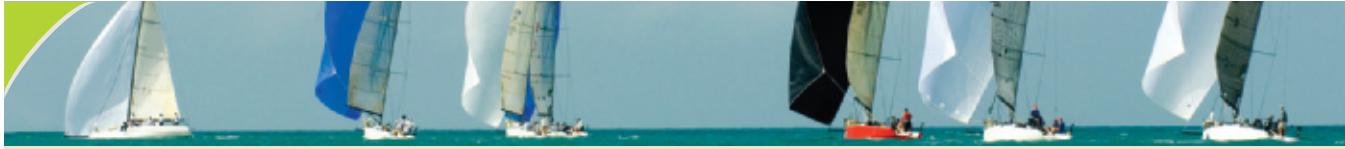
As shown, the total value that is created is the spread between the opportunity costs of the resources it employs and the willingness-to-pay of its customers. However, value is created and captured by different stakeholders. Suppliers create and capture value in the form of goods and services they sell to the firm; employees and management create value through their labor and capture value in the form of salaries and other benefits; government creates value in the form of providing the broad infrastructure in which the firm operates and captures value in the form of taxes; debt providers and stockholders create value by providing capital to the firm that it can use to finance its operations, and they capture value in the form of interest, dividends, and capital gains. Finally, customers capture value in the form of consumer surplus—the difference between the price they pay for goods and their true willingness-to-pay.

Despite the argument that maximizing long-term profitability and profit growth is the best way to satisfy the claims of several key stakeholder groups, it should be noted that a company must do so within the limits set by the law and in a manner consistent with societal expectations. The unfettered pursuit of profit can lead to behaviors that are outlawed by government regulations, opposed by important public constituencies, or simply unethical. Governments have enacted a wide range of regulations to govern business behavior, including antitrust laws, environmental laws, and laws pertaining to health and safety in the workplace. It is incumbent on managers to make sure that the company is in compliance with these laws when pursuing strategies.

Unfortunately, there is plenty of evidence that managers can be tempted to cross the line between legal and illegal in their pursuit of greater profitability and profit growth. For example, in mid-2003, the U.S. Air Force stripped Boeing of \$1 billion in contracts to launch satellites when it was discovered that Boeing had obtained thousands of pages of proprietary information from rival Lockheed Martin. Boeing had used that information to prepare its winning bid for the satellite contract. This was followed by the revelation that Boeing's CFO, Mike Sears, had offered a government official, Darleen Druyun, a lucrative job at Boeing while Druyun was still involved in evaluating whether Boeing should be awarded a \$17-billion contract to build tankers for the Air Force. Boeing won the contract against strong competition from Airbus, and hired Druyun. It was clear that the job offer may have had an impact on the Air Force decision. Boeing fired Druyun and the CFO, and shortly thereafter, Boeing CEO Phil Condit resigned in a tacit acknowledgment that he bore responsibility for the ethics violations that had occurred at Boeing during his tenure as leader.²²

In another case, the chief executive of Archer Daniels Midland, one of the world's largest producers of agricultural products, was sent to jail after the Federal Bureau of Investigation (FBI) determined that the company had systematically tried to fix the price for lysine by colluding with other manufacturers in the global marketplace. In another example of price fixing, the 76-year-old chairman of Sotheby's auction house was sentenced to a jail term, and the former CEO to house arrest, for fixing prices with rival auction house Christie's over a 6-year period (see Strategy in Action 11.1).

Examples such as these beg the question of why managers would engage in such risky behavior. A body of academic work collectively known as agency theory provides an explanation for why managers might engage in behavior that is either illegal or, at the very least, not in the interest of the company's shareholders.



11.1 STRATEGY IN ACTION

Price Fixing at Sotheby's and Christie's

Sotheby's and Christie's are the two largest fine-art auction houses in the world. In the mid-1990s, the two companies controlled 90% of the fine-art auction market, which at the time was worth approximately \$4 billion annually. Traditionally, auction houses earn their profits by the commissions they charge on auction sales. In good times, these commissions can be as high as 10% on some items, but in the early 1990s, the auction business was in a slump, with the supply of art for auction shriveling. With Sotheby's and Christie's desperate for works of art, sellers played the two houses against each other, driving commissions down to 2%, or sometimes lower.

To try to control this situation, Sotheby CEO Dede Brooks, met with Christie CEO Christopher Davidge in a series of clandestine meetings held in parking lots that began in 1993. Brooks claimed that she was acting on behalf of her boss, Alfred Taubman, the chairman and controlling shareholder of Sotheby's. According to Brooks, Taubman had agreed with the chairman of Christie's, Anthony Tennant, to work together in the weak auction market and limit price competition. In their meetings, Brooks and Davidge agreed to a fixed and nonnegotiable commission structure. Based on a sliding scale, the commission structure would range from 10% on a \$100,000 item to 2% on a \$5-million

item. In effect, Brooks and Davidge were agreeing to eliminate price competition between them, thereby guaranteeing both auction houses higher profits. The price-fixing agreement began in 1993 and continued unabated for 6 years, until federal investigators uncovered the arrangement and brought charges against Sotheby's and Christie's.

With the deal out in the open, lawyers filed several class-action lawsuits on behalf of the sellers that had been defrauded. Ultimately, at least 100,000 sellers signed on to the class-action lawsuits, which the auction houses settled with a \$512-million payment. The auction houses also pleaded guilty to price fixing and paid \$45 million in fines to U.S. antitrust authorities. As for the key players, the chairman of Christie's, as a British subject, was able to avoid prosecution in the United States (price fixing is not an offense for which someone can be extradited). Davidge struck a deal with prosecutors, and in return for amnesty turned over incriminating documents to the authorities. Brooks also cooperated with federal prosecutors and avoided jail (in April 2002, she was sentenced to 3 years of probation, 6 months of home detention, 1,000 hours of community service, and a \$350,000 fine). Taubman, ultimately isolated by all his former coconspirators, was sentenced to 1 year in jail and fined \$7.5 million.

Sources: S. Tully, "A House Divided," *Fortune*, December 18, 2000, pp. 264–275; J. Chaffin, "Sotheby's Ex CEO Spared Jail Sentence," *Financial Times*, April 30, 2002, p. 10; T. Thorncroft, "A Courtroom Battle of the Vanities," *Financial Times*, November 3, 2001, p. 3.

11-3 AGENCY THEORY

Agency theory looks at the problems that can arise in a business relationship when one person delegates decision-making authority to another. It offers a way of understanding why managers do not always act in the best interests of stakeholders and why they might sometimes behave unethically, and, perhaps, also illegally.²³ Although agency theory was originally formulated to capture the relationship between management and

stockholders, the basic principles have also been extended to cover the relationship with other key stakeholders, such as employees, as well as relationships between different layers of management within a corporation.²⁴ Although the focus of attention in this section is on the relationship between senior management and stockholders, some of the same language can be applied to the relationship between other stakeholders and top managers, and between top management and lower levels of management.

11-3a Principal-Agent Relationships

The basic propositions of agency theory are relatively straightforward. First, an agency relationship is held to arise whenever one party delegates decision-making authority or control over resources to another. The principal is the person delegating authority, and the agent is the person to whom authority is delegated. The relationship between stockholders and senior managers is the classic example of an agency relationship. Stockholders, who are the principals, provide the company with risk capital but delegate control over that capital to senior managers, and particularly to the CEO, who, as their agent, is expected to use that capital in a manner consistent with the best interests of stockholders. As we have seen, this means using capital to maximize the company's long-term profitability and profit growth rate.

The agency relationship continues down the hierarchy within the company. For example, in a large, complex, multibusiness company, top managers cannot possibly make all the important decisions; therefore, they delegate some decision-making authority and control over capital resources to business-unit (divisional) managers. Thus, just as senior managers such as the CEO are the agents of stockholders, business-unit managers are the agents of the CEO (and in this context, the CEO is the principal). The CEO entrusts business-unit managers to use the resources over which they have control in the most effective manner in order to maximize the performance of their units. This helps the CEO ensure that he or she maximizes the performance of the entire company, thereby discharging agency obligation to stockholders. More generally, whenever managers delegate authority to managers below them in the hierarchy and give them the right to control resources, an agency relation is established.

11-3b The Agency Problem

Although agency relationships often work well, problems may arise if agents and principals have different goals, and if agents take actions that are not in the best interests of their principals. Sometimes this occurs because an **information asymmetry** exists between the principal and the agent: Agents almost always have more information about the resources they are managing than principals do. Unscrupulous agents can take advantage of such information asymmetry to mislead principals and maximize their own interests at the expense of principals.

In the case of stockholders, the information asymmetry arises because they delegate decision-making authority to the CEO, their agent, who, by virtue of his or her position inside the company, is likely to know far more than stockholders do about the company's operations. Indeed, there may be certain information about the company that the CEO is unwilling to share with stockholders because that information would also help competitors. In such a case, withholding information from stockholders may be in the best interest of all. Generally, the CEO, involved in the day-to-day operations

information asymmetry

A situation where an agent has more information about the resources he or she is managing than the principal has.

of the company, is bound to have an information advantage over stockholders, just as the CEO's subordinates may have an information advantage over the CEO with regard to the resources under their control.

The information asymmetry between principals and agents is not necessarily a bad thing, but it can make it difficult for principals to measure an agent's performance and thus hold the agent accountable for how well he or she is using the entrusted resources. There is a certain amount of performance ambiguity inherent in the relationship between a principal and agent. Principals cannot know for sure if the agent is acting in his or her best interests. They cannot know for sure if the agent is using the resources to which he or she has been entrusted as effectively and efficiently as possible. This ambiguity is amplified by the fact that agents must engage in behavior that has outcomes for different time horizons. For example, investing in research and development may lower profits today but help to ensure the firm is profitable in the future. Principals who reward only immediate performance outcomes could induce myopic ("short-sighted") behavior on the part of the agent. To an extent, principals must trust the agent to do the right thing.

Of course, this trust is not blind: principals do put mechanisms in place with the purpose of monitoring agents, evaluating their performance, and, if necessary, taking corrective action. As we shall see shortly, the board of directors is one such mechanism, for, in part, the board exists to monitor and evaluate senior managers on behalf of stockholders. In Germany, the codetermination law (*Mitbestimmungsgesetz*) requires that firms with over 2,000 employees have boards of directors that represent the interests of employees—just under half of a firm's supervisory board members must represent workers. Other mechanisms serve a similar purpose. In the United States, publicly owned companies must regularly file detailed financial statements with the Securities and Exchange Commission (SEC) that are in accordance with generally agreed-upon accounting principles (GAAP). This requirement exists to give stockholders consistent, detailed information about how well management is using the capital with which it has been entrusted. Similarly, internal control systems within a company help the CEO ensure that subordinates are using the resources with which they have been entrusted to the best possible advantage.

Despite the existence of governance mechanisms and comprehensive measurement and control systems, a degree of information asymmetry will always remain between principals and agents, and there is always an element of trust involved in the relationship. Unfortunately, not all agents are worthy of this trust. A minority will deliberately mislead principals for personal gain, sometimes behaving unethically or breaking laws in the process, or engaging in behaviors that the principals would never condone.

The interests of principals and agents are not always the same; they diverge. For example, some authors argue that, like many other people, senior managers are motivated by desires for status, power, job security, and income.²⁵ By virtue of their position within the company, managers such as the CEO can use their authority and control over corporate funds to satisfy these desires at the cost of returns to stockholders. CEOs might use their position to invest corporate funds in various perks that enhance their status—executive jets, lavish offices, and expense-paid trips to exotic locales—rather than investing those funds in ways that increase stockholder returns. Economists have termed such behavior **on-the-job consumption**.²⁶

Aside from engaging in on-the-job consumption, CEOs, along with other senior managers, might satisfy their desire for greater income by using their influence or control over the board of directors to persuade the compensation committee of the

on-the-job consumption

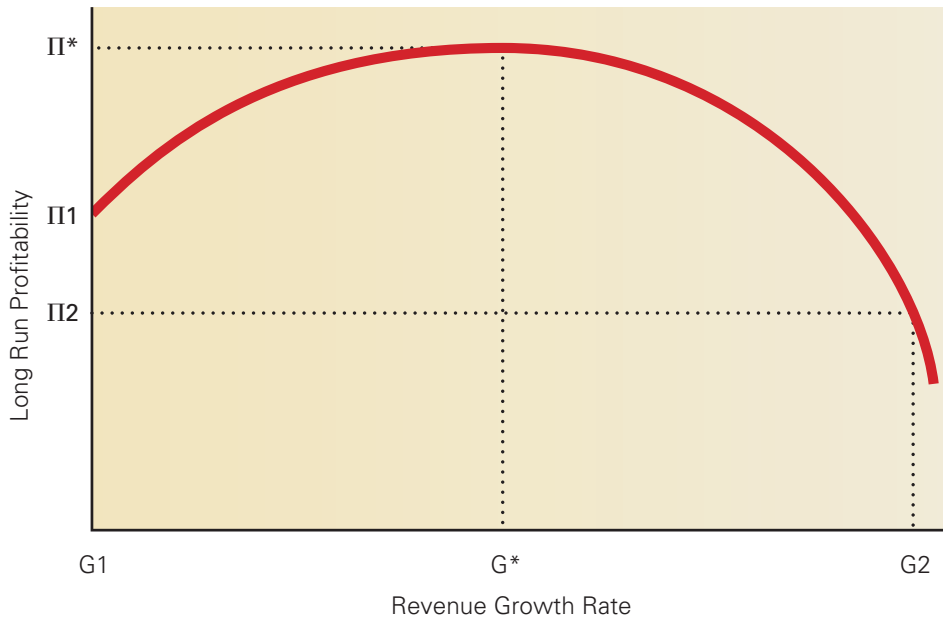
A term used by economists to describe the behavior of senior management's use of company funds to acquire perks (lavish offices, jets, and the like) that will enhance their status, instead of investing the funds to increase stockholder returns.

board to grant pay increases. Critics of U.S. industry claim that extraordinary pay has now become an endemic problem, and that senior managers are enriching themselves at the expense of stockholders and other employees. They point out that CEO pay has been increasing far more rapidly than the pay of average workers, primarily because of very liberal stock option grants that enable a CEO to earn huge pay bonuses in a rising stock market, even if the company underperforms the market and competitors.²⁷ In 1980, the average CEO in *Business Week's* survey of CEOs of the largest 500 American companies earned 42 times what the average blue-collar worker earned. By 1990, this figure had increased to 85 times. In 2013, the AFL-CIO's Executive PayWatch database reported that American CEOs made 331 times the pay of average workers.²⁸

The size of some CEO pay packages, and their apparent lack of relationship to company performance, rankles critics.²⁹ In 2010, a study by Graef Crystal evaluating the relationship between CEO pay and performance concluded that there virtually is none. For example, if CEOs were paid according to shareholder return, the CEO of CBS Corporation, Leslie Moonves, who earned an impressive \$43.2 million in 2009, should have gotten a \$28 million pay cut, according to Crystal.³⁰ Critics argue that CEO compensation is disproportionate to achievement, representing a clear example of the agency problem. However, in response to shareholder pressure, in recent years more companies have begun adopting compensation practices that more closely tie CEO pay to performance. For example, at Air Products & Chemicals, when the earnings per share fell short of its 9% growth target in 2012, CEO John McGlade paid the price in the form of a 65% cut in his annual bonus. His stock grants and stock options decreased as well, reducing his total direct compensation 19%, to 9.1 million.³¹

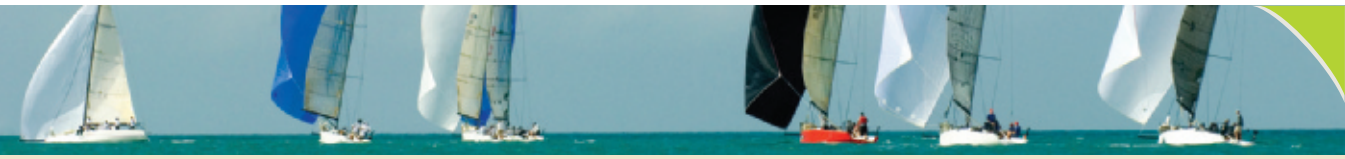
A further concern is that in trying to satisfy a desire for status, security, power, and income, a CEO might engage in empire building—buying many new businesses in an attempt to increase the size of the company through diversification.³² Although such growth may depress the company's long-term profitability and thus stockholder returns, it increases the size of the empire under the CEO's control and, by extension, the CEO's status, power, security, and income (there is a strong relationship between company size and CEO pay). Instead of trying to maximize stockholder returns by seeking the right balance between profitability and profit growth, some senior managers may trade long-term profitability for greater company growth via new business purchases. For example, in the mid-1970s, Compagnie Générale des Eaux was primarily a water utility and waste-management company, operating “near-monopolies” in local municipalities in France and generating strong, stable cash flows for its shareholders. However, a series of audacious, debt-funded acquisitions in the 1980s and 1990s, first by CEO Guy DeJouany and later by his successor, Jean-Marie Messier, rapidly transformed the company into one of the world's largest media and telecom empires, renamed Vivendi.” Then, in the 2000s, as the tech, media, and telecom bubble burst, the Vivendi empire came crashing down under the weight of its debt burden. Jean-Marie Messier was investigated by both French and U.S. courts, and was accused of misleading shareholders, misappropriating funds, and worsening the company's precarious position. He was fined and forced to resign.³³

Figure 11.3 graphs long-term profitability against the rate of growth in company revenues. A company that does not grow is likely missing out on profitable opportunities.³⁴ A moderate revenue growth rate of G^* allows a company to maximize long-term

Figure 11.3 The Trade-off Between Profitability and Revenue Growth Rates

profitability, generating a return of π^* . Thus, a growth rate of G_1 in Figure 11.3 is not consistent with maximizing profitability ($\pi_1 < \pi^*$). By the same token, however, attaining growth in excess of G_2 requires moving into market segments that earn lower profit margins or diversification into areas that the company knows little about. Consequently, it can be achieved only by sacrificing profitability; that is, past G^* , the investment required to finance further growth does not produce an adequate return, and the company's profitability declines. Yet G_2 may be the growth rate favored by an empire-building CEO, for it will increase his or her power, status, and income. At this growth rate, profitability is equal only to π_2 . Because $\pi^* < \pi_2$, a company growing at this rate is clearly not maximizing its long-run profitability or the wealth of its stockholders.

The magnitude of agency problems was emphasized in the early 2000s, when a series of scandals swept through the corporate world, many of which could be attributed to self-interest-seeking senior executives and a failure of corporate governance mechanisms. In 2003, an investigation revealed that Hollinger CEO Conrad Black, had used “tunneling” to divert over \$400 million in company funds to his family and friends (see the Strategy in Action 11.2 for more details on Hollinger and Black). Between 2001 and 2004, accounting scandals unfolded at a number of major corporations, including Enron, WorldCom, Tyco, Computer Associates, HealthSouth, Adelphia Communications, Dynegy, Royal Dutch Shell, and Parmalat, a major Italian food company. At Enron, \$27 billion in debt was hidden from shareholders, employees, and regulators in special partnerships that were removed from the balance sheet. At Parmalat, managers apparently “invented” \$8 to \$12 billion in assets to shore up the company's balance sheet—assets that never existed. In the case of Royal Dutch Shell, senior managers knowingly



11.2 STRATEGY IN ACTION

Self-Dealing at Hollinger International Inc.

From 1999 to 2003, Conrad Black, CEO, and F. David Radler, COO, of Hollinger International Inc., illegally diverted cash and assets to themselves, family members, and other corporate insiders. Hollinger International, a global publishing empire, owned newspapers around the world, such as the *Chicago Sun-Times*, the *Daily Telegraph* (in London), the *National Post* (in Toronto), and the *Jerusalem Post* (in Israel), among others. According to Stephen Cutler, the director of the SEC's Division of Enforcement, "Black and Radler abused their control of a public company and treated it as their personal piggy bank. Instead of carrying out their responsibilities to protect the interest of public shareholders, the defendants cheated and defrauded these shareholders through a series of deceptive schemes and misstatements." In a practice known

as "tunneling," Black and Radler engaged in a series of self-dealing transactions such as selling some of Hollinger's newspapers at below-market prices to companies privately held by Black and Radler themselves—sometimes for as low as one dollar. They also directly channeled money out of the firm under the guise of "noncompetition payments." The managers abused corporate perks, using a company jet to fly to the South Pacific for a vacation and spending corporate funds on a swanky, New York apartment on Park Avenue and a lavish, \$62,000 birthday party for Black's wife. Black's ill-gotten gains are thought to total more than \$400 million, and fallout from the scandal resulted in a loss of \$2 billion in shareholder value. Although Black was sentenced to 6½ years in jail, he ultimately only served 42 months.

Sources: S. Taub, "SEC Charges Hollinger, Two Executives," *CFO*, November 16, 2004; www.cfo.com, U.S. Department of Justice, "Former Hollinger Chairman Conrad Black and Three Other Executives Indicted in U.S.–Canada Corporate Fraud Schemes," indictment released November 17, 2005; "Ex-Media Mogul Black Convicted of Fraud," *Associated Press*, July 13, 2007; A. Stern, "Ex-Media Mogul Conrad Black Sent Back to Prison," *Reuters*, June 24, 2011.

inflated the value of the company's oil reserves by one-fifth, which amounted to 4 billion barrels of oil that never existed, making the company appear much more valuable than it was. At the other companies, earnings were systematically overstated, often by hundreds of millions of dollars, or even billions of dollars in the case of Tyco and WorldCom, which understated its expenses by \$3 billion in 2001. In all of these cases, the prime motivation seems to have been an effort to present a more favorable view of corporate affairs to shareholders than was the case, thereby securing senior executives significantly higher pay packets.³⁵

It is important to remember that the agency problem is not confined to the relationship between senior managers and stockholders. It can also bedevil the relationship between the CEO and subordinates, and between them and their subordinates. Subordinates might use control over information to distort the true performance of their unit in order to enhance their pay, increase their job security, or make sure their unit gets more than its fair share of company resources.

Confronted with agency problems, the challenge for principals is to (1) shape the behavior of agents so that they act in accordance with the goals set by principals,

(2) reduce information asymmetry between agents and principals, and (3) develop mechanisms for removing agents who do not act in accordance with the goals of principals and mislead them. Principals deal with these challenges through a series of governance mechanisms.

11-4 GOVERNANCE MECHANISMS

Principals put governance mechanisms in place to align incentives between principals and agents, and to monitor and control agents. The purpose of governance mechanisms is to reduce the scope and frequency of the agency problem; that is, to help ensure that agents act in a manner that is consistent with the best interests of their principals. In this section, the primary focus is on governance mechanisms that exist to align the interests of senior managers (as agents) with their principals, stockholders. It should not be forgotten, however, that governance mechanisms also exist to align the interests of business-unit managers with those of their superiors, and likewise down the hierarchy within the organization.

Here we look at four main types of governance mechanisms for aligning stockholder and management interests: the board of directors, stock-based compensation, financial statements, and the takeover constraint. The section closes with a discussion of governance mechanisms within a company to align the interests of senior and lower-level managers.

11-4a The Board of Directors

The board of directors is the centerpiece of the corporate governance system. Board members are directly elected by stockholders, and under corporate law they represent the stockholders' interests in the company. Hence, the board can be held legally accountable for the company's actions. Its position at the apex of decision making within the company allows it to monitor corporate strategy decisions and ensure that they are consistent with stockholder interests. If the board believes that corporate strategies are not in the best interest of stockholders, it can take measures such as voting against management nominations to the board of directors, or submitting its own nominees. In addition, the board has the legal authority to hire, fire, and compensate corporate employees, including, most importantly, the CEO.³⁶ The board is also responsible for making sure that the company's audited financial statements present a true picture of its financial situation. Thus, the board exists to reduce the information asymmetry between stockholders and managers, and to monitor and control management actions on behalf of stockholders.

The typical board is composed of a mix of inside and outside directors. **Inside directors** are senior employees of the company, such as the CEO. They are required on the board because they have valuable information about the company's activities. Without such information, the board cannot adequately perform its monitoring function. But because insiders are full-time employees of the company, their interests tend to be aligned with those of management. Hence, outside directors are needed to bring objectivity to the monitoring and evaluation processes. **Outside directors** are not full-time employees of the company. Many of them are full-time, professional directors

inside directors

Senior employees of the company, such as the CEO.

outside directors

Directors who are not full-time employees of the company, needed to provide objectivity to the monitoring and evaluation of processes.

who hold positions on the boards of several companies. They need to maintain a reputation for competency, and so are motivated to perform their role as objectively and effectively as possible.³⁷

There is little doubt that many boards perform their assigned functions admirably. For example, when the board of Sotheby's discovered that the company had been engaged in price fixing with Christie's, board members moved quickly to oust both the CEO and the chairman of the company (see Strategy in Action 11.1). But not all boards perform as well as they should. The board of now-bankrupt energy company Enron approved the company's audited financial statements, which were later discovered to be grossly misleading.

Critics of the existing governance system charge that inside directors often dominate the outsiders on the board. Insiders can use their position within the management hierarchy to exercise control over the company-specific information that the board receives. Consequently, they can present information in a way that puts them in a favorable light. In addition, because insiders have intimate knowledge of the company's operations, and because superior knowledge and control over information are sources of power, they may be better positioned than outsiders to influence boardroom decision making. The board may become the captive of insiders and merely rubber-stamp management decisions instead of guarding stockholder interests.

Some observers contend that many boards are dominated by the company CEO, particularly when the CEO is also the chairman of the board.³⁸ To support this view, they point out that both inside and outside directors are often the CEO's nominees. The typical inside director is subordinate to the CEO in the company's hierarchy and therefore unlikely to criticize the boss. Nor can outside directors nominated by the CEO be expected to evaluate the CEO objectively. Sometimes CEOs sit on each other's boards as outside directors, forming "interlocking directorates" that may induce them to act in each other's interests. Thus, the loyalty of the board may be biased toward the CEO, not the stockholders. Moreover, a CEO who is also chairman of the board may be able to control the agenda of board discussions in such a manner as to deflect criticisms of his or her leadership. Notably, although shareholders ostensibly vote on board members, board members are not legally required to resign if they do not receive a majority of the vote. The Council of Institutional Investors (which represents pension funds, endowments, and other large investors) published a list of "zombie directors" in 2012—directors who were retained on boards despite being rejected by shareholders. The list involves a wide range of companies, from Boston Beer Company, to Loral Space and Communications, to Cablevision. In fact, Cablevision was listed as having three directors who lost their shareholder votes twice between 2010 and 2012, yet remained on the board.³⁹

In the aftermath of the wave of scandals that hit the corporate world in the early 2000s, there are clear signs that many corporate boards are moving away from merely rubber-stamping top-management decisions and are beginning to play a much more active role in corporate governance. In part, they have been prompted by new legislation such as the 2002 Sarbanes–Oxley Act in the United States, which tightened rules regulating corporate reporting and corporate governance. A growing trend on the part of the courts to hold directors liable for corporate misstatements has also been important. Powerful institutional investors such as pension funds have also been more aggressive in exerting their power, often pushing for more outside representation on the board of directors and for a separation between the roles of chairman and CEO. An apt example is provided by the settlement reached in September 2018 between

Tesla, Elon Musk, and the Securities Exchange Commission, requiring that Musk, who served in both the CEO and chairman of the board roles, would step down from his position as chairman. Musk had come under fire for tweeting that he intended to take the company private, and that funding was secured; the Securities and Exchange Commission believed the tweet was reckless and had the potential to mislead stockholders, and thus believed Musk needed more oversight.

In general, there has been growing pressure to have the chairman role go to an outsider rather than firm management. Partly as a result, more than 50% of firms on the Standard & Poor's 500 index split the chairman and CEO jobs as of December 2017—up from 25% 15 years earlier. However, only 28% of S&P 500 companies have an independent board chairman; chairmen of 21% of companies are former CEOs or current non-CEO executives.⁴⁰ Separating the role of chairman and CEO limits the ability of corporate insiders, particularly the CEO, to exercise control over the board. Regardless, it must be recognized that boards of directors do not work as well as they should in theory, and other mechanisms are needed to align the interests of stockholders and managers.

11-4b Stock-Based Compensation

According to agency theory, one of the best ways to reduce the scope of the agency problem is for principals to establish incentives for agents to behave in the company's best interest through pay-for-performance systems. In the case of stockholders and top managers, stockholders can encourage top managers to pursue strategies that maximize a company's long-term profitability and profit growth, and thus the gains from holding its stock, by linking the pay of those managers to the performance of the stock price.

Giving managers **stock options**—the right to purchase the company's shares at a predetermined (strike) price at some point in the future, usually within 10 years of the grant date—has been the most common pay-for-performance system. Typically, the strike price is the price at which the stock was trading when the option was originally granted. Ideally, stock options will motivate managers to adopt strategies that increase the share price of the company, for in doing so managers increase the value of their stock options. Granting managers stock if they attain predetermined performance targets is another stock-based, pay-for-performance system.

Several academic studies suggest that stock-based compensation schemes such as stock options and stock grants can align executive and stockholder interests. For instance, one study found that managers were more likely to consider the effects of their acquisition decisions on stockholder returns if they were significant shareholders.⁴¹ According to another study, managers who were significant stockholders were less likely to pursue strategies that would maximize the size of the company rather than its profitability.⁴² More generally, it is difficult to argue with the proposition that the chance to get rich from exercising stock options is the primary reason for the 14-hour days and 6-day workweeks that many employees of fast-growing companies experience.

However, the practice of granting stock options has become increasingly controversial. Many top managers earn huge bonuses from exercising stock options that were granted several years prior. Critics claim that these options are often too generous but do not deny that they motivate managers to improve company performance. A particular cause for concern is that stock options are often granted at such low strike prices

stock options

The right to purchase company stock at a predetermined price at some point in the future, usually within 10 years of the grant date.

that the CEO can hardly fail to make a significant amount of money by exercising them, even if the company underperforms in the stock market by a significant margin. A serious example of the agency problem emerged in 2005 and 2006, when the SEC investigated several companies that had granted stock options to senior executives and apparently “backdated” the stock to a time when the price was lower, enabling executives to earn more money than if those options had simply been dated on the day they were granted.⁴³ By late 2006, the SEC had investigated nearly 130 companies for possible fraud related to stock-option backdating, including such major corporations as Apple, Jabil Circuit, United Healthcare, and Home Depot.⁴⁴

Other critics of stock options, including the famous investor Warren Buffett, complain that huge stock-option grants increase the outstanding number of shares in a company and therefore dilute the equity of stockholders; accordingly, they should be shown in company accounts as an expense against profits. Under accounting regulations that were enforced until 2005, stock options, unlike wages and salaries, were not expensed. However, this has since changed, and as a result many companies are beginning to reduce their use of options. Microsoft, for example, which had long given generous stock-option grants to high-performing employees, replaced stock options with stock grants in 2005. Requiring senior management to hold large numbers of shares in the company also has its downside: Managers who hold a large portion of their personal wealth in the company they manage are likely to be underdiversified. This can lead to excessively risk-averse behavior, or overdiversification of the firm.

11-4c Financial Statements and Auditors

Publicly traded companies in the United States are required to file quarterly and annual reports with the SEC that are prepared according to GAAP. The purpose of this requirement is to give consistent, detailed, and accurate information about how efficiently and effectively the agents of stockholders—the managers—are running the company. To make sure that managers do not misrepresent financial information, the SEC also requires that the accounts be audited by an independent, accredited accounting firm. Similar regulations exist in most other developed nations. If the system works as intended, stockholders can have faith that the information contained in financial statements accurately reflects the state of affairs at a company. Among other things, such information can enable a stockholder to calculate the profitability (ROIC) of a company in which he or she invests and to compare its ROIC against that of competitors.

Unfortunately, this system has not always worked as intended in the United States. Despite the fact that the vast majority of companies do file accurate information in their financial statements, and although most auditors review that information accurately, there is substantial evidence that a minority of companies have abused the system, aided in part by the compliance of auditors. This was clearly an issue at bankrupt energy trader Enron, where the CFO and others misrepresented the true financial state of the company to investors by creating off-balance-sheet partnerships that hid the true state of Enron’s indebtedness from public view. Enron’s auditor, Arthur Andersen, was complicit with this deception and in direct violation of its fiduciary duty. Arthur Andersen had lucrative consulting contracts with Enron that it did not want to jeopardize by questioning the accuracy of the company’s financial statements. The losers in this mutual deception were shareholders, who relied completely upon inaccurate information to make their investment decisions.

There have been numerous examples in recent years of managers' gaming of financial statements to present a distorted picture of their company's finances to investors (see the accusations made by HP about Autonomy in the Closing Case, for example). The typical motive has been to inflate the earnings or revenues of a company, thereby generating investor enthusiasm and propelling the stock price higher, which gives managers an opportunity to cash in stock-option grants for huge personal gain, obviously at the expense of stockholders, who have been misled by the reports.

The gaming of financial statements by companies such as Enron raises serious questions about the accuracy of the information contained in audited financial statements. In response, Congress passed the Sarbanes–Oxley Act in 2002, representing the most far-reaching overhaul of accounting rules and corporate governance procedures since the 1930s. Among other things, Sarbanes–Oxley established an oversight board for accounting firms, required CEOs and CFOs to endorse their company's financial statements, and barred companies from hiring the same accounting firm for both auditing and consulting services.

11-4d The Takeover Constraint

Given the imperfections in corporate governance mechanisms, it is clear that the agency problem persists at some companies. However, stockholders do have residual power—they can always sell their shares. If stockholders sell in large numbers, the price of the company's shares will decline. If the share price falls far enough, the company might be worth less on the stock market than the actual value of its assets. At this point, the company may become an attractive acquisition target and runs the risk of being purchased by another enterprise, against the wishes of the target company's management.

The risk of being acquired by another company is known as the **takeover constraint**—it limits the extent to which managers can pursue strategies and take actions that put their own interests above those of stockholders. If they ignore stockholder interests and the company is acquired, senior managers typically lose their independence, and likely their jobs as well. Therefore, the threat of takeover can constrain management action and limit the worst excesses of the agency problem.

During the 1980s and early 1990s, the threat of takeover was often enforced by corporate raiders: individuals or corporations that purchase large blocks of shares in companies which appear to be pursuing strategies inconsistent with maximizing stockholder wealth. Corporate raiders argue that if these underperforming companies pursued different strategies, they could create more wealth for stockholders. Raiders purchase stock in a company either to take over the business and run it more efficiently, or to precipitate a change in top management, replacing the existing team with one more likely to maximize stockholder returns. Raiders are motivated not by altruism, but by gain. If they succeed in their takeover bid, they can institute strategies that create value for stockholders, including themselves. Even if a takeover bid fails, raiders can still earn millions, for their stockholdings will typically be bought out by the defending company for a hefty premium. Called **greenmail**, this source of gain has stirred much controversy and debate about its benefits. Whereas some claim that the threat posed by raiders has had a salutary effect on enterprise performance by pushing corporate management to run companies better, others counter that there is little evidence of this.⁴⁵

takeover constraint

The risk of being acquired by another company.

greenmail

A source of gaining wealth whereby corporate raiders either push companies to change their corporate strategy to one that will benefit stockholders, or charge a premium for stock when the company wants to buy it back.

Although the incidence of hostile takeover bids has fallen off significantly since the early 1990s, this should not imply that the takeover constraint has ceased to operate. Unique circumstances existed in the early 2000s that made it more difficult to execute hostile takeovers. The boom years of the 1990s left many corporations with excessive debt (corporate America entered the new century with record levels of debt on its balance sheets), limiting the ability to finance acquisitions, particularly hostile acquisitions, which are often particularly expensive. In addition, the market valuation of many companies became misaligned with underlying fundamentals during the stock market bubble of the 1990s, and after a substantial fall in certain segments of the stock market, such as the technology sector, present valuations are still high relative to historic norms—making the hostile acquisition of even poorly run and unprofitable companies expensive. However, takeovers tend to occur in cycles, and it seems likely that once excesses are worked out of the stock market and off corporate balance sheets, the takeover constraint will reassert itself. It should be remembered that the takeover constraint—the governance mechanism of last resort—is often invoked only when other governance mechanisms have failed.

11-4e Governance Mechanisms Inside a Company

Thus far, this chapter has focused on the governance mechanisms designed to reduce the agency problem that potentially exists between stockholders and managers. Agency relationships also exist within a company, and the agency problem can arise between levels of management. In this section, we explore how the agency problem can be reduced within a company by using two complementary governance mechanisms to align the incentives and behavior of employees with those of upper-level management: strategic control systems and incentive systems.

Strategic Control Systems Strategic control systems are the primary governance mechanisms established within a company to reduce the scope of the agency problem between levels of management. These systems are the formal, target-setting, measurement and feedback systems that allow managers to evaluate whether a company is executing the strategies necessary to maximize its long-term profitability and, in particular, whether the company is achieving superior efficiency, quality, innovation, and customer responsiveness. They are discussed in more detail in Chapter 12.

The purpose of strategic control systems is to (1) establish standards and targets against which performance can be measured, (2) create systems for measuring and monitoring performance on a regular basis, (3) compare actual performance against the established targets, and (4) evaluate results and take corrective action if necessary. In governance terms, their purpose is to ensure that lower-level managers, as the agents of top managers, act in a way that is consistent with top managers' goals—which should be to maximize the wealth of stockholders, subject to legal and ethical constraints.

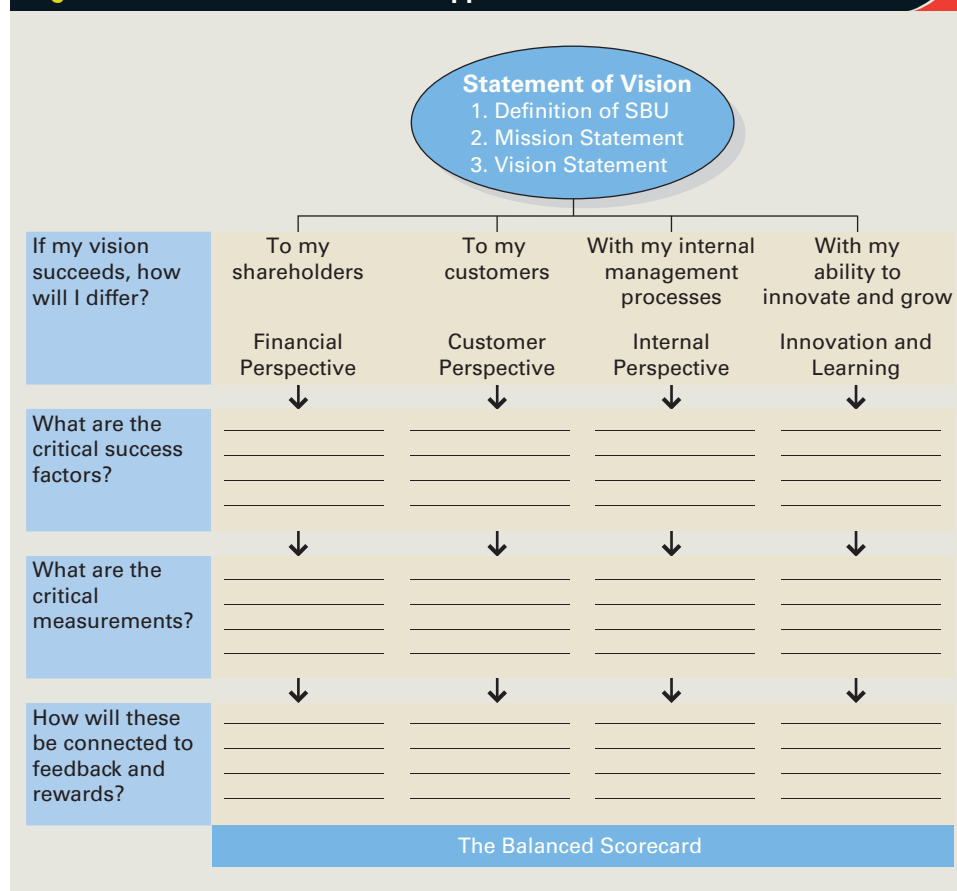
One increasingly influential model that guides managers through the process of creating the right kind of strategic control systems is the balanced scorecard model.⁴⁶ Managers have traditionally emphasized financial measures of performance such as ROIC to gauge and evaluate organizational performance. According to the balanced scorecard model financial information is extremely important, but it alone is not enough. If managers are to obtain a true picture of organizational performance, financial information must be supplemented with performance measures that indicate

how well an organization has been achieving the four building blocks of competitive advantage: efficiency, quality, innovation, and responsiveness to customers. This is because financial results simply inform managers about the results of strategic decisions they have already taken; the other measures balance this picture of performance by informing managers about how reliably the organization has in place the building blocks to drive future performance.⁴⁷

One version of the way the balanced scorecard operates is presented in Figure 11.4. Based on an organization's mission and goals, strategic managers develop a set of criteria for assessing performance according to multiple perspectives such as:

- *The financial perspective:* for example, ROIC, cash flow, and revenue growth
- *The customer perspective:* for example, satisfaction, product reliability, on-time delivery, and level of service
- *The internal perspective:* for example, efficiency, timeliness, and employee satisfaction
- *Innovation and learning:* for example, the number of new products introduced, the percentage of revenues generated from new products in a defined period, the time taken to develop the next generation of new products versus the competition, and the productivity of research and development (R&D)—how much R&D spending is required to produce a successful product

Figure 11.4 A Balanced Scorecard Approach



As Kaplan and Norton, the developers of this approach, suggest, “Think of the balanced scorecard as the dials and indicators in an airplane cockpit. For the complex task of navigating and flying an airplane, pilots need detailed information about many aspects of the flight. They need information on fuel, air speed, altitude, learning, destination, and other indicators that summarize the current and predicted environment. Reliance on one instrument can be fatal. Similarly, the complexity of managing an organization today requires that managers be able to view performance in several areas simultaneously.”⁴⁸

Based on an evaluation of the complete set of measures in the balanced scorecard, strategic managers are in a good position to reevaluate the company’s mission and goals and take corrective action to rectify problems, limit the agency problem, or exploit new opportunities by changing the organization’s strategy and structure—which is the purpose of strategic control.

Employee Incentives Control systems alone may not be sufficient to align incentives between stockholders, senior management, and the organization as a whole. To help do this, positive incentive systems are often put into place to motivate employees to work toward goals that are central to maximizing long-term profitability. As already noted, ESOPs are one form of positive incentive, as are stock-option grants. In the 1990s, ESOPs and stock-ownership grants were pushed down deep within many organizations, meaning that employees at many levels of the firm were eligible for the plans. The logic behind such systems is straightforward: Recognizing that the stock price, and therefore their own wealth, is dependent upon the profitability of the company, employees will work toward maximizing profitability.

In addition to stock-based compensation systems, employee compensation can be tied to goals that are linked to the attainment of superior efficiency, quality, innovation, and customer responsiveness. For example, the bonus pay of a manufacturing employee might depend upon attaining quality and productivity targets, which, if reached, will lower the costs of the company, increase customer satisfaction, and boost profitability. Similarly, a salesperson’s bonus pay might depend upon surpassing sales targets, and an R&D employee’s bonus pay may be contingent upon the success of new products he or she had worked on developing.

ethics

Accepted principles of right or wrong that govern the conduct of a person, the members of a profession, or the actions of an organization.

business ethics

Accepted principles of right or wrong governing the conduct of businesspeople.

ethical dilemmas

Situations where there is no agreement over exactly what the accepted principles of right and wrong are, or where none of the available alternatives seems ethically acceptable.

11-5 ETHICS AND STRATEGY

The term **ethics** refers to accepted principles of right or wrong that govern the conduct of a person, the members of a profession, or the actions of an organization. **Business ethics** are the accepted principles of right or wrong governing the conduct of businesspeople. Ethical decisions are in accordance with those accepted principles, whereas unethical decisions violate accepted principles. This is not as straightforward as it sounds. Managers may be confronted with **ethical dilemmas**, situations where there is no agreement over the accepted principles of right and wrong, or where none of the available alternatives seems ethically acceptable.

In our society, many accepted principles of right and wrong are not only universally recognized but also codified into law. In the business arena, laws govern product liability (tort laws), contracts and breaches of contract (contract law), the protection of intellectual property (intellectual property law), competitive behavior (antitrust

law), and the selling of securities (securities law). Not only is it unethical to break these laws, it is illegal.

Unfortunately, as we have already seen in this chapter, managers do break laws. Moreover, managers may take advantage of ambiguities and gray areas in the law, of which there are many in our common law system, to pursue actions that are at best legally suspect and, in any event, clearly unethical. It is important to realize, however, that behaving ethically surpasses staying within the bounds of the law. The Opening Case shows that Volkswagen behaved both illegally and unethically in the “Dieselgate” scandal. In the Closing Case we show that Starbucks goes well beyond legal requirements to behave ethically by ensuring that its coffee is purchased from suppliers that use safe, fair, humane working and living conditions, including minimum-wage requirements and the prohibition of child and forced labor.

Many nations have different laws and ethical norms, making issues of ethics and legality vastly more complicated when firms’ activities span multiple national borders. Research by Surroca, Tribó, and Zahra on 110 multinational firms found that often multinational firms deal with stakeholder pressures and legal concerns in their home country by simply transferring their socially irresponsible practices to their overseas subsidiaries. The researchers found that this was particularly likely when it was not overtly apparent that the subsidiary had a connection to the multinational, suggesting that managers knew the behavior was unethical and did not want to be associated with it, yet continued the practice anyway.⁴⁹

In this section, we take a closer look at the ethical issues that managers may confront when developing strategy, and at the steps they can take to ensure that strategic decisions are not only legal but also ethical.

11-5a Ethical Issues in Strategy

The ethical issues that strategic managers confront cover many topics, but most are due to a potential conflict between the goals of the enterprise, or the goals of individual managers, and the fundamental rights of important stakeholders, including stockholders, customers, employees, suppliers, competitors, communities, and the general public. Stakeholders have basic rights that must be respected; it is unethical to violate those rights.

Stockholders have the right to timely, accurate information about their investments (in accounting statements); it is unethical to violate that right. Customers have the right to be fully informed about the products and services they purchase, including the right to information about how those products might cause them harm, and it is unethical to restrict their access to such information. Employees have the right to safe working conditions, fair compensation for the work they perform, and just treatment by managers. Suppliers have the right to expect contracts to be respected, and the company should not take advantage of a power disparity between it and a supplier to opportunistically rewrite a contract. Competitors have the right to expect that the firm will abide by the rules of competition and not violate the basic principles of antitrust laws. Communities and the general public, including their political representatives in government, have the right to expect that a firm will not violate the basic expectations that society places on enterprises—for example, by dumping toxic pollutants into the environment, or overcharging for work performed on government contracts.

Those who take the stakeholder view of business ethics often argue that it is in the enlightened self-interest of managers to behave in an ethical manner that recognizes and respects the fundamental rights of stakeholders, because doing so will ensure the support of stakeholders and, ultimately, benefit the firm and its managers. Others go beyond this instrumental approach to ethics and argue that, in many cases, acting ethically is simply the right thing to do. They argue that businesses need to recognize their *noblesse oblige*—a French term that refers to honorable and benevolent behavior that is considered the responsibility of people of high (noble) birth—and give something back to the society that made their success possible. In a business setting, it is understood that benevolent behavior is the moral responsibility of successful enterprises.

Unethical behavior often arises in a corporate setting when managers decide to put the attainment of their own personal goals, or the goals of the enterprise, above the fundamental rights of one or more stakeholder groups (in other words, unethical behavior may arise from agency problems). The most common examples of such behavior involve self-dealing, information manipulation, anticompetitive behavior, opportunistic exploitation of other players in the value chain in which the firm is embedded (including suppliers, complement providers, and distributors), the maintenance of substandard working conditions, environmental degradation, and corruption.

self-dealing

Managers using company funds for their own personal consumption

information manipulation

When managers use their control over corporate data to distort or hide information in order to enhance their own financial situation or the competitive position of the firm.

anticompetitive behavior

A range of actions aimed at harming actual or potential competitors, most often by using monopoly power, and thereby enhancing the long-run prospects of the firm.

Self-dealing occurs when managers find a way to feather their own nests with corporate monies, as we have already discussed in several examples in this chapter (such as Conrad Black at Hollinger). **Information manipulation** occurs when managers use their control over corporate data to distort or hide information in order to enhance their own financial situation or the competitive position of the firm; HP accused Autonomy of this in the Closing Case. As we have seen, many accounting scandals have involved the deliberate manipulation of financial information. Information manipulation can also occur with nonfinancial data. An example is when managers at the tobacco companies suppressed internal research that linked smoking to health problems, violating the right of consumers to accurate information about the dangers of smoking. When this evidence came to light, lawyers filed class-action suits against the tobacco companies, claiming that they had intentionally caused harm to smokers—they had broken tort law by promoting a product that they knew was seriously harmful to consumers. In 1999, the tobacco companies settled a lawsuit brought by the states that sought to recover health-care costs associated with tobacco-related illnesses; the total payout to the states was \$260 billion.

Anticompetitive behavior covers a range of actions aimed at harming actual or potential competitors, most often by using monopoly power, and thereby enhancing the long-run prospects of the firm. For example, in the 1990s, the Justice Department claimed that Microsoft used its monopoly in operating systems to force PC makers to bundle Microsoft's Web browser, Internet Explorer, with the Windows operating system, and to display the Internet Explorer logo prominently on the computer desktop. Microsoft reportedly told PC makers that it would not supply them with Windows unless they did this. Because the PC makers needed Windows to sell their machines, this was a powerful threat. The alleged aim of the action, which exemplifies "tie-in sales"—which are illegal under antitrust laws—was to drive a competing browser maker, Netscape, out of business. The courts ruled that Microsoft was indeed abusing its monopoly power in this case and, under a 2001 consent decree, the company was forced to cease this practice.

Legality aside, the actions in which Microsoft managers allegedly engaged are unethical on at least three counts; first, by violating the rights of end-users by unfairly limiting their choice; second, by violating the rights of downstream participants in the industry value chain—in this case, PC makers—by forcing them to incorporate a particular product in their design; and third, by violating the rights of competitors to free and fair competition.

Opportunistic exploitation of other players in the value chain in which the firm is embedded is another example of unethical behavior. Exploitation of this kind typically occurs when the managers of a firm seek to unilaterally rewrite the terms of a contract with suppliers, buyers, or complement providers in a way that is more favorable to the firm, often using their power to force a revision to the contract. For example, in the late 1990s, Boeing entered into a \$2-billion contract with Titanium Metals Corporation to purchase certain amounts of titanium annually for 10 years. In 2000, after Titanium Metals had already spent \$100 million to expand its production capacity to fulfill the contract, Boeing demanded that the contract be renegotiated, asking for lower prices and an end to minimum-purchase agreements. As a major purchaser of titanium, managers at Boeing probably thought they had the power to push this contract revision through, and Titanium's investment meant that it would be unlikely that the company walk away from the deal. Titanium promptly sued Boeing for breach of contract. The dispute was settled out of court, and under a revised agreement Boeing agreed to pay monetary damages to Titanium Metals (reported to be in the \$60-million range) and entered into an amended contract to purchase titanium.⁵⁰ This action was arguably unethical because it violated the supplier's right to have a purchaser do business in a fair and open way, regardless of any issues of legality.

Substandard working conditions arise when managers underinvest in working conditions, or pay employees below-market rates, in order to reduce their production costs. The most extreme examples of such behavior occur when a firm establishes operations in countries that lack the workplace regulations found in developed nations such as the United States. For example, the Ohio Art Company ran into an ethical storm when newspaper reports alleged that it had moved production of its popular Etch A Sketch toy from Ohio to a supplier in Shenzhen Province, where employees—mostly teenagers—work long hours for \$0.24 per hour, below the legal minimum wage of \$0.33 per hour. Moreover, production reportedly started at 7:30 a.m. and continued until 10 p.m., with breaks only for lunch and dinner. Furthermore, Saturdays and Sundays were treated as normal workdays, meaning that employees worked 12 hours per day, 7 days per week, or 84 hours per week—well above the standard 40-hour week authorities set in Shenzhen. Working conditions such as these clearly violate employees' rights in China, as specified by local regulations (which are poorly enforced). Is it ethical for the Ohio Art Company to use such a supplier? Many would say it is not.⁵¹

Environmental degradation occurs when a company's actions directly or indirectly result in pollution or other forms of environmental harm. Environmental degradation can violate the right of local communities and the general public to clean air and water, land that is free from pollution by toxic chemicals, and properly managed forests.

Finally, **corruption** can arise in a business context when managers pay bribes to gain access to lucrative business contracts. For example, it was alleged that Halliburton was part of a consortium that paid nearly \$180 million in bribes to win a lucrative contract to build a natural gas plant in Nigeria.⁵² Similarly, between 2006 and 2009, Siemens was found guilty of paying hundreds of millions of dollars in bribes to secure sales contracts; the company was ultimately forced to pay hefty fines, and one

opportunistic exploitation

Unethical behavior sometimes used by managers to unilaterally rewrite the terms of a contract with suppliers, buyers, or complement providers in a way that favors to the firm.

substandard working conditions

Arise when managers underinvest in working conditions, or pay employees below-market rates, to reduce their production costs.

environmental degradation

Occurs when a company's actions directly or indirectly result in pollution or other forms of environmental harm.

corruption

Can arise in a business context when managers pay bribes to gain access to lucrative business contracts.

Chinese executive who accepted \$5.1 million in bribes was sentenced to death by Chinese courts.⁵³ Corruption is clearly unethical because it violates many rights, including the right of competitors to a level playing field when bidding for contracts, and, when government officials are involved, the right of citizens to expect that government officials will act in the best interests of the local community (or nation), and not in response to corrupt payments.

11-5b The Roots of Unethical Behavior

personal ethics

Generally accepted principles of right and wrong governing the conduct of individuals.

Why do some managers behave unethically? What motivates managers to engage in actions that violate accepted principals of right and wrong, trample on the rights of one or more stakeholder groups, or simply break the law? Although there is no simple answer to this question, a few generalizations can be made.⁵⁴ First, it is important to recognize that business ethics are not divorced from **personal ethics**, which are the generally accepted principles of right and wrong governing the conduct of individuals. As individuals, we are taught that it is wrong to lie and cheat, and that it is right to behave with integrity and honor, and to stand up for what we believe to be true. The personal ethical code that guides behavior comes from many sources, including parents, schools, religion, and the media. A personal ethical code will exert a profound influence on the way an individual behaves as a businessperson. An individual with a strong sense of personal ethics is less likely to behave in an unethical manner in a business setting; in particular, he or she is less likely to engage in self-dealing and more likely to behave with integrity.

Second, many studies of unethical behavior in a business setting have come to the conclusion that businesspeople sometimes do not realize that they are behaving unethically, primarily because they simply fail to ask the relevant question: Is this decision or action ethical? Instead, they apply straightforward business calculus to what they perceive to be a business decision, forgetting that the decision may also have an important ethical dimension.⁵⁵ The fault here is within processes that do not incorporate ethical considerations into business decision making. This may have been the case at Nike and other textile companies when managers originally made subcontracting arrangements with contractors that operated factories as “sweatshops,” with long hours, low pay, and poor working conditions. Those decisions were probably based upon good economic logic. Subcontractors were probably chosen on the basis of business variables such as cost, delivery, and product quality, and key managers simply failed to ask: “How does this subcontractor treat its workforce?” If managers pondered this question at all, they probably reasoned that it was the subcontractor’s concern, not the company’s.

Unfortunately, the climate in some businesses does not encourage people to think through the ethical consequences of business decisions. This brings us to the third cause of unethical behavior in businesses: an organizational culture that de-emphasizes business ethics and considers all decisions to be purely economic ones. Individuals may believe their decisions within the workplace are not subject to the same ethical principles that govern their personal lives, or that their decisions within the firm do not really “belong” to them, but rather that they are merely acting as agents of the firm. A related fourth cause of unethical behavior may be pressure from top management to meet performance goals that are unrealistic and can only be attained by cutting corners or acting in an unethical manner. Thus, the pressure to perform induces

individuals to behave in ways they otherwise would not. This appears to have been the case at Volkswagen: Engineers were under extreme pressure to produce a diesel car that would be fuel efficient, powerful, and meet U.S. emission standards in order to meet then-CEO Winterkorn's goal of tripling U.S. sales. Documents from within the organization suggest that the company had a "culture of fear" that made employees so afraid of disappointing management they were willing to cheat even though they clearly knew it was both a legal and ethical violation.

An organizational culture can "legitimize" behavior that society would judge as unethical, particularly when this is mixed with a focus upon unrealistic performance goals such as maximizing short-term economic performance regardless of the costs. In such circumstances, there is a greater-than-average probability that managers will violate their own personal ethics and engage in behavior that is unethical. By the same token, an organization's culture can do just the opposite and reinforce the need for ethical behavior. Recreational Equipment Inc. (REI), for example, has a strong culture around valuing environmental sustainability, respect for individuals, and trustworthiness. The firm backs up this belief system with such policies as producing an annual environmental stewardship report and providing health-care benefits for all workers (including part-time employees), a retirement plan that does not require individual contributions, and grants for employees to contribute to their communities or to buy gear to pursue personal outdoor challenges. The company has made *Fortune's* "100 Best Companies to Work For" list every year since 1998.

This brings us to a fifth root cause of unethical behavior: *unethical leadership*. Leaders help to establish the culture of an organization, and they set the example that others follow. Other employees in a business often take their cues from business leaders, and if those leaders do not behave in an ethical manner, employees may not either. It is not what leaders say that matters, but what they do. A good example is Ken Lay, the former CEO of the failed energy company Enron. While constantly referring to Enron's code of ethics in public statements, Lay simultaneously engaged in behavior that was ethically suspect. Among other things, he failed to discipline subordinates who had inflated earnings by engaging in corrupt energy-trading schemes. Such behavior sent a very clear message to Enron's employees—unethical behavior would be tolerated if it could boost earnings.

11-5c Behaving Ethically

What is the best way for managers to ensure that ethical considerations are taken into account? In many cases, there is no easy answer to this question, for many of the most vexing ethical problems involve very real dilemmas and suggest no obvious right course of action. Nevertheless, managers can and should do at least seven things to ensure that basic ethical principles are adhered to, and that ethical issues are routinely considered when making business decisions. They can (1) favor hiring and promoting people with a well-grounded sense of personal ethics, (2) build an organizational culture that places a high value on ethical behavior, (3) make sure that leaders within the business not only articulate the rhetoric of ethical behavior but also act in a manner that is consistent with that rhetoric, (4) put decision-making processes in place that require people to consider the ethical dimension of business decisions, (5) use ethics officers, (6) put strong governance processes in place, and (7) act with moral courage.

Hiring and Promotion It seems obvious that businesses should strive to hire people who have a strong sense of personal ethics and would not engage in unethical or illegal behavior. Similarly, you would rightly expect a business to not promote people, and perhaps fire people, whose behavior does not match generally accepted ethical standards. But doing this is actually very difficult.

Is there anything that businesses can do to ensure they do not hire people who have poor personal ethics, particularly given that people have an incentive to hide this from public view (indeed, unethical people may well lie about their nature)? Businesses can give potential employees psychological tests to try to discern their ethical predisposition, and they can check with prior employees regarding someone's reputation, such as by asking for letters of reference and talking to people who have worked with the prospective employee. The latter approach is not uncommon and does influence the hiring process. Promoting people who have displayed poor ethics should not occur in an organization that values ethical behavior, and where leaders act accordingly.

Organization Culture and Leadership To foster ethical behavior, organizations must build an culture that places high value on ethical behavior. Three actions are particularly important. First, businesses must explicitly articulate values that place a strong emphasis on ethical behavior. Many companies now do this by drafting a **code of ethics**, a formal statement of the ethical priorities to which a business adheres—in fact, both the New York Stock Exchange and Nasdaq listing services require listed companies to have a code of ethics that identifies areas of ethical risk, provides guidance for recognizing and dealing with ethical issues, provides mechanisms for reporting unethical conduct, and notes procedures to ensure prompt action against violations.⁵⁶ Firms also sometimes incorporate ethical statements into documents that articulate the values or mission of the business. For example, the food and consumer products giant Unilever's code of ethics includes the following points: “We will not use any form of forced, compulsory or child labor” and “No employee may offer, give or receive any gift or payment which is, or may be construed as being, a bribe. Any demand for, or offer of, a bribe must be rejected immediately and reported to management.”⁵⁷ Unilever's principles send a very clear message to managers and employees within the organization. Data from the National Business Ethics Survey, administered by the Ethics Resource Center, a U.S. nonprofit, has found that firms with strong, well-implemented ethics programs have significantly fewer cases of ethical misconduct.

Having articulated values in a code of ethics or some other document, it is important that business leaders give life and meaning to those words by repeatedly emphasizing their importance and then acting on them. This means using every relevant opportunity to stress the importance of business ethics and making sure that key business decisions not only make good economic sense but also are ethical. Many companies have gone a step further and hired independent firms to audit them and make sure that they are behaving in a manner consistent with their ethical codes. Nike, for example, has in recent years hired independent auditors to ensure that its subcontractors are adhering to Nike's code of conduct.

Finally, building an organization culture that places a high value on ethical behavior requires incentive and reward systems, including promotional systems that reward people who engage in ethical behavior and sanction those who do not.

code of ethics

Formal statement of the ethical priorities to which a business adheres.

Decision-Making Processes In addition to establishing the right kind of ethical culture in an organization, businesspeople must be able to think through the ethical implications of decisions in a systematic way. To do this, they need a moral compass, and beliefs about what determines individual rights and justice. Some experts on ethics have proposed a straightforward practical guide, or ethical algorithm, to determine whether a decision is ethical. A decision is acceptable on ethical grounds if a businessperson can answer “yes” to each of these questions:

1. Does my decision fall within the accepted values or standards that typically apply in the organizational environment (as articulated in a code of ethics or some other corporate statement)?
2. Am I willing to see the decision communicated to all stakeholders affected by it—for example, by having it reported in newspapers or on television?
3. Would the people with whom I have a significant personal relationship, such as family members, friends, or even managers in other businesses, approve of the decision?

Ethics Officers To make sure that a business behaves in an ethical manner, a number of firms now have ethics officers. These individuals are responsible for making sure that all employees are trained to be ethically aware; that ethical considerations enter the business decision-making process; and that employees adhere to the company’s code of ethics. Ethics officers may also be responsible for auditing decisions to ensure that they are consistent with this code. In many businesses, ethics officers act as an internal ombudsperson with responsibility for handling confidential inquiries from employees, investigating complaints from employees or others, reporting findings, and making recommendations for change.

United Technologies, a large aerospace company with worldwide revenues of about \$60 billion, has had a formal code of ethics since 1990. There are now some 450 “business practice officers” (the company’s name for ethics officers) within United Technologies who are responsible for making sure that employees adhere to the code. United Technologies also established an ombudsperson program in 1986 that allows employees to inquire anonymously about ethics issues.⁵⁸

Strong Corporate Governance Strong corporate governance procedures are needed to ensure that managers adhere to ethical norms—in particular, that senior managers do not engage in self-dealing or information manipulation. Strong corporate governance procedures require an independent board of directors that is willing to hold top managers accountable for self-dealing and can verify the information managers provide. If companies like Tyco, WorldCom, and Enron had had strong boards of directors, it is unlikely that they would have experienced accounting scandals, or that top managers would have been able to access the funds of these corporations as personal treasuries.

There are five cornerstones of strong governance. The first is a board of directors that is composed of a majority of outside directors who have no management responsibilities in the firm, are willing and able to hold top managers accountable, and have no business ties with important insiders. Outside directors should be individuals of high integrity whose reputation is based on their ability to act independently. The second cornerstone is a board where the positions of CEO and chairman are held by separate individuals and the chairman is an outside director.

When the CEO is also chairman of the board of directors, he or she can control the agenda, thereby furthering his or her own personal agenda (which may include self-dealing) or limiting criticism against current corporate policies. The third cornerstone is a compensation committee formed by the board that is composed entirely of outside directors. The compensation committee sets the level of pay for top managers, including stock-option grants and additional benefits. The scope of self-dealing is reduced by making sure that the compensation committee is independent of managers. Fourth, the audit committee of the board, which reviews the financial statements of the firm, should also be composed of outsiders, thereby encouraging vigorous, independent questioning of the firm's financial statements. Finally, the board should use outside auditors that are truly independent and do not have a conflict of interest. This was not the case in many recent accounting scandals, where outside auditors were also consultants to the corporation and therefore less likely to ask management hard questions for fear that doing so would jeopardize lucrative consulting contracts.

Moral Courage It is important to recognize that sometimes managers and others need significant moral courage. Moral courage enables managers to walk away from a decision that is profitable but unethical, gives employees the strength to say no to superiors who instruct them to behave unethically, and gives employees the integrity to contact the media and “blow the whistle” on persistent unethical behavior in a company. Moral courage does not come easily; there are well-known cases where individuals have lost their jobs because they were whistleblowers on unethical corporate behaviors.

Companies can strengthen the moral courage of employees by making a commitment to refuse to seek retribution against employees who exercise moral courage, say no to superiors, or otherwise complain about unethical actions. For example, Unilever's code of ethics includes the following:

Any breaches of the Code must be reported in accordance with the procedures specified by the Joint Secretaries. The Board of Unilever will not criticize management for any loss of business resulting from adherence to these principles and other mandatory policies and instructions. The Board of Unilever expects employees to bring to their attention, or to that of senior management, any breach or suspected breach of these principles. Provision has been made for employees to be able to report in confidence and no employee will suffer as a consequence of doing so.

This statement gives “permission” to employees to exercise moral courage. Companies can also set up an ethics hotline that allows employees to anonymously register a complaint with a corporate ethics officer.

Final Words The steps discussed here can help to ensure that when managers make business decisions, they are fully cognizant of the ethical implications and do not violate basic ethical prescriptions. At the same time, not all ethical dilemmas have a clean and obvious solution—that is why they are dilemmas. At the end of the day, there are things that a business should not do, and there are things that a business should do, but there are also situations that present managers with true predicament. In these cases, a premium is placed upon the ability of managers to make sense out of complex, messy situations, and to make balanced decisions that are as just as possible.

KEY TERMS

stakeholders 355	inside directors 367	information	environmental
internal stakeholders 355	outside directors 367	manipulation 376	degradation 377
external	stock options 369	anticompetitive	corruption 377
stakeholders 355	takeover constraint 371	behavior 376	personal ethics 378
risk capital 357	greenmail 371	opportunistic	code of ethics 380
information	ethics 374	exploitation 377	
asymmetry 362	business ethics 374	substandard working	
on-the-job	ethical dilemmas 374	conditions 377	
consumption 363	self-dealing 376		

TAKEAWAYS FOR STRATEGIC MANAGERS

1. Stakeholders are individuals or groups that have an interest, claim, or stake in a company—in what it does and in how well it performs.
2. Stakeholders are in an exchange relationship with the company. They supply the organization with important resources (or contributions), and in exchange expect their interests to be satisfied (by inducements).
3. A company cannot always satisfy the claims of all stakeholders. The goals of different groups may conflict. The company must identify the most important stakeholders and give highest priority to pursuing strategies that satisfy their needs.
4. A company's stockholders are its legal owners and the providers of risk capital—a major source of capital resources that allow a company to operate its business. As such, they have a unique role among stakeholder groups.
5. Maximizing long-term profitability and profit growth is the route to maximizing returns to stockholders, and is also consistent with satisfying the claims of several other key stakeholder groups.
6. When pursuing strategies that maximize profitability, a company has the obligation to do so within the limits set by the law and in a manner consistent with societal expectations.
7. An agency relationship is said to exist whenever one party delegates decision-making authority or control over resources to another party.
8. The essence of the agency problem is that the interests of principals and agents are not always the same, and some agents may take advantage of information asymmetries to maximize their own interests at the expense of principals.
9. Numerous governance mechanisms serve to limit the agency problem between stockholders and managers. These include the board of directors, stock-based compensation schemes, financial statements and auditors, and the threat of a takeover.
10. The term *ethics* refers to accepted principles of right or wrong that govern the conduct of a person, the members of a profession, or the actions of an organization. Business ethics are the accepted principles of right or wrong governing the conduct of businesspeople. An ethical strategy is one that does not violate these accepted principles.
11. Unethical behavior is rooted in poor personal ethics; the inability to recognize that ethical issues are at stake; failure to incorporate ethical issues into strategic and operational decision making; a dysfunctional culture; and failure of leaders to act in an ethical manner.
12. To make sure that ethical issues are considered in business decisions, managers should (a) favor hiring and promoting people with a well-grounded sense of personal ethics, (b) build an organizational culture that places high value on ethical behavior, (c) ensure that leaders within

the business not only articulate the rhetoric of ethical behavior but also act in a manner that is consistent with that rhetoric, (d) put decision-making processes in place that require people to

consider the ethical dimension of business decisions, (e) use ethics officers, (f) have strong corporate governance procedures, and (g) be morally courageous and encourage others to be the same.

DISCUSSION QUESTIONS

1. How prevalent has the agency problem been in corporate America during the last decade? During the late 1990s, there was a boom in initial public offerings of Internet companies (dot.com companies), supported by sky-high valuations, often assigned to Internet start-ups that had no revenues or earnings. The boom ended abruptly in 2001, when the Nasdaq stock market collapsed, losing almost 80% of its value. Who do you think benefited most from this boom: investors (stockholders) in those companies, managers, or investment bankers?
2. Why is maximizing ROIC consistent with maximizing returns to stockholders?
3. How might a company configure its strategy-making processes to reduce the probability that managers will pursue their own self-interest at the expense of stockholders?
4. In a public corporation, should the CEO of the company also be allowed to be the chairman of the board (as allowed for by the current law)? What problems might this present?
5. Under what conditions is it ethically defensible to outsource production to companies in the developing world that have much lower labor costs when such actions involve laying off long-term employees in the firm's home country?
6. Is it ethical for a firm faced with a labor shortage to employ illegal immigrants to meet its needs?

CLOSING CASE

Starbucks: Taking a Stand on Social Issues

When Howard Schultz founded Starbucks in 1987, he wanted to create a company that would genuinely care for the well-being of its employees. He had been very influenced by his memories of his father, noting that his father “struggled a great deal and never made more than \$20,000 a year, and his work was never valued, emotionally or physically, by his employer ... This was an injustice ... I want our employees to know we value them.” He also believed that happy employees are the key to competitiveness and

growth. As he stated: “We can’t achieve our strategic objectives without a work force of people who are immersed in the same commitment as management. Our only sustainable advantage is the quality of our work force. We’re building a national retail company by creating pride in—and stake in—the outcome of our labor.”

Schulz set out to accomplish his goals by creating an empowering corporate culture, exceptional employee benefits, and employee stock ownership programs. While Starbucks enforces almost

fanatical standards of coffee quality and customer service, the culture at Starbucks towards employees is laid back and supportive. Employees are empowered to make decisions without constant referral to management, and are encouraged to think of themselves as partners in the business. Starbucks wants employees to use their best judgment in making decisions and will stand behind them. This is reinforced through generous compensation and benefits packages.

In 2000, Schultz announced that he was resigning as CEO and left the firm to pursue other ventures (though he remained chairman of the board of directors). However, after Starbucks began to suffer from slumping net income and decreasing share price, Schultz returned to the helm in 2008. Rather than cutting costs and reducing the work force, Schulz announced his “Transformation Agenda”—a controversial plan to invest in Starbucks’ employees, environment, and community. His plan included:

Competitive employee compensation plans that include equity-based compensation for nonexecutive partners. In 2013, \$230 million was paid out in equity awards. In 2015, Starbucks gave all baristas and supervisors a pay raise and increased starting pay rates across the United States. In 2018, Starbucks’s U.S. baristas earned between \$7 and \$15 an hour (with an average of \$9 an hour), plus an average of \$742 a year in cash bonus, \$286 in stock bonus, \$442 in profit sharing, and \$1,095 in tips.

Industry-leading health care benefits and 401K benefits for both part-time and full-time workers. Other companies that offer health benefits to part-time workers typically only do so for employees who work at least 30 hours a week. Starbucks broke with industry norms by creating benefits for employees who work at least 20 hours a week.

Tuition reimbursement for students. In June 2014, Starbucks unveiled a “College Achievement Plan” wherein employees who work more than

20 hours a week can work towards a bachelor’s degree through an online program from Arizona State University.

An ethical sourcing plan. Starbucks’ coffee must be purchased from suppliers that adhere to Starbucks’ “C.A.F.E.” standards. These standards include practices related to *product quality*, *economic accountability*, and *transparency* (e.g., suppliers must provide evidence to demonstrate that the price Starbucks pays reaches the farmer), *social responsibility* (e.g., third-party verifiers provide audits to ensure that suppliers are using safe, fair, and humane working and living conditions, including minimum-wage requirements and the prohibition of child and forced labor), and *environmental leadership* (e.g., measures to manage waste, protect water quality, and reduce use of agrochemicals).

Whether investors and consumers were inspired by the Agenda, were encouraged by Schultz’s return, or just floated up with the recovering economy is unclear, but Starbucks’ stock price and balance sheet roared back to life. Revenues and net income began to climb again and, by September 2014, Starbucks’ sales had reached \$16.4 billion—160% of what sales had been when Schultz returned as CEO and an all-time high for the company. With a 12.6% net margin and 19.2% return on assets, Starbucks was one of the most profitable food retailers in the world.

In late 2014 and early 2015, Schultz decided to leverage the company’s influence in the world by speaking out on such issues as gay marriage (Schultz supports it), gun-carrying laws (Starbucks requests that people not carry guns into their locations, even in states that permit it), and treatment of veterans (in March 2014, Schultz committed \$30 million of his own money to posttraumatic stress disorder programs and other initiatives to help veterans, and vowed to hire 10,000 veterans and military spouses by 2018).

The company drew some ire in taking on issues that bear little relationship to its core activities.

Critics admonished that such initiatives risked alienating some consumers and investors, and creating elevated expectations that the company might not always be able to meet. As Schultz noted, “I can tell you the organization is not thrilled when I walk into a room and say we’re now going to take on veterans (issues).” But he adds, “The size and the scale of the company and the platform that we have allows us, I think, to project a voice into the debate, and hopefully that’s for good ... We are leading

[Starbucks] to try to redefine the role and responsibility of a public company.”

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CASE DISCUSSION QUESTIONS

1. What are the pros and cons of Starbucks taking a stance on ethical issues such as minimum wage requirements, sustainable growing practices, and more? What do you think motivated Schultz to implement these standards?
2. Do you think it makes sense for companies to hold themselves to a higher standard than the law? Do you think it makes sense for companies to utilize ethical standards that might not increase profitability?
3. How much influence do you think a company with the size and reach of Starbucks could have on the legal and ethical environment of the countries in which it operates?

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CHAPTER

12

IMPLEMENTING STRATEGY THROUGH ORGANIZATION

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OPENING CASE

LEARNING OBJECTIVES

Organization at Microsoft

As is often the case with many start-ups, in its early days Microsoft's organization developed organically. Initially, when the company's main product was its MS-DOS operating system (the forerunner to Windows), the company had a functional organization. The two main functions were engineering, which was responsible for developing software products, and marketing and sales, which sold those products to computer manufacturers, business users, and consumers. The engineering function was initially headed by founder and CEO Bill Gates, while Steve Ballmer (who would ultimately succeed Gates as CEO), ran the marketing and sales function. Support functions included finance, human relations, and legal.

As the company grew and developed new products such as Office, Windows server software, development tools, X-Box, and Internet search, Microsoft developed into a de facto matrix organization. Each major product category was put into its own business division, while the engineering and sales functions cut across these divisions. The rationale for the matrix structure was that it encouraged close coordination between the different businesses. This was seen as a key imperative at Microsoft, where various software products needed to work well with each other. For example, on the engineering side, Office needed to be optimized to run well on Windows; X-Box used a customized version of the Windows operating system, so development had to be synchronized; and the Windows operating system for desktop and laptop computers had to communicate seamlessly with the Windows server software that ran on servers. On the sales and marketing side, coordination was important to ensure that business users had one main point of contact with Microsoft, which was far preferable to having multiple salespeople from different divisions contact the company.

While the matrix organization achieved its main objectives of facilitating coordination between divisions and presenting a main point of contact for businesses, it did create some problems for the organization. In particular, there was a chronic lack of accountability within Microsoft.

- 12.1 Explain the concept of organizational architecture
- 12.2 Articulate how strategy is implemented through the right combination of organizational structure, controls, incentives, process, culture, and people
- 12.3 Discuss how effective organizational design enables a company to implement its business-level strategy
- 12.4 Discuss how effective organization design enables a company to implement its corporate-level strategy

When things went wrong, it could be unclear whether this was due to management problems within the business divisions, or due to a lack of execution by the engineering function, or by sales and marketing. It was also the case that engineering was viewed as the premier cultural function within the organization. Most importantly, engineering took the lead in developing new products. This didn't always serve the company well, because its engineers, isolated from customers, were not as focused on the market as they should have been. Over time, the company also became increasingly bureaucratic and slow to respond to innovation by rivals such as Apple and Google.

When Satya Nadella became CEO of Microsoft in January 2014, one of his priorities was to increase accountability within the organization and make Microsoft more agile. By mid-2017, he had reorganized into three main business segments—Productivity and Business Processes (which included Office 365, Dynamics, and Linked-in), Intelligent Cloud (public, private, and hybrid server products and cloud services), and More Personal Computing (Windows, X-box, Surface, and search advertising). The heads of each segment report directly to Nadella, and they have primary profit-and-loss responsibility for their segments. The different product offerings within each segment are also profit centers, and the heads of those product divisions report to the head of each segment. Sales continues to operate as a separate function, but engineering and marketing responsibilities are now



Vijin Kumar/Hindustan Times/Getty Images

embedded in each segment, and the product groups within each segment. In other words, Microsoft has moved significantly away from its *de facto* matrix structure. The articulated goal of these changes is to align structure with strategy, drive accountability, and eliminate obstacles to innovation. Judged by Microsoft's financial results and the rapid growth of its cloud offerings since Nadella took over, so far this seems to be working.

Sources: Discussions with Microsoft personnel by the author.

12-1 OVERVIEW

Earlier in this book, we noted that strategy is implemented through the organizational arrangements of a firm and through actions taken at the functional level. We discussed the functional actions required to implement different *business-level strategies* in Chapters 4 and 5. In this chapter, we look at how organizational arrangements are used to implement the business-, corporate-, and global-level strategies of an enterprise.

The Opening Case illustrates some of the issues that we shall be discussing in this chapter. Like most new enterprises, Microsoft started out with a functional organization. Over time, as it developed additional products, it grouped those products into business divisions. At the same time, its two core functions—engineering and marketing and sales—remained strong, resulting in a *de facto* matrix organization. This organization structure did help Microsoft ensure that all of its product offerings worked well with each other, which was a key competitive requirement, but it also resulted in problems of accountability and control, and a lack of agility. After Satya Nadella became CEO in January 2015, he instituted a number of changes to better align the structure of the organization with its strategy of growing its cloud computing business, increasing accountability, and removing barriers to product innovation. Microsoft is not the first company to wrestle with the problem of how best to organize the enterprise to implement its strategy. This is a major issue in all organizations, and accordingly it is the focus of the current chapter.

organizational architecture

The totality of a firm's organizational arrangements, including its formal organizational structure, control systems, incentive systems, organizational culture, organizational processes, and human capital.

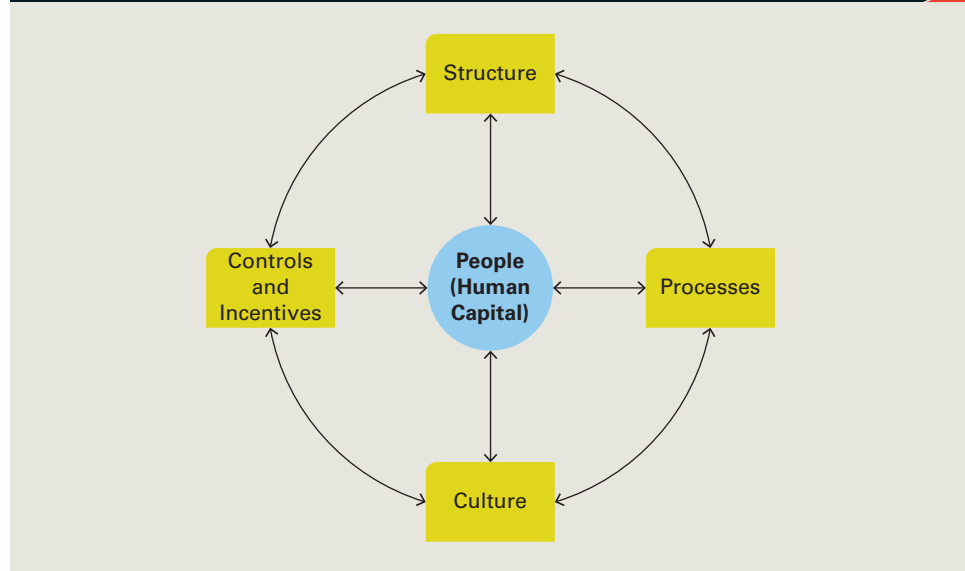
12-2 ORGANIZATIONAL ARCHITECTURE

In this chapter, we use the term **organizational architecture** to refer to the totality of a firm's organizational arrangements, including its formal organizational structure, control systems, incentive systems, organizational culture, organizational processes, and people (or human capital).¹ Figure 12.1 illustrates these different elements.

By **organizational structure**, we mean three things: First, the location of decision-making responsibilities in the firm (e.g., centralized or decentralized); second, the formal division of the organization into subunits such as functions, product divisions, and national operations; and third, the establishment of integrating mechanisms to coordinate the activities of subunits.

organizational structure

The combination of the location of decision-making responsibilities, the formal division of the organization into subunits, and the establishment of integrating mechanisms to coordinate the activities of the subunits.

Figure 12.1 Organizational Architecture**controls**

The metrics used to measure the performance of subunits and make judgments about how well managers are running them.

incentives

The devices used to encourage desired employee behavior.

organizational processes

The manner in which decisions are made and work is performed within the organization.

organizational culture

The norms and value systems that are shared among the employees of an organization.

people

The employees of an organization, as well as the strategy used to recruit, compensate, motivate, and retain those individuals; also refers to employees' skills, values, and orientation.

Controls are the metrics used to measure the performance of subunits and make judgments about how well managers are running those subunits. **Incentives** are the devices used to encourage desired employee behavior. Incentives are very closely tied to performance metrics. For example, the incentives of a manager in charge of General Electric's lighting business might be linked to the performance of that division.

Organizational processes refer to the manner in which decisions are made and work is performed within the organization. Examples include the processes for formulating strategy, for deciding how to allocate resources within a firm, for developing new products, and for evaluating the performance of managers and giving feedback. Processes are conceptually distinct from the location of decision-making responsibilities within an organization, although both involve decisions. For example, while the CEO might have ultimate responsibility for deciding on the firm's strategy (that is, the decision-making responsibility is centralized), the *process* he or she uses to make that decision might include the solicitation of ideas and criticism from lower-level managers and employees.

Organizational culture refers to the norms and value systems that are shared among the employees of an organization. Just as societies have cultures, so do organizations. Organizations are societies of individuals who come together to perform collective tasks. They have their own distinctive patterns of culture and subculture.² As we shall see, organizational culture can have a profound impact on a firm's performance.

Finally, by **people** we mean not just the employees of the organization, but also the strategy used to recruit, compensate, motivate, and retain those individuals, as well as the type of people that they are in terms of their skills, values, and orientation. Collectively, the people within an organization, the employees, constitute the human capital of an enterprise. We have already discussed the role of human resources in recruiting, training, developing, and compensating employees in order to execute the strategy of the firm in Chapters 3 and 4. We will not repeat that discussion here. However, it

is important to note that the value of an organization's human capital is more than the sum of each individual employee's skills and capabilities. Much of the value is *contextual* in the sense that employees can achieve things within an organization that would not be possible if they were working as independent contractors. Put differently, the other elements of the architecture of an organization may create an environment within which it is possible for people to do extraordinary things.

For example, Johnny Ive, the head of product design at Apple, is clearly a remarkably skilled individual. However, Ive probably could not have had the impact that he has without the benefit of working within Apple, where the structure, control systems, incentives, decision-making processes, and culture all supported what he was trying to do in terms of developing elegantly designed digital devices that are as much a fashion statement as they are a computing tool. Much of Ive's human capital, in other words, is the result of the *combination* of his skills and Apple's organizational architecture.

As suggested by this example, and as illustrated by the arrows in Figure 12.1, the various components of organization architecture are not independent of each other: Each component shapes, and is shaped by, other components of architecture. Again, an obvious example is the strategy regarding people. Human resources can proactively hire individuals whose internal values are consistent with those that the firm emphasizes in its organizational culture. The people component of architecture can be used to reinforce the prevailing culture of the organization. A business enterprise endeavoring to attain a competitive advantage and maximize its performance must pay close attention to achieving internal consistency between the various components of its architecture, and the architecture must support the strategy and functional activities of the enterprise.

12-3 ORGANIZATIONAL STRUCTURE

Organizational structure can be thought of in terms of three dimensions. The first is **vertical differentiation**, which refers to the location of decision-making responsibilities within a structure (that is, centralization or decentralization), and also to the number of layers in a hierarchy (that is, whether the organizational structure is tall or flat). The second is **horizontal differentiation**, which refers to the formal division of the organization into subunits. The third is the establishment of **integrating mechanisms** for coordinating subunits. We will discuss each in turn.

12-3a Centralization and Decentralization

A firm's vertical differentiation determines where in its hierarchy decision-making power is concentrated.³ Are production and marketing decisions centralized in the offices of upper-level managers, or are they decentralized to lower-level managers? Where does the responsibility for R&D decisions lie? Are important strategic and financial decisions pushed down to operating units, or are they concentrated in the hands of top management? And so on. There are arguments for centralization, and other arguments for decentralization. **Centralization** is a condition where decision-making authority is concentrated at a high level in a management hierarchy. **Decentralization** is a condition where decision-making authority is vested in lower-level managers or other employees.

vertical differentiation

The location of decision-making responsibilities within a structure, referring to centralization or decentralization, and also the number of layers in a hierarchy, referring to whether the organizational structure is tall or flat.

horizontal differentiation

The formal division of the organization into subunits.

integrating mechanisms

Processes and procedures used for coordination subunits.

centralization

Structure in which decision-making authority is concentrated at a high level in the management hierarchy.

decentralization

Structure in which decision-making authority is distributed to lower-level managers or other employees.

Arguments for Centralization There are four main arguments for centralization. First, it can facilitate coordination. For example, consider a firm that has a component manufacturing operation in California and a final assembly operation in Seattle. The activities of these two operations need to be coordinated to ensure a smooth flow of products from the component operation to the assembly operation. This might be achieved by centralizing production scheduling at the firm's head office.

Second, centralization can help ensure that decisions are consistent with organizational objectives. When decisions are decentralized to lower-level managers, those managers may make decisions at variance with top management's goals. Centralization of important decisions minimizes the chance of this occurring. Major strategic decisions, for example, are often centralized in an effort to make sure that the entire organization is pulling in the same direction. In this sense, centralization is a way of controlling the organization.

Third, centralization can avoid the duplication of activities that occurs when similar activities are carried on by various subunits within the organization. For example, many firms centralize their R&D functions at one or two locations to ensure that R&D work is not duplicated. Similarly, production activities may be centralized at key locations to eliminate duplication, attain economies of scale, and lower costs. The same may also be true of purchasing decisions. Wal-Mart, for example, has centralized all purchasing decisions at its headquarters in Arkansas. By wielding its enormous bargaining power, purchasing managers at the head office can drive down the costs that Wal-Mart pays for the goods it sells in its stores. It then passes on those savings to consumers in the form of lower prices, which enables the company to grow its market share and profits.

Fourth, by concentrating power and authority in one individual or a management team, centralization can give top-level managers the means to bring about needed major organizational changes. Often times, firms seeking to transform their organizations centralize power and authority in a key individual (or group), who then sets the new strategic direction for the firm and redraw organizational architecture. Once the new strategy and architecture have been decided upon, however, greater decentralization of decision making normally follows. Put differently, the *temporary* centralization of decision-making power is often an important step in organizational change.

Arguments for Decentralization There are five main arguments for decentralization. First, top management can become overburdened when decision-making authority is centralized. Centralization increases the amount of information that senior managers have to process, and this can result in information overload and poor decision making.⁴ Decentralization gives top management time to focus on critical issues by delegating more routine issues to lower-level managers and reducing the amount of information top managers have to process.

Second, motivational research favors decentralization. Behavioral scientists have long argued that people are willing to give more to their jobs when they have a greater degree of individual freedom and control over their work. The idea behind employee empowerment is that if you give employees more responsibility for their jobs, they will work harder, increasing productivity and reducing costs.

Third, decentralization permits greater flexibility—more rapid response to environmental changes. In a centralized firm, the need to refer decisions up the hierarchy for approval can significantly impede the speed of decision making and inhibit the ability of the firm to adapt to rapid environmental changes.⁵ This can put the firm at

a competitive disadvantage. Managers deal with this by decentralizing decisions to lower levels within the organization. Thus, at Wal-Mart, while purchasing decisions are centralized so that the firm can realize economies of scale in purchasing, routine pricing and stocking decisions are decentralized to individual store managers who have some control over pricing and decide upon the products to stock depending on local conditions. This enables store managers to respond quickly to changes in their local environment, such as a drop in demand or actions by a local competitor.

Fourth, decentralization can result in better decisions. In a decentralized structure, decisions are made closer to the spot by individuals who (presumably) have better information than managers several levels up a hierarchy. It might make little sense for the CEO of Procter & Gamble to make marketing decisions for the detergents business in Germany because he is unlikely to have the relevant expertise and information. Instead, those decisions are decentralized to local marketing managers, who are far more likely to be in tune with the German market.

Fifth, decentralization can increase control and be used to establish relatively autonomous, self-contained subunits within an organization. An **autonomous subunit** is one that has all of the resources and decision-making power required to run the operation on a day-to-day basis. Managers of autonomous subunits can be held accountable for subunit performance. The more responsibility subunit managers have for decisions that impact subunit performance, the fewer excuses they have for poor performance and the more accountable they are. Thus, by giving store managers the ability to set prices and make stocking decisions, Wal-Mart's top managers are able to hold local store managers accountable for the performance of their stores, and this increases the ability of top managers to control the organization. Just as centralization is one way of maintaining control in an organization, decentralization is another.

autonomous subunit

A subunit that has all the resources and decision-making power required to run the operation on a day-to-day basis.

The Choice Between Decentralization and Centralization The choice between centralization and decentralization is not absolute. Frequently, it makes sense to centralize some decisions and decentralize others, depending on the type of decision and the firm's strategy. We have already noted how Wal-Mart centralized purchasing decisions and decentralized pricing and stocking decisions. Similarly, Microsoft has centralized major development activities for its Windows operating system at its Redmond corporate campus but has decentralized responsibility for marketing and sales to local managers in each country and region where it does business. Although the choice between centralization and decentralization depends upon the circumstances being considered, a few important generalizations can be made.

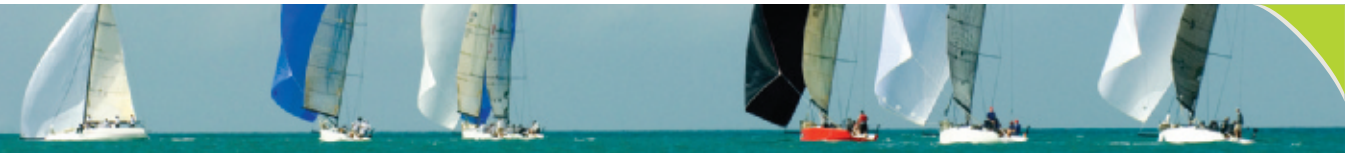
First, decisions regarding overall firm strategy, major financial expenditures, financial objectives, and legal issues are centralized at the senior-management level in most organizations. Functional decisions relating to production, marketing, R&D, and human resource management may or may not be centralized depending on the firm's strategy and environmental conditions.

Second, when the realization of economies of scale is an important factor, there tends to be greater centralization. Purchasing and manufacturing decisions are often centralized in an attempt to eliminate duplication and realize scale economies. In contrast, sales decisions tend to be more decentralized because economies of scale are less of a consideration here.

Third, when local adaptation is important, decentralization is typically favored. When there are substantial differences between conditions in local markets, marketing and sales decisions will often be decentralized to local marketing and sales managers.

Multinational, consumer products firms such as Unilever centralize decisions about manufacturing and purchasing in order to realize scale economies, but decentralize marketing and sales decisions to local brand managers in different countries precisely because competitive conditions differ from country to country and local adaptation is required.⁶

Finally, decentralization is favored in environments characterized by high uncertainty and rapid change. When competitive conditions in a firm's market are changing rapidly, with new technologies and competitors emerging in ways that are difficult to anticipate, centralization, because it slows down decision making, can put a firm at a competitive disadvantage. Due to this, many high-tech firms operate with a greater degree of decentralization than firms operating in more predictable environments.⁷ At Google, for example, lower-level employees are given the ability to develop new business ideas and the right to lobby top managers for the funds to develop those ideas (see the Opening Case). Such decentralization of strategy making might not be found in firms operating in a more stable environment such as the automobile industry. For a vivid example of the costs of making the wrong choice between centralization and decentralization, see Strategy in Action 12.1 on FEMA and Hurricane Katrina.



12.1 STRATEGY IN ACTION

FEMA and Hurricane Katrina

A vivid example of the costs of making the wrong choice between centralization and decentralization occurred in 2005, when the Federal Emergency Management Agency (FEMA) responded to the devastating impact that Hurricane Katrina had on New Orleans. The hurricane flooded much of the city and resulted in a mandatory evacuation. However FEMA, the Federal agency responsible for disaster relief, was widely criticized for being very slow to respond to the plight of the hundreds of thousands of mostly poor people who had been made homeless. For several days, while thousands of homeless people huddled in the New Orleans Superdome, lacking food and adequate sanitary facilities, FEMA was nowhere to be seen.

A postmortem revealed that one reason for FEMA's slow response was that the once-autonomous agency had been placed under the direct supervision of the

Department of Homeland Security after September 11, 2001. FEMA officials apparently felt that they had to discuss relief efforts with their superiors before proceeding. This cost the agency crucial time in the early hours of the disaster and significantly slowed its response, meaning that the relief effort was less effective than it might have been. In addition, FEMA was poorly managed. Its head, Mike Brown, a political appointee, had no experience in disaster relief. Moreover, the agency had been gutted by budget cuts.

In a report that was highly critical of FEMA, the U.S. Senate Committee charged with reviewing the response to Katrina cited a "failure of agility" and concluded that response plans at all levels of government lacked flexibility and adaptability, which often delayed response. In other words, decision making was too centralized, bureaucratic, and inflexible. Decentralization would have helped enormously in this case.

Sources: "A failure to innovate: Final report of the select bipartisan committee to investigate the preparation for and response to Hurricane Katrina" United States Government Printing Office, February 17, 2006; *The Economist*, "When Government Fails – Katrina's Aftermath," September 2005, p. 25.

12-3b Tall Versus Flat Hierarchies

A second aspect of vertical differentiation refers to the number of levels in an organization hierarchy. **Tall hierarchies** have many layers of management, while **flat hierarchies** have very few layers (see Figure 12.2). Most firms start out small, often with only one or at most two layers in the hierarchy. As they grow, management finds that there is a limit to the amount of information they can process and the control they can exert over day-to-day operations. To avoid being stretched too thin and losing control, they tend to add another layer to the management hierarchy, hiring more managers and delegating some decision-making authority to them. In other words, as an organization gets larger it tends to become taller. In addition, growing organizations often undertake more activities, expanding their product line, diversifying into adjacent activities, vertically integrating, or expanding into new regional or national markets. This too creates problems of coordination and control, and once again the organization's response often is to add another management layer. Adding levels in the hierarchy is a problem that mounts when managers have too much work to do. The number of layers added is also partly determined by the span of control that managers can effectively handle.

tall hierarchies

An organizational structure with many layers of management.

flat hierarchies

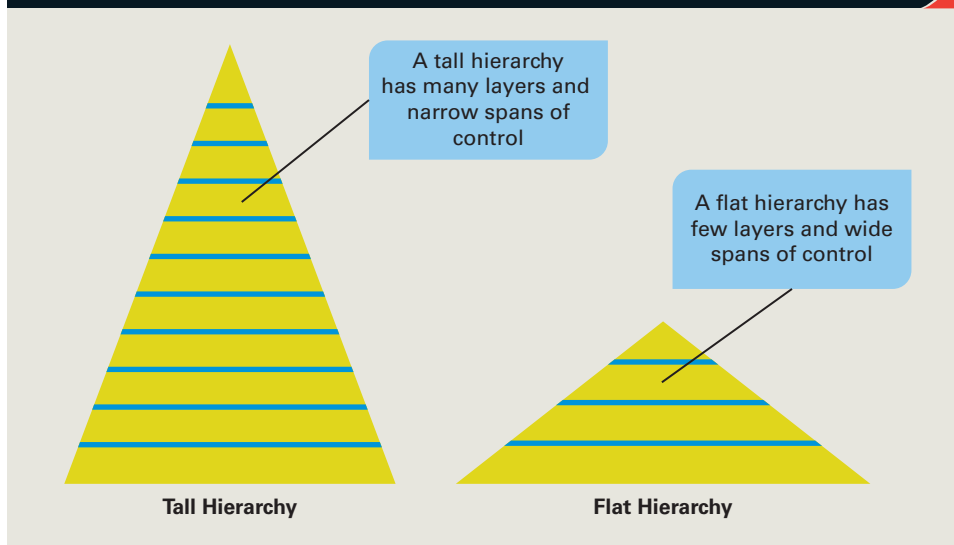
An organizational structure with very few layers of management.

Span of Control The term **span of control** refers to the number of direct reports that a manager has. At one time, it was thought that the optimal span of control was six subordinates.⁸ The argument was that, if a manager was responsible for more than six subordinates, he or she would soon lose track of what was going on and control loss would occur. Now we recognize that the relationship is not this simple. The number of direct reports a manager can handle depends upon (1) the nature of the work being supervised, (2) the extent to which the performance of subordinates is visible, and (3) the extent of decentralization within the organization. Generally, if the work being performed by subordinates is routine, their performance is visible and easy to measure, and they are empowered to make many decisions and need not refer up the hierarchy

span of control

The number of a manager's direct reports.

Figure 12.2 Tall Versus Flat Hierarchies



for approval or consultation, managers can operate with a wide span of control. How wide is the subject of debate, but it does seem as if managers can effectively handle as many as 20 direct reports if the circumstances are right.

In sum, as organizations grow and undertake more activities, the management hierarchy tends to become taller, but how tall depends upon the span of control that is feasible, and that in turn depends upon the nature of the work being performed, the visibility of subordinate performance, and the extent of decentralization within the organization. It is important to note that managers can influence the visibility of subunit performance and the extent of decentralization through organization design, thereby limiting the impact of organization size and diversity on the size of a management hierarchy. This is significant, because we know that while adding layers to an organization can reduce the workload of higher-level managers and attenuate control loss, tall hierarchies have their own problems.

Problems in Tall Hierarchies Several problems can occur in tall hierarchies that may result in lower organizational efficiency and effectiveness. First, there is a tendency for information to get *accidentally distorted* as it passes through layers in a hierarchy. The phenomenon is familiar to anyone who has played the game “telephone,” in which players sit in a circle and each whispers a message to the person sitting next to them, who then whispers the message to the next person, and so on around the room. Often, by the time the message has been transmitted through all the players, it has become distorted and its meaning has changed (this can have amusing consequences, which of course is the point of the game). Human beings are not adept at transmitting information; we tend to embellish or omit data. In a management context, if critical information has to pass through many layers in a tall hierarchy before it reaches critical decision makers, it may well get distorted in the process, resulting in a message that differs from the one originally sent. As a result, decisions may be made based on inaccurate information, and poor performance may result.

In addition to the accidental distortion of information as it travels through a management hierarchy, there is also the problem of *deliberate distortion* by midlevel managers trying to curry favor with their superiors or pursue a personal agenda. For example, the manager of a division might suppress negative information while exaggerating positive information in an attempt to “window dress” the performance of the unit under his control to higher-level managers and win their approval. By doing so he may gain access to more resources, earn performance bonuses, or avoid sanctions for poor performance. All things being equal, the more layers in a hierarchy, the more opportunities exist for people to deliberately distort information. To the extent that information is distorted, once again it implies that senior managers will be making important decisions on the basis of inaccurate information, which can result in poor performance. Economists refer to the loss of efficiency that arises from deliberate information distortions for personal gain within an organization as **influence costs**, which they argue can be a major source of low efficiency.⁹

An interesting case of information distortion in a hierarchy concerned the quality of prewar intelligence information on weapons of mass destruction in Iraq prior to the 2003 invasion by the United States and allied forces. The information on biological weapons that was used to help justify the invasion of Iraq was derived from a single Iraqi defector, code named “Curveball,” who was an alcoholic and, in the view of the one person who had interviewed him, a Pentagon analyst, “utterly useless as a source.” However, higher-level personnel in the intelligence community took the information

influence costs

The loss of efficiency that arises from deliberate information distortions for personal gain within an organization.

provided by Curveball, stripped out the reservations expressed by the Pentagon analyst, and passed it on as high-quality intelligence to U.S. Secretary of State Colin Powell, who included the information in a speech he made to the United Nations to justify the war. Powell was apparently unaware of the highly questionable nature of the data. He stated later that had he been aware of this he would not have included it in his speech. Apparently, gatekeepers who stood between Powell and the Pentagon analyst deliberately distorted the information, presumably to further their own agenda or the agenda of other parties whose favor they were trying to curry.¹⁰

A third problem with tall hierarchies is that they are expensive. The salaries and benefits of multiple layers of midlevel managers can add up to significant overhead, which can increase the cost structure of the firm. Unless there is a commensurate benefit, a tall hierarchy can put a firm at a competitive disadvantage.

A final problem concerns the inherent inertia associated with a tall hierarchy. Organizations are inherently inert—that is, they are difficult to change. One cause of inertia in an organization is that, in order to protect their turf, and perhaps their jobs, managers often argue for the maintenance of the status quo. In tall hierarchies there is more turf, more centers of power and influence, and more voices arguing against change. Thus, tall hierarchies tend to be slow to change.

Delaying—Reducing the Size of a Hierarchy Many firms attempt to limit the size of the management hierarchy. **Delaying** to reduce the number of levels in a management hierarchy has become a standard component of many attempts to boost a firm's performance.¹¹ Delaying is based on the assumption that when times are good, many firms tend to expand their management hierarchies beyond the point at which it is efficient to do so. However, the bureaucratic inefficiencies associated with a tall hierarchy become evident when the competitive environment becomes tougher, at which time managers seek to delay the organization. Delaying, and simultaneously widening spans of control, is also seen as a way of enforcing greater decentralization within an organization and reaping the associated efficiency gains.

delaying

The process of reducing the number of levels in a management hierarchy.

The process of delaying was a standard feature of Jack Welch's tenure at General Electric, during which time he laid off 150,000 people and reduced the number of layers in the hierarchy from nine to five, while simultaneously growing GE's profits and revenues. Welch believed that GE had become too top heavy during the tenure of his successors. A key element of his strategy was to transform General Electric into a leaner, faster-moving organization, which required delaying. Welch himself had a wide span of control, with some 20 subordinates reporting directly to him, including the heads of GE's 15 top businesses. Similarly, Jeffery Immelt, the head of GE's medical-systems business under Welch, had 21 direct reports (Immelt eventually replaced Welch as CEO).¹²

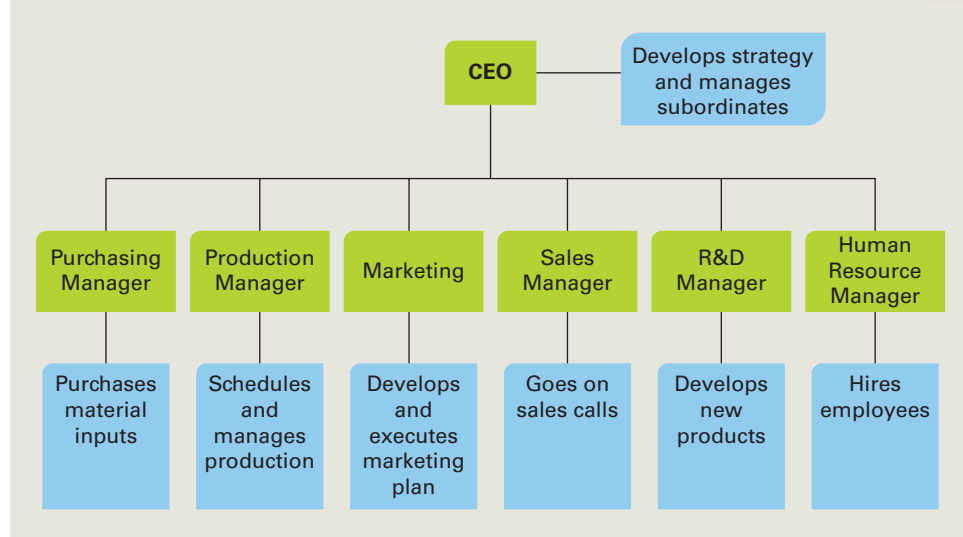
12-3c Structural Forms

Most firms begin with no formal structure and are run by a single entrepreneur or a small team of individuals. As they grow, the demands of management become too great for one individual or a small team to handle. At this point, the organization is split into functions that represent different aspects of the firm's value chain (see Chapter 3).

Functional Structure In a **functional structure**, the structure of the organization follows the obvious *division of labor* within the firm with different functions focusing on

functional structure

An organizational structure built upon the division of labor within the firm, with different functions focusing on different tasks.

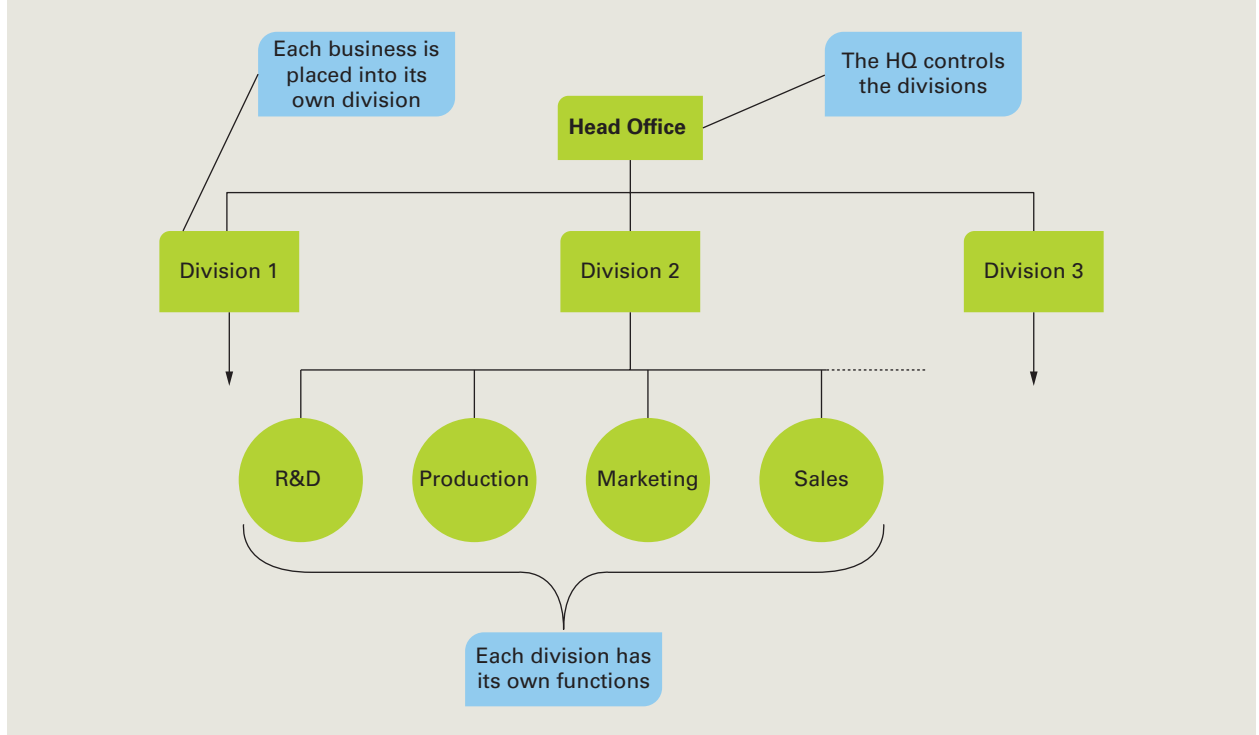
Figure 12.3 A Typical Functional Structure

different tasks. There might be a production function, an R&D function, a marketing function, a sales function, and so on (see Figure 12.3). A top manager, such as the CEO, or a small top-management team oversees these functions. Most single businesses of any scale are organized along functional lines.

While a functional structure can work well for a firm that is active in a single line of business, problems develop once the firm expands into different businesses. Google began as a search company, but has expanded into operating systems (Android and Chrome), software applications (Google Apps, Gmail), digital media distribution (Google Play), and social products (Google Plus, Blogspot). Trying to manage these different businesses within the context of a functional structure created problems of accountability, coordination, and control, so Google placed each one into its own product division.¹³

With regard to control, it becomes difficult to identify the profitability of each distinct business when the activities of those businesses are scattered across various functions. It is hard to assess whether a business is performing well or poorly. Moreover, because no one individual or management team is responsible for the performance of each business, there is a lack of accountability within the organization, and this too can result in poor control. As for coordination, when the different activities that constitute a business are embedded in different functions, such as production and marketing, that are simultaneously managing multiple businesses, it can be difficult to achieve the tight coordination between functions needed to effectively run the business. Moreover, it is difficult to run a functional department if it is supervising the value creation activities of several business areas.

Multidivisional Structure The problems that we have just discussed were first recognized in the 1920s by one of the pioneers of American management thinking, Alfred Sloan, who at the time was CEO of General Motors, then the largest company in the world.¹⁴ Under Sloan, GM had diversified into multiple businesses. In addition to

Figure 12.4 A Multidivisional Structure

making cars under several distinct brands, it made trucks, airplane engines, and refrigerators. After struggling to run these different businesses within the framework of a functional structure, Sloan realized that a fundamentally different structure was required. His solution, which has since become the classic way to organize a diversified, multibusiness enterprise, was to adopt a multidivisional structure (see Figure 12.4).

In a **multidivisional structure**, the firm is divided into different divisions, each responsible for a distinct business area. The multidivisional structure has become the standard structural form for managing a diversified enterprise. In most multidivisional enterprises, each division is set up as a self-contained, largely autonomous entity with its own functions. Responsibility for functional decisions and business-level strategy is typically decentralized to the divisions, which are then held accountable for their performance. Headquarters is responsible for the overall strategic development of the firm (corporate-level strategy), for control of the various divisions, for allocating capital between divisions, for supervising and coaching the managers who run each division, and for transferring valuable knowledge between divisions.

The divisions are generally left alone to run day-to-day operations as long as they hit performance targets, which are typically negotiated on an annual basis between the head office and divisional management. Headquarters, however, will often help divisional managers think through their strategy. Thus, while the CEO of General Electric does not develop strategy for the various businesses within GE's portfolio (that is decentralized to divisional managers), he does probe the thinking of divisional managers to see if they have thought through their strategy. In addition, he devotes much effort

multidivisional structure

An organizational structure in which a firm is divided into divisions, each of which is responsible for a distinct business area.

to getting managers to share best practices across divisions, and to the formulation and implementation of strategies that span multiple businesses.

One great virtue claimed for the multidivisional structure is that it creates an internal environment where divisional managers focus on efficiency.¹⁵ Because each division is a self-contained entity, its performance is highly visible. The high level of responsibility and accountability implies that divisional managers have few alibis for poor performance. This motivates them to focus on improving efficiency. Base pay, bonuses, and promotional opportunities for divisional managers can be tied to how well the division does. Capital is also allocated by top management between the competing divisions depending upon how effectively top management thinks the division managers can invest that capital. The desire to get access to capital to grow their businesses, and to gain pay increases and bonuses, creates further incentives for divisional managers to focus on improving the competitive position of the businesses under their control.

On the other hand, too much pressure from the head office on divisional managers to improve performance can result in some of the worst practices of management. These can include cutting necessary investments in plant, equipment, and R&D to boost short-term performance, even though such action can damage the long-term competitive position of the enterprise.¹⁶ To guard against this possibility, top managers need to develop a good understanding of each division, set performance goals that are attainable, and acquire personnel who can regularly audit the accounts and operations of divisions to ensure that they are not being managed for short-term results or in a way that destroys their long-term competitiveness.

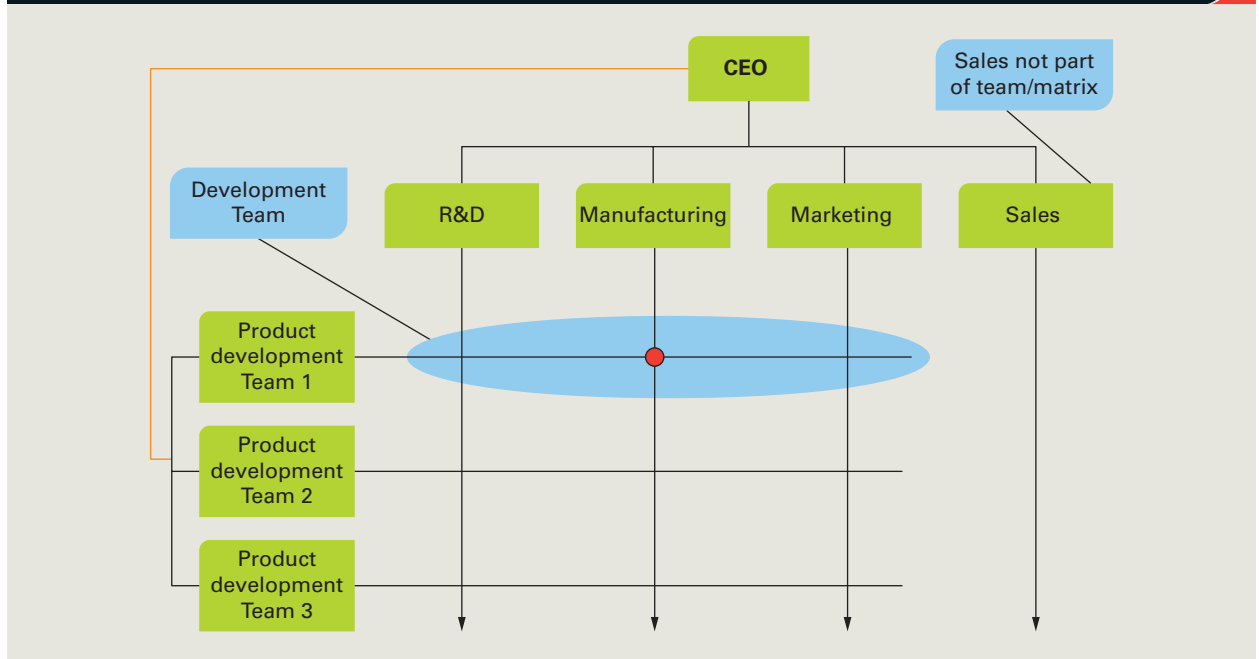
matrix structure

An organizational structure in which managers try to achieve tight coordination between functions, particularly R&D, production, and marketing.

Matrix Structure High-technology firms based in rapidly changing environments sometimes adopt a **matrix structure** in which they try to achieve tight coordination between functions, particularly R&D, production, and marketing.¹⁷ As we saw in the Opening Case, for a long time Microsoft operated with a de facto matrix structure. Tight coordination is required so that R&D designs products that (a) can be manufactured efficiently, and (b) are designed with customer needs in mind—both of which increase the probability of successful product commercialization (see Chapter 4). Tight coordination between R&D, manufacturing, and marketing has also been shown to result in a quicker product development effort, which can enable a firm to gain an advantage over its rivals.¹⁸ As illustrated in Figure 12.5, in such an organization an employee might belong to two subunits within the firm. For example, a manager might be a member of the manufacturing function and a product development team.

A matrix structure looks nice on paper, but the reality can be very different. Unless this structure is managed very carefully it may not work well.¹⁹ In practice, the matrix can be clumsy and bureaucratic. It can require so many meetings that it is difficult to get any work done. The dual-hierarchy structure can lead to conflict and perpetual power struggles between the different sides of the hierarchy. In one high-tech firm, for example, the manufacturing manager was reluctant to staff a product development team with his best people because he felt that would distract them from their functional work. The result was that the product development team did not work as well it might have.

To make matters worse, it can prove difficult to ascertain accountability in a matrix structure. When all critical decisions are the product of negotiation between different hierarchies, one side can always blame the other when things go wrong. As a manager in one high-tech matrix structure said to the author when reflecting on a failed product launch, “Had the engineering [R&D] group provided our development team with

Figure 12.5 Matrix Structure in a High-Tech Firm

decent resources, we would have got that product out on time and it would have been successful.” For his part, the head of the engineering group stated that “We did everything we could to help them succeed but the project was not well managed. They kept changing their requests for engineering skills, which was very disruptive.” The result of such finger pointing can be that accountability is compromised and conflict escalated, and senior management can lose control over the organization.

Despite these problems, there is evidence that a matrix structure can work.²⁰ Making a matrix work requires clear lines of responsibility. Normally this means that one side of the matrix must be given the primary role, while the other is given a support role. In a high-tech firm, for example, the product development teams might be given the primary role, because getting good products to market as quickly as possible is a key to competitive success. Despite taking such steps, managing within a matrix structure is difficult. In light of these problems, managers sometimes try to build “flexible” matrix structures based more on enterprisewide management knowledge networks, and a shared culture and vision, than on a rigid, hierarchical arrangement. Within such companies, the informal structure plays a greater role than the formal structure. We discuss this issue when we consider informal integrating mechanisms in the next section.

12-3d Formal Integrating Mechanisms

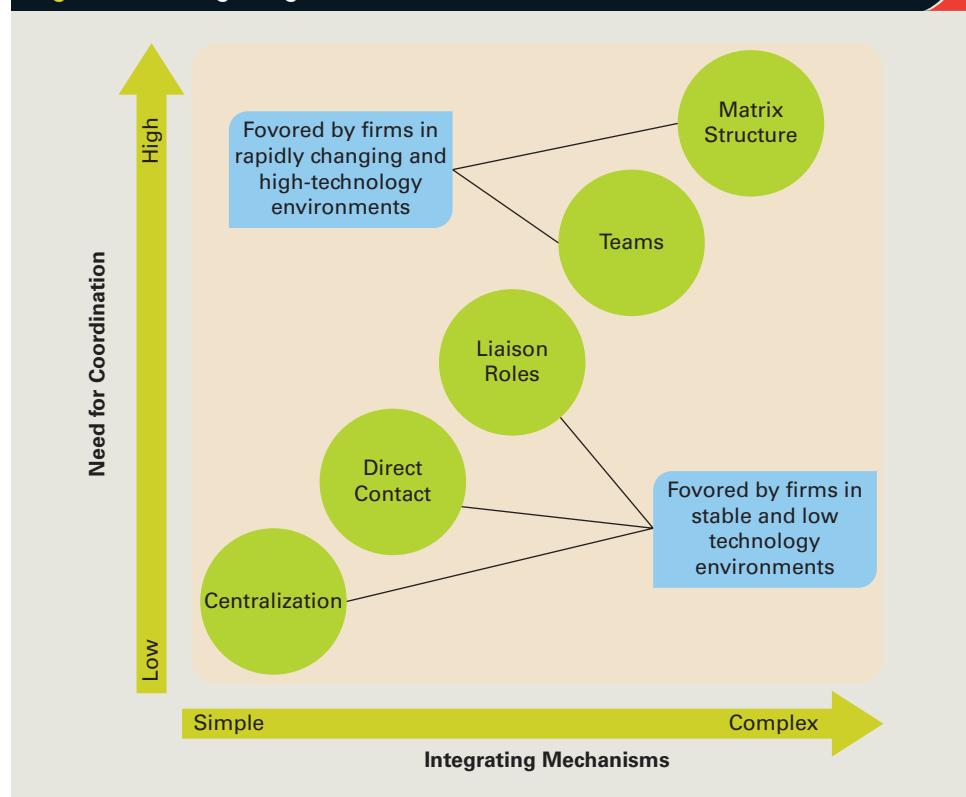
There is often a need to coordinate the activities of different functions and divisions within an organization in order to achieve strategic objectives. For example, at the *business level*, effective new product development requires tight integration between

R&D, production, and marketing functions. Similarly, at the *corporate level*, implementing a related diversification strategy requires integration between divisions in order to realize economies of scope and to transfer or leverage rare, valuable resources such as knowledge across divisions.

The formal integrating mechanisms used to coordinate subunits vary in complexity from simple, direct contact and liaison roles, to teams, to a matrix structure (see Figure 12.6). In general, the greater the need for coordination between subunits (functions or divisions), the more complex the formal integrating mechanisms need to be.²¹

Direct contact between subunit managers is the simplest integrating mechanism: Managers of the various subunits simply contact each other whenever they have a common concern. Direct contact may not be effective, however, if the managers have differing orientations that impede coordination, partly because they have different tasks. For example, production managers are typically concerned with issues such as capacity utilization, cost control, and quality control, whereas marketing managers are concerned with issues such as pricing, promotions, distribution, and market share. These differences can inhibit communication between managers. Managers from different functions often do not “speak the same language.” Managers can also become entrenched in their own “functional silos,” and this can lead to a lack of respect between subunits (for example, marketing managers “looking down on” production managers, and vice versa). This further inhibits the communication required to

Figure 12.6 Integrating Mechanisms



achieve cooperation and coordination. For these reasons, direct contact is rarely sufficient to achieve coordination between subunits when the need for integration is high.

Liaison roles are a bit more complex than direct contact. As the need for coordination between subunits increases, integration can be improved by giving one individual in each subunit responsibility for coordinating with other subunits on a regular basis. Through these roles, the employees involved establish a permanent relationship, which helps attenuate the impediments to coordination discussed above.

When the need for coordination is greater still, firms often use temporary or permanent teams composed of individuals from the subunits that need to achieve coordination. Teams are often used to coordinate product development efforts, but they can be useful when any aspect of operations or strategy requires the cooperation of two or more subunits. Product development teams are typically composed of personnel from R&D, production, and marketing. The resulting coordination aids the development of products that are tailored to consumer needs and can be produced at a reasonable cost (through design for manufacturing).

When the need for integration is very high, firms may institute a matrix structure in which all roles are viewed as integrating roles. The structure is designed to facilitate maximum integration among subunits. However, as we have already noted, matrix structures can quickly become bogged down in a bureaucratic tangle that creates as many problems as it solves. If not well managed, matrix structures can become bureaucratic, inflexible, and characterized by conflict rather than the hoped-for cooperation. For such a structure to work, it needs to be somewhat flexible and be supported by informal integrating mechanisms.²²

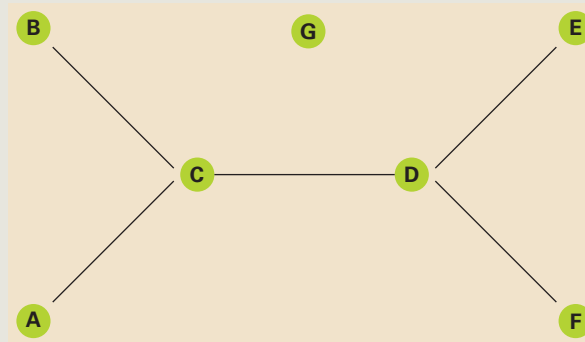
12-3e Informal Integrating Mechanisms

In attempting to alleviate or avoid the problems associated with formal integrating mechanisms in general, and matrix structures in particular, firms with a high need for integration have been experimenting with an informal integrating mechanism: knowledge networks that are supported by an organization culture that values teamwork and cross-unit cooperation.²³ A **knowledge network** is a system for transmitting information within an organization that is based not on formal organizational structure but on informal contacts between managers within an enterprise.²⁴ The great strength of such a network is that it can be used as a nonbureaucratic conduit for knowledge flow within an enterprise.²⁵ For a network to exist, managers at different locations within the organization must be linked to each other, at least indirectly. For example, Figure 12.7 shows the simple network relationships between seven managers within a multinational firm. Managers A, B, and C all know each other personally, as do Managers D, E, and F. Although Manager B does not know Manager F personally, they are linked through common acquaintances (Managers C and D). Thus, Managers A through F are all part of the network; Manager G is not.

Imagine Manager B, a marketing manager in Spain, needs to know the solution to a technical problem to better serve an important European customer. Manager F, an R&D manager in the United States, has the solution to Manager B's problem. Manager B mentions her problem to all of her contacts, including Manager C, and asks if they know of anyone who might be able to provide a solution. Manager C asks Manager D, who tells Manager F, who then calls Manager B with the solution. In this way, coordination is achieved informally through the network, rather than by formal integrating mechanisms such as teams or a matrix structure.

knowledge network

A network for transmitting information within an organization that is based not on formal organization structure but on informal contacts between managers within an enterprise and on distributed-information systems.

Figure 12.7 A Knowledge Network

For such a network to function effectively, it must embrace as many managers as possible. For example, if Manager G had a problem similar to manager B's, he would not be able to utilize the informal network to find a solution; he would have to resort to more formal mechanisms. Establishing firmwide knowledge networks is difficult. Although network enthusiasts speak of networks as the “glue” that binds complex organizations together, it is far from clear how successful firms have been at building companywide networks. The techniques that have been used to establish knowledge networks include information systems, management development policies, and conferences.

Firms are using their distributed computer and telecommunications information systems to provide the foundation for informal knowledge networks.²⁶ E-mail, videoconferencing, intranets, and web-based search engines make it much easier for managers scattered over the globe to get to know each other, identify contacts who might help to solve a particular problem, and publicize and share best practices within the organization. Wal-Mart, for example, uses its intranet system to communicate ideas about merchandizing strategy between stores located in different countries.

Firms are also using their management development programs to build informal networks. Tactics include rotating managers through various subunits on a regular basis, so they build their own informal network, and using management education programs to bring managers of subunits together in a single location so they can become acquainted. In addition, some science-based firms use internal conferences as a way to establish contacts between people in different units of the organization. At 3M, regular, multidisciplinary conferences bring together scientists from different business units and get them talking to each other. Apart from the benefits of direct interaction in the conference setting, the idea is that once the conference is over, the scientists may continue to share ideas, and this will increase knowledge flows within the organization. 3M has many stories of product ideas that were the result of such knowledge flows, including the ubiquitous Post-it Notes, whose inventor, Art Fry, first learned about the adhesive that he would use on the product from a colleague working in another division of 3M, Spencer Silver, who had spent several years shopping his adhesive around 3M.²⁷

Knowledge networks alone may not be sufficient to achieve coordination if subunit managers persist in pursuing subgoals that are at variance with firmwide goals. For a

knowledge network to function properly—and for a formal matrix structure to work as well—managers must share a strong commitment to the same goals. To appreciate the nature of the problem, consider again the case of Manager B and Manager F. As before, Manager F hears about Manager B's problem through the network. However, solving Manager B's problem would require Manager F to devote considerable time to the task. Insofar as this would divert Manager F away from his regular tasks—and the pursuit of subgoals that differ from those of Manager B—he may be unwilling to do it. Thus, Manager F may not call Manager B, and the informal network would fail to provide a solution to Manager B's problem.

To eliminate this flaw, an organization's managers must adhere to a common set of norms and values that override differing subunit orientations.²⁸ In other words, the firm must have a strong organizational culture that promotes teamwork and cooperation. When this is the case, a manager is willing and able to set aside the interests of his own subunit when doing so benefits the firm as a whole. If Manager B and Manager F are committed to the same organizational norms and value systems, and if these organizational norms and values place the interests of the firm as a whole above the interests of any individual subunit, Manager F should be willing to cooperate with Manager B on solving her subunit's problems.

12-4 ORGANIZATION CONTROLS AND INCENTIVES

One critical management task is to control an organization's activities. Controls are an integral part of an enterprise's organizational architecture. They are necessary to ensure that an organization is operating efficiently and effectively, and in a manner that is consistent with its intended strategy. Without adequate controls, *control loss* occurs and the organization's performance will suffer.

12-4a Control Systems

Control can be viewed as the process through which managers *regulate* the activities of individuals and units so that they are consistent with the goals and standards of the organization.²⁹ A **goal** is a desired future state that an organization attempts to realize. A **standard** is a performance requirement that the organization is meant to attain on an ongoing basis. Managers can regulate the activities of individuals and units in several different ways to assure that they are consistent with a firm's goals and standards. Before considering these, we need to review the workings of a typical control system. As illustrated in Figure 12.8, this system has five main elements; establishing goals and standards, measuring performance, comparing performance against goals and standards, taking corrective action, and/or providing reinforcement.³⁰

Most organizations operate with a hierarchy of goals. In the case of a business enterprise, the major goals at the top of the hierarchy are normally expressed in terms of profitability and profit growth. These major goals are typically translated into subgoals that can be applied to individuals and units within the organization. A **subgoal** is an *objective*, the achievement of which helps the organization attain or exceed its major

control

The process through which managers regulate the activities of individuals and units so that they are consistent with the goals and standards of the organization.

goal

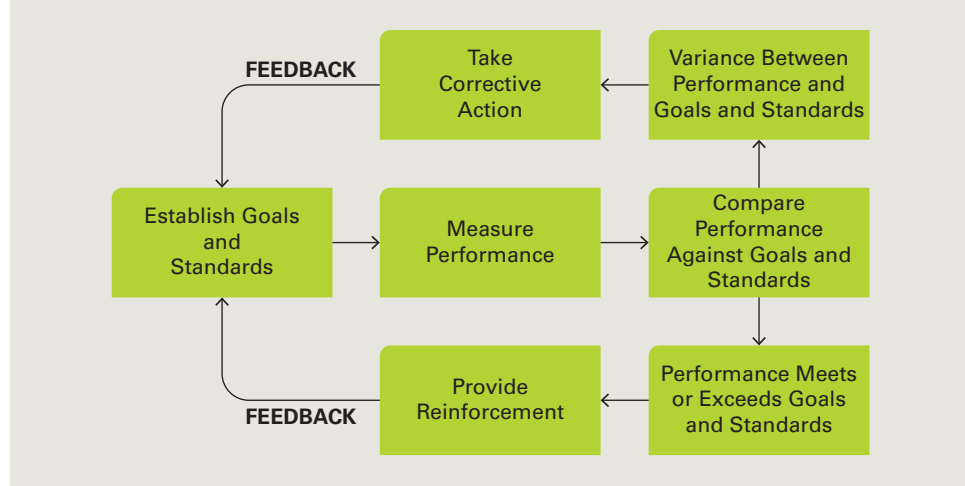
A desired future state that an organization attempts to realize.

standard

A performance requirement that the organization is meant to attain on an ongoing basis.

subgoal

An objective, the achievement of which helps the organization attain or exceed its major goals.

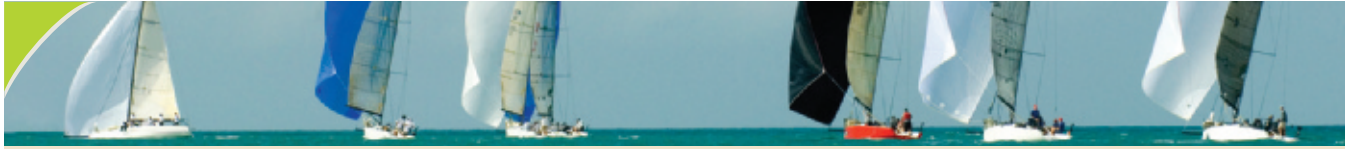
Figure 12.8 A Typical Control System

goals. Goals and subgoals should be precise, measurable, address important issues, be challenging but realistic, and specify a time period.

To illustrate the concept of a goal hierarchy, suppose that the retailer Nordstrom has a goal of attaining a 15% return on invested capital (ROIC) in the coming year. This is the company's major profitability goal. One way of achieving it is to reduce the amount of capital needed to generate a dollars' worth of sales, and a good way of doing that is to reduce the amount of capital that Nordstrom has tied up in inventory. How does the company do that? By turning over inventory more rapidly. Thus, Nordstrom might operate with a subgoal of turning over inventory five times in the next year. If it hits that subgoal, which is precise, measurable, challenging, and has to be achieved within a prespecified time period, the company's profitability, measured by ROIC, will increase. In fact, as explained in Strategy in Action 12.2, Nordstrom has done something very much along these lines.

Standards are similar to goals but tend to be objectives that the organization is expected to achieve as a part of its routine operations, rather than a challenging goal it is striving to attain. For example, an organization might operate with standards specifying that vendors should be paid within 30 days of submitting an invoice, that customer inquiries should be answered within 24 hours, that all employees should have a formal performance review and be given written feedback once a year, that safety checks should be performed on production equipment every six months, or that employees should fly coach when traveling on business trips.

A key element in the control process is generating the right goals, subgoals, and standards. Managers need to choose goals and standards carefully to avoid motivating the wrong behavior. There is a saying, "You get what you measure." If you chose the wrong goals and standards, you get the wrong behavior. Dysfunctional controls will generate dysfunctional behavior. A few years ago, a placement agency decided to start evaluating and rewarding its staff based on how many job seekers they sent to a job interviews. This productivity measure seemed to produce the desired results; over the next few months; more job seekers got interviews. However, after a while the numbers started to drop off quite alarmingly. When management looked into the issue, they



12.2 STRATEGY IN ACTION

Goal Setting and Controls at Nordstrom

A few years ago, Nordstrom, the venerable, high-end department store, was facing some challenges. Despite industry-leading sales per square foot, profits had fallen short of the company's goals for 3 years in a row and were down some 35%. The root of the problem was that poor inventory controls meant that Nordstrom either had too much merchandise that was in low demand, or too little of the merchandise that consumers wanted. To get rid of excess inventory, Nordstrom held frequent sales, marking down items and selling them at a lower profit margin. Moreover, the failure to stock popular items meant that Nordstrom was losing high-margin sales.

To correct this problem, Nordstrom revamped its inventory-control systems. The company invested heavily in information technology so that it could track its inventory on a real-time basis. It also built electronic links

to provide suppliers with visibility of what was selling at Nordstrom and what the reorder pattern would be, so the suppliers could adjust their production schedules accordingly. The goal was to stock only what consumers demanded by having inventories delivered to stores on an as-needed basis. To measure the success of this program, Nordstrom focused on two metrics—inventory turnover and average inventory per square foot of selling space. When the company began to implement these systems, it was turning over its inventory 3.73 times a year, and on average throughout the year had \$60 of inventory for every square foot of selling space in a store. Three years later, as a result of better inventory controls, inventory was turning over 4.51 times a year, and the company held \$52.46 of inventory for every square foot of selling space. Due to improved operating efficiency, net profits tripled over this time period.³¹

Sources: J. Batsell, "Cost Cutting, Inventory Control Help Boost Nordstrom's Quarterly Profit," *Knight Ridder Tribune News*, February 22, 2002, p. 1; Nordstrom's 2004 10K statement.

found that several prospective employers would no longer interview people referred to them by the placement agency. The problem: In an effort to hit their numbers, staff members had been sending people to interview for jobs for which they were not qualified. This had damaged the reputation of the placement agency among prospective employers, and led to a fall-off in business for the agency—the opposite of what managers had been trying to achieve. Managers subsequently changed the measure to reflect the number of job seekers who were actually hired.

The next step in the control process is to compare actual performance against goals and standards. If performance is in line with goals or standards, that is good. However, the point made earlier still holds: Management needs to make sure that the reported performance is being achieved in a manner that is consistent with the values of the organization. If reported performance falls short of goals and standards, management needs to start digging to find out the reason for the variance. This typically requires collecting more information, much of which might be qualitative data gleaned from face-to-face meetings and detailed probing to get behind the numbers. The same is true if reported performance *exceeds* goals or standards. Management needs to find out the reason for such favorable variance, and doing so requires collecting more information.

Variances from goals (and standards) require that managers take corrective action. When actual performance easily exceeds the goal, corrective action might include raising the goal. When actual performance falls short of the goal, depending on what further investigation reveals, management might make changes in strategy, operations, or personnel. Radical adjustment is not always the appropriate response when an organization fails to hit a major goal. Investigation might reveal that the original goal was too aggressive, or that changes in market conditions outside the control of management accounted for the poor performance. In such cases, the response to a shortfall might be to adjust the goal downward.

If the goals and standards are met, or exceeded, management needs to provide timely, positive reinforcement to those responsible. This can run from congratulations for a job well done, to awards, pay increases, bonuses, and enhanced career prospects for those responsible. Providing positive reinforcement is every bit as important an aspect of a control system as is taking corrective action. Behavioral scientists have long known that positive reinforcement increases the probability that those being acknowledged will continue to pursue the rewarded behavior in the future.³² Without positive reinforcement, people become discouraged, feel underappreciated, may not be willing to work as hard, and might look for other employment opportunities where they are better appreciated.

12-4b Methods of Control

There are several main ways of achieving control within an organization including personal controls, bureaucratic controls, output controls, incentive controls, market controls, and control through culture (which we consider in the next section on organizational culture).³³

personal control

Control by personal contact with and direct supervision of subordinates.

Personal Controls As the term suggests, **personal control** is control by personal contact with and direct supervision of subordinates. Personal control consists of making sure, through personal inspection and direct supervision, that individuals and units behave in a way that is consistent with the goals of the organization. Personal control can be very subjective, with the manager assessing how well subordinates are performing by observing and interpreting their behavior. As an overarching philosophy for control within an organization, personal control tends to be found primarily in small firms where the activities of a few people might be regulated through direct oversight. By its very nature, personal control tends to be associated with the centralization of power and authority in a key manager, who is often the owner of the small business. Personal control may work best when this key manager is a charismatic individual who can command the personal allegiance of subordinates.

Personal control has several serious limitations. For one thing, excessive supervision can be demotivating. Employees may resent being closely supervised and may perform better if given a greater degree of personal freedom. Moreover, the subjective nature of personal control can lead to a feeling that there is a lack of objectivity and procedural justice in the performance review process. Subordinates may feel that favoritism, personal likes and dislikes, and individual idiosyncrasies may be as important in performance reviews as actual performance. Personal control is also costly in that managers must devote considerable time and attention to the direct supervision of subordinates, which takes their attention away from

other important issues. The real Achilles heel of personal control, however, is that it starts to break down as an overarching control philosophy when an organization grows in size and complexity. As this occurs, the key manager has no choice but to decentralize decision making to others within the hierarchy if the enterprise is to continue growing. Doing so effectively requires the adoption of different control philosophies.

Bureaucratic Control **Bureaucratic control** is defined as control through a formal system of written rules and procedures.³⁴ As a strategy for control, bureaucratic control methods rely on prescribing what individuals and units can and cannot do; that is, on establishing bureaucratic standards. At the University of Washington, for example, there is a bureaucratic standard specifying that faculty members can perform no more than 1 day a week of outside work. Other standards articulate the steps to be taken when hiring faculty and promoting faculty, purchasing computer equipment for faculty, and so on.

bureaucratic control

Control through a formal system of written rules and procedures.

Almost all organizations use bureaucratic controls. Familiar examples are budgetary controls and controls over capital spending. Budgets are essentially a set of rules for allocating an organization's financial resources. A subunit's budget specifies with some precision how much the unit may spend, and how that spending should be allocated across different areas. Senior managers in an organization use budgets to control the behavior of subunits. For example, an R&D budget might specify how much cash an R&D unit may spend on product development in the coming year. R&D managers know that if they spend too much on one project, they will have less to spend on other projects, so they modify their behavior to stay within the budget. Most budgets are set by negotiation between headquarters management and subunit management. Headquarters management can encourage the growth of certain subunits and restrict the growth of others by manipulating their budgets.

Although the term "bureaucratic" often has negative connotations, bureaucratic control methods can be very useful in organizations. They allow managers to decentralize decision making within the constraints specified by formal rules and procedures. However, too great a reliance on bureaucratic rules can lead to problems. Excessive formal rules and procedures can be stifling, limiting the ability of individuals and units to respond in a flexible way to specific circumstances. This can result in poor performance and sap the motivation of those who value individual freedom and initiative. As such, extensive bureaucratic control methods are not well suited to organizations facing dynamic, rapidly changing environments, or to organizations that employ skilled individuals who value autonomy. The costs of monitoring the performance of individuals and units to make sure that they comply with bureaucratic rules can also be significant and may outweigh the benefits of establishing extensive rules and standards.

Bureaucratic standards can also lead to unintended consequences if employees try to find ways around rules that they think are unreasonable. An interesting and controversial case in point concerns rules on forced school busing in the United States. In the 1970s, school districts around America started to bus children to schools outside of their immediate neighborhood in order to achieve a better racial mix. This well-intentioned bureaucratic rule was designed to speed racial integration in a society characterized by significant racial discrimination. Unfortunately, the rule had unintended consequences. Parents of all races objected to their children being bused to distant schools in order to comply with a bureaucratic rule. In many large cities where

forced busing was practiced, white families with children responded by fleeing to the suburbs, where there were few minorities and busing was not practiced, or by sending their children to expensive, private schools within the city. The result: Far from advancing racial integration, busing had the opposite effect. A case in point was Seattle, where the percentage of white students in city schools dropped from 60 to 41% over the 20 years during which forced busing was enforced.³⁵ In the 1990s, most school districts ended forced busing.

Output Controls Output controls can be used when managers can identify tasks that are complete in the sense of having a measurable output or meeting a criterion of overall achievement.³⁶ For example, the overall achievement of an automobile factory might be measured by the number of employee hours it takes to build a car (a measure of productivity) and the number of defects found per 100 cars produced by the factory (a measure of quality). Nordstrom measures the overall achievement of the unit responsible for inventory management by the number of inventory turns per year. FedEx measures the “output” of each of its local stations in its express delivery network by the percentage of packages delivered before 10:30 a.m. In a multibusiness company such as GE or 3M, senior management might measure the “output” of a product division in terms of that division’s profitability, profit growth, and market share.

output controls

Setting goals for units or individuals and monitoring performance against those goals.

When complete tasks can be identified, **output controls** involve setting goals for units or individuals, and monitoring performance against those goals. The performance of unit managers is then judged by their ability to achieve the goals.³⁷ If goals are met or exceeded, unit managers will be rewarded (an act of reinforcement). If goals are not met, senior management will normally intervene to find out why and take corrective action. Thus, as in a classic control system, control is achieved by comparing actual performance against targets, providing reinforcement, and intervening selectively to take corrective action.

The goals assigned to units depend on the unit’s role in the firm. Self-contained product divisions are typically given goals for profitability and profit growth. Functions are more likely to be given goals related to their particular activity. Thus, R&D will be given product development goals, production will be given productivity and quality goals, marketing will be given market-share goals, and so on.

The great virtue of output controls is that they facilitate decentralization and give individual managers within units much greater autonomy than either personal or bureaucratic controls. This autonomy enables managers within a unit to configure their own work environment in a way that best matches the particular contingencies they face, rather than having a work environment imposed upon them from above. Thus, output controls are useful when units have to respond rapidly to changes in the markets they serve. Output controls also involve less extensive monitoring than either bureaucratic or personal controls. Senior managers can achieve control by comparing actual performance against targets and intervening selectively. As such, they reduce the workload on senior executives and allow them to manage a larger, more diverse organization with relative ease. Thus, many large, multiproduct, multinational enterprises rely heavily upon output controls to manage their various product divisions and foreign subsidiaries.

Output controls have limitations. Senior managers need to look behind the numbers to make sure that unit managers are not only achieving goals but are doing so in a way that is consistent with the values of the organization. Managers also need to

make sure that they choose the right criteria to measure output. Failure to select the right criteria might result in dysfunctional behavior. Moreover, output controls do not always work well when extensive interdependencies exist between units.³⁸

The performance of a unit may be ambiguous if it is based upon cooperation with other units. For example, if the performance of a unit is declining, it may be because of poor management within that unit, or it may be because a unit with which it is cooperating is not doing its part. In general, interdependence between units within an organization can create performance ambiguities that make output controls more difficult to interpret. Resolving these ambiguities requires managers to collect more information, which places more demands on top management and raises the monitoring costs associated with output controls. It also increases the possibility that managers will become overloaded with information and, as a result, make poor decisions.

Market Controls **Market controls** involve regulating the behavior of individuals and units within an enterprise by setting up an *internal market* for valuable resources such as capital.³⁹ Market controls are usually found within diversified enterprises organized into product divisions, where the head office might act as an internal investment bank, allocating capital funds between the competing claims of the different product divisions based upon an assessment of their likely future performance. Within this internal market, all cash generated by the divisions is viewed as belonging to the head office. The divisions have to compete for access to the capital resources controlled by the head office. Insofar as they need that capital to grow their divisions, the assumption is that this internal competition will drive divisional managers to find ways to improve the efficiency of their units. One of the first companies in the world to establish an internal capital market was Japanese electronics manufacturer Matsushita, which introduced such a system in the 1930s.⁴⁰

market controls

The regulation of the behavior of individuals and units within an enterprise by setting up an internal market for valuable resources such as capital.

In addition, in some enterprises divisions compete with each other for the right to develop and sell new products. Again, Japan's Matsushita has a long history of letting different divisions develop similar new products, and then assigning overall responsibility for producing and selling the product to the division that seems to be furthest along in the commercialization process. While some might view such duplication of product development effort as wasteful, Matsushita's legendary founder, Konosuke Matsushita, believed that the creation of an internal market for the right to commercialize technology drove divisional managers to maximize the efficiency of product development efforts within their unit. Similarly, within Samsung, the Korean electronics company, senior management will often set up two different teams within different units to develop new products such as memory chips. The purpose of the internal competition between the two teams is to accelerate the product development process, with the winning team earning significant accolades and bonuses.⁴¹

The main problem with market controls is that fostering internal competition between divisions for capital and the right to develop new products can make it difficult to establish cooperation between divisions for mutual gain.⁴² If two different divisions are racing against each other to develop very similar new products, and are competing against each other for limited capital resources, they may be unwilling to share technological knowhow with each other, perhaps to the detriment of the entire corporation. Companies like Samsung deal with

this problem by using integrating mechanisms such as liaison role, and by assigning the responsibility for leveraging technological knowhow across divisions to key individuals.

Incentives Control Incentives are the devices used to encourage and reward appropriate employee behavior. Many employees receive incentives in the form of annual bonus pay. Incentives are usually closely tied to the performance metrics used for output controls. For example, setting targets linked to profitability might be used to measure the performance of a subunit such as a product division. To create positive incentives for employees to work hard to exceed those targets, they may be given a share of any profits over above those targeted. If a subunit has set a goal of attaining a 15% ROIC and actually attains a 20% return, unit employees may be given a share in the profits generated in excess of the 15% target in the form of bonus pay.

The idea is that giving employees incentives to work productively reduces the need for other control mechanisms. Control through incentives is designed to facilitate *self-control*. Employees regulate their own behavior in a manner consistent with organizational goals in order to maximize their chance of earning incentive-based pay. Although paying out bonuses and the like costs the organization money, well-designed incentives pay for themselves. That is, the increase in performance due to incentives more than offsets the costs of financing them.

The type of incentive used may vary depending on the employees and their tasks. Incentives for employees working on the factory floor may be very different from the incentives for senior managers. The incentives must be matched to the type of work being performed. The employees on the factory floor of a manufacturing plant may be broken into teams of 20 to 30 individuals, and they may have their bonus pay tied to the ability of their team to hit or exceed targets for output and product quality. In contrast, the senior managers of the plant may be rewarded according to metrics linked to the output of the entire operation. The basic principle is to make sure the incentive scheme for an individual employee is linked to an output target that he or she has some control over and can influence. Individual employees on the factory floor may not be able to exercise much influence over the performance of the entire operation, but they can influence the performance of their team, so their incentive pay is tied to output at this level.

When incentives are tied to team performance, as is often the case, they have the added benefit of encouraging cooperation between team members and fostering a degree of peer control. **Peer control** occurs when employees pressure others within their team or work group to perform up to or in excess of the expectations of the organization.⁴³ Thus, if the incentive pay of a 20-person team is linked to team output, members can be expected to pressure those in the team who are perceived as slacking off and freeloading on the efforts of others, urging them to pick up the pace and make an equal contribution to team effort. Well-functioning peer control within an organization reduces the need for direct supervision of a team and can facilitate attempts to move toward a flatter management hierarchy.

In sum, incentives can reinforce output controls, induce employees to practice self-control, increase peer control, and lower the need for other control mechanisms. Like all other control methods discussed here, controls through incentives have limitations. Because incentives are typically linked to the metrics used in output controls, the points made with regard to output controls also apply here. Specifically,

peer control

The pressure that employees exert on others within their team or work group to perform up to or in excess of the expectations of the organization.

managers need to make sure that incentives are not tied to output metrics that result in unintended consequences or dysfunctional behavior.

12-5 ORGANIZATIONAL CULTURE

Organizational culture refers to the values, norms, and assumptions that are shared among employees of an organization. By **values** we mean abstract ideas about what a group believes to be good, right, and desirable. Put differently, values are shared assumptions about how things ought to be. By **norms**, we mean social rules and guidelines that prescribe the appropriate behavior in particular situations.

Culture can exert a profound influence on the way people behave within an organization, on the decisions that are made, on the things that the organization pays attention to, and ultimately, on the firm's strategy and performance.

An organization's culture has several sources. There seems to be wide agreement that founders or important leaders can have a profound impact on organizational culture, often imprinting their own values upon it. In addition, the culture of an enterprise can be shaped by landmark events in its history. Culture is maintained and transmitted over time through formal and informal socialization mechanisms. These include hiring practices, procedures regarding rewards, pay, and promotions, and the informal rules of behavior that employees are expected to adopt if they want to fit in and succeed within the organization.⁴⁴

Microsoft, for example, has a strong culture that was influenced by the company's founder and long-time CEO, Bill Gates. Gates always placed a high value on technical brilliance, competitiveness, and a willingness to work long hours—something that he himself did. Gates hired and promoted people who shared these characteristics, and he led by example. He also had a tendency to dismiss the opinions of people who lacked technical brilliance. Talented engineers often “walked taller” within Microsoft, and they had a disproportionate impact on strategic decisions. The employees who gained Gates's confidence themselves hired and promoted individuals who were technically strong, competitive, and hardworking. The culture of the company was thus transmitted and enforced throughout the organization. As a result, Microsoft became a company where technical brilliance, competitiveness, and working long hours were highly valued attributes of behavior. New employees were socialized into these norms by coworkers who themselves had been similarly socialized.

History also shaped the culture at Microsoft. Most notably, it took three versions and 6 years before sales of Windows started to take off with the introduction of Windows 3.1 (Windows 1.0 and 2.0 did not do well). The lesson that Microsoft gained from this was that persistence can pay off. “We will get it right by version 3” is a phrase that is still used frequently at Microsoft. This culturally embedded value influences strategic decisions regarding investments such as Microsoft's long-running commitment to its money-losing Bing search business. Reflecting the culture of Microsoft, many employees believe that if they stick with it, Bing will eventually turn profitable.

Culture as a Control Mechanism Given that organizational culture shapes behavior, culture can be viewed as a control mechanism that mandates expected behaviors.

values

The ideas or shared assumptions about what a group believes to be good, right, and desirable.

norms

Social rules and guidelines that prescribe the appropriate behavior in particular situations.

At Microsoft, under the leadership of Gates, staff worked long hours not because bureaucratic rules told them to do so, and not because supervisors explicitly required them to do so, but because that was the cultural norm. In this sense, culture shaped behavior, thereby reducing the need for bureaucratic and personal controls. The company could trust people to work hard and behave in a competitive manner because those norms were such a pervasive aspect of the culture.

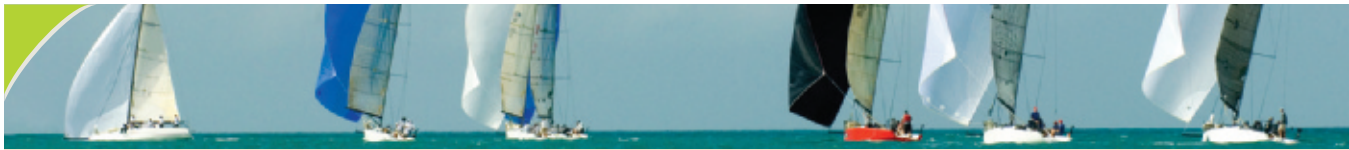
Although cultural controls can mitigate the need for other controls, thereby reducing monitoring costs, they are not universally beneficial. Cultural controls can have dysfunctional aspects. The hard-driving, competitive aspect of Microsoft's culture was arguably a contributing factor in the antitrust violations that the company was found to have made in the 1990s (the U.S. Justice Department, which brought the antitrust case against Microsoft in the United States, used as evidence internal e-mails where one senior manager stated that Microsoft would "cut off a competitor's air supply"). Moreover, Microsoft's culture of working long hours clearly had a downside: Many good employees burned out and left the company. In the post-Gates era, the company has become attuned to this. As its workforce has aged and started families, it has become more accommodating, stressing that the output produced is more important than the hours worked.

Implementing Strategy Through Culture Given that culture can have such a profound impact upon the way in which people behave within organizations, it is important for managers to get culture right. The right culture can help a company execute its strategy; the wrong culture can hinder strategy execution.⁴⁵ In the 1980s, when IBM was performing very well, several authors sang the praises of its culture, which among other things placed a high value on consensus-based decision making.⁴⁶ These authors argued that such a decision-making process was appropriate given the substantial financial investments that IBM routinely made in new technology. However, this process turned out to be a weakness in the fast-moving computer industry of the late 1980s and 1990s. Consensus-based decision making was slow, bureaucratic, and not particularly conducive to corporate risk taking. While this was fine in the 1970s, IBM needed rapid decision making and entrepreneurial risk taking in the 1990s, but its culture discouraged such behavior. IBM was outflanked by then-small enterprises such as Microsoft, almost went bankrupt, and went through a massive change to shift its organizational culture.

One academic study concluded that firms that exhibited high performance over a prolonged period tended to have strong but adaptive cultures. According to this study, in an adaptive culture most managers care deeply about and value customers, stockholders, and employees. They also strongly value people and processes that create useful change in a firm.⁴⁷ While this is interesting, it does reduce the issue to a very high level of abstraction; after all, what company would say that it doesn't care deeply about customers, stockholders, and employees? A somewhat different perspective is to argue that the culture of the firm must match the rest of its architecture, its strategy, and the demands of the competitive environment for superior performance to be attained. All these elements must be consistent with each other. Lincoln Electric provides a useful example (see Strategy in Action 12.3). Lincoln competes in a business that is very competitive, where cost minimization is a key source of competitive advantage. Its culture and incentive systems both encourage employees to strive for high levels of productivity, which translates into the low costs that are critical for its success. These aspects of Lincoln's organizational architecture are aligned with its low-cost strategy.

12-6 ORGANIZATION PROCESSES

Processes, defined as the manner in which decisions are made and work is performed within an organization,⁴⁸ are found at many different levels within an organization. There are processes for formulating strategy, allocating resources, evaluating new-product ideas, handling customer inquiries and complaints for improving product quality, evaluating employee performance, and so on. Often, a firm's core competencies or valuable, knowledge-based resources are embedded in its processes. Efficient, effective processes can lower the costs of value creation and add additional value to a product. For example, the global success of many Japanese manufacturing enterprises in the 1980s was based



12.3 STRATEGY IN ACTION

Organizational Culture at Lincoln Electric

Lincoln Electric is one of the leading companies in the global market for arc welding equipment. Lincoln's success has been based on extremely high levels of employee productivity. The company attributes its productivity to a strong organizational culture and an incentive scheme based on piecework. Lincoln's organizational culture dates back to James Lincoln. Lincoln had a strong respect for the ability of the individual and believed that, correctly motivated, ordinary people could achieve extraordinary performance. He emphasized that Lincoln should be a meritocracy where people were rewarded for their individual effort. Strongly egalitarian, Lincoln removed barriers to communication between "workers" and "managers," practicing an open-door policy. He made sure that all who worked for the company were treated equally; for example, everyone ate in the same cafeteria, there were no reserved parking places for "managers," and so on. Lincoln also believed that gains in productivity should be shared with consumers in the form of lower prices, with employees in the form of higher pay, and with shareholders in the form of higher dividends.

The organizational culture that grew out of Lincoln's beliefs was reinforced by the company's incentive

system. Production workers receive no base salary but are paid according to the number of pieces they produce. The piecework rates at the company enable an employee working at a normal pace to earn an income equivalent to the average wage for manufacturing workers in the area where a factory is based. Workers have responsibility for the quality of their output and must repair defects spotted by quality inspectors before the pieces are included in the piecework calculation. Production workers are awarded a semiannual bonus based on merit ratings. These ratings are based on objective criteria (such as an employee's level and quality of output) and subjective criteria (such as an employee's attitudes toward cooperation and his or her dependability). These systems give Lincoln's employees an incentive to work hard and generate innovations that boost productivity, for doing so influences their level of pay. Lincoln's factory workers have been able to earn a base pay that often exceeds the average manufacturing wage in the area by more than 50%, and they receive a bonus on top of this which, in good years, could double their base pay. Despite high employee compensation, its workers are so productive that Lincoln has a lower cost structure than its competitors.⁴⁹

Sources: J. O'Connell, "Lincoln Electric: Venturing Abroad," Harvard Business School Case No. 9-398-095, April 1998; www.lincolnelectric.com.

in part on their early adoption of processes for improving product quality and operating efficiency, including total quality management and just-in-time inventory systems. Today, the competitive success of General Electric can in part be attributed to a number of processes that have been widely promoted within the company. These include the company's Six Sigma process for quality improvement, its process for "digitalization" of business (using corporate intranets and the Internet to automate activities and reduce operating costs), and its process for idea generation, referred to within the company as "workouts," where managers and employees gather for intensive sessions over several days to identify and commit to ideas for improving productivity.

An organization's processes can be summarized by means of a flow chart, which illustrates the various steps and decision points involved in performing work. A detailed consideration of the nature of processes and strategies for process improvement and reengineering is beyond the scope of this book. However, it is important to make two basic remarks about managing processes, particularly in the context of an international business.⁵⁰

First, many processes cut across functions, or divisions, and require cooperation between individuals in different subunits. For example, product development processes require employees from R&D, manufacturing, and marketing to work in a cooperative manner to make sure new products are developed with market needs in mind and designed in such a way that they can be manufactured at a low cost. Because they cut across organizational boundaries, performing processes effectively often require the establishment of formal integrating mechanisms and incentives for cross-unit cooperation.

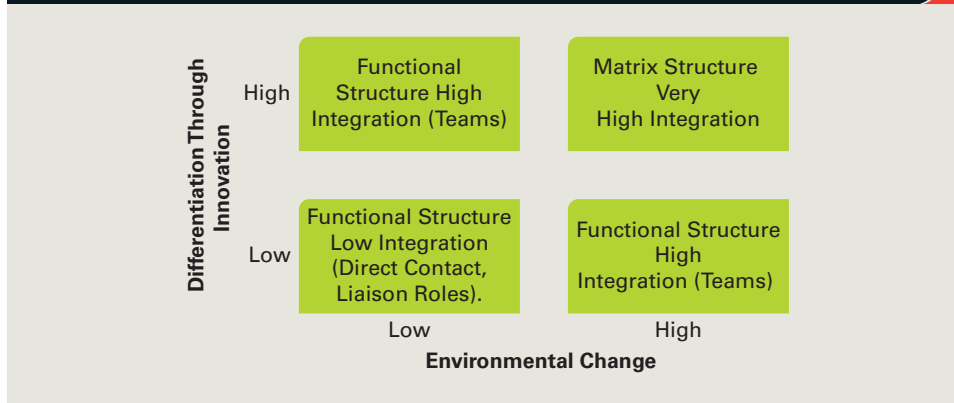
Second, it is particularly important for an enterprise to recognize that valuable new processes that might lead to a competitive advantage can be developed anywhere within the organization's network of operations.⁵¹ Valuable and rare new processes may be developed within a team, function, product division, or foreign subsidiary. Those processes might then be valuable to other parts of the enterprise. The ability to create valuable processes matters, but it is also important to leverage those processes, and this requires both formal and informal integrating mechanisms such as knowledge networks.

12-7 IMPLEMENTING STRATEGY THROUGH ORGANIZATIONAL ARCHITECTURE

We are now in a position to make observations about the kind of organizational arrangements required to implement different strategies. Rather than construct an exhaustive list, we will focus on a limited number of business- and corporate-level strategies. We start by considering strategy and organization within the single-business firm. Then we look at strategy and organization within the diversified firm.

12-7a Strategy and Organization in the Single-Business Enterprise

As noted earlier, single-business enterprises are typically organized along functional lines (see Figure 12.3). However, the need for integration between functions will vary depending upon (1) the business-level strategy of the firm, and (2) the nature of the environment in which the firm competes (see Figure 12.9).

Figure 12.9 Strategy, Environment, and Organization

Strategy, Environment, and the Need for Integration In general, the need for integration between functions is greater for firms that are competing through product development and innovation.⁵² This is typically the case when an organization's business-level strategy involves differentiation through the introduction of new and/or improved product offerings. Apple, Google, Ford, Microsoft, Tesla, and Toyota, for example, all try to differentiate themselves through product development and innovation. As discussed earlier, in such organizations there is an ongoing need to coordinate the R&D, production, and marketing functions of the firm to ensure that (1) new products are developed in a timely manner, (2) that they can be efficiently produced and delivered, and (3) that they match consumer demands. We saw that a matrix structure is one way of achieving such coordination (see Figure 12.5). Another, more common, solution is to form temporary teams to oversee the development and introduction of a new product. Once the new product has been introduced, the team is disbanded and employees return to their functions or move to another team.

Firms that face an uncertain, highly turbulent, competitive environment, where rapid adaptation to changing market conditions is required, need coordination in order to survive.⁵³ Environmental change, such as that which occurs when an industry is disrupted by radical innovations, may require a change in product, process, business model, and strategy. In such cases, it is critical to make sure that the different functions of the firm all pull in the same direction, so that the firm's response to a changing environment is coherent and organizationwide. Temporary teams are often used to effect such coordination.

For example, in the mid-1990s, the World Wide Web emerged with stunning speed and in a way that almost no one anticipated. The rise of the Web produced a profound change in the environment facing computer software firms such as Microsoft, where managers quickly shifted their strategy so as to make their products Web enabled, and position their marketing and sales activities to compete in this new landscape. This shift required very tight coordination between different software engineering groups, such as those working on the software code for Windows, Office and MSN, so that all products not only were Web enabled but also worked seamlessly with each other. Microsoft achieved this by forming cross-functional teams.

In addition to using formal integrating mechanisms such as cross-functional teams, firms with a crucial need for coordination between subunits—for instance, those based in turbulent, high-tech environments—would do well to foster informal knowledge networks, for they too can facilitate coordination between subunits.

In contrast, if the firm is based in a stable environment characterized by little or no change, and if developing new products is not a central aspect of the firm's business strategy, the need for coordination between functions may be less. In such cases, a firm may be able to function with basic integrating mechanisms such as direct contact or simple liaison roles. These mechanisms, coupled with a strong culture that encourages employees to pursue the same goals, and to cooperate with each other for the benefit of the entire organization, may be all that is required to achieve coordination between functions. Wal-Mart and Costco, for example, utilize basic integrating mechanisms such as liaison roles.

Integration and Control Systems: Low Integration The extent of integration required to implement a strategy has an important impact upon the control systems that management can use. Consider a firm with a functional structure where there are no integrating mechanisms between functions beyond direct contact and simple liaison roles. The environment facing the firm is stable, so the need for integration is minimal. Within such a firm, *bureaucratic controls* in the form of budgets are used to allocate financial resources to each function and control spending by the functions. *Output controls* will then be used to assess how well a function is performing. Different functions will be assigned different output targets, depending on their specific tasks. The procurement function might be assigned an output target based on procurement costs as a percentage of sales; a manufacturing function might be given productivity and product quality targets such as output per employee and defects per thousand products; the logistics function might be given an inventory turnover target; the marketing and sales function might be given sales-growth and market-share goals; and the success of the service function might be measured by the time it takes to resolve a customer problem. To the extent that each function hits these targets, the overall performance of the firm will improve and its profitability increase.

Output controls might also be pushed further down within functions. A production process might be subdivided into discrete tasks, each of which has a measurable output. Employee teams might be formed and empowered to take ownership over each discrete task. Each team will be assigned an output target. To the extent that functions can be divided into teams, and output controls applied to those teams, this will facilitate (1) decentralization within the organization, (2) wider spans of control (because it is relatively easy to control a team by monitoring its outputs, as opposed to regulating behavior through bureaucratic rules), and (3) a flatter organization structure.

Within such a structure, the CEO will monitor the functional heads. They in turn will exercise control over units or teams within their function. There may also be some degree of *personal control*, with the CEO using personal supervision to influence the behavior of functional heads; they in turn do the same for their direct reports. *Incentives* will be tied to output targets. The incentive pay of the head of manufacturing might be linked to the attainment of predetermined productivity and quality targets for the manufacturing function; the incentive pay of the head of logistics might be linked to increases in inventory turnover; the pay of the head of marketing and sales

to gains in market share, and so on. Incentives might also be pushed further down within the organization, with members of teams within functions being rewarded on the basis of the ability of their team to hit or exceed predetermined targets. A portion of the incentive pay for managers—and perhaps all employees—might be tied to the overall performance of the enterprise to encourage cooperation and knowledge sharing within the organization.

Finally, it is possible for such an enterprise to have strong *cultural controls*. Cultural controls may reduce the need for personal controls and bureaucratic rules. Individuals might be trusted to behave in the desired manner because they “buy into” the prevailing culture. Thus, cultural controls might allow the firm to operate with a flatter organization structure and wider spans of control, and generally increase the effectiveness of output controls and incentives, because employees may buy into the underlying philosophy upon which such controls are based.

Integration and Control Systems: High Integration A functional structure where the strategy and/or environment requires a high degree of integration presents managers with a complex control problem. The problem is particularly severe if the firm adopts a matrix structure. As noted earlier, a firm based in a dynamic environment where competition centers on product development might adopt such a structure. Within such an enterprise, *bureaucratic controls* will again be used for financial budgets and, as before, *output controls* will be applied to the different functions. *Output controls* will also be applied to cross-functional product development teams. Thus a team might be assigned output targets covering development time, production costs of the new product, and the features the product should incorporate. For functional managers, *incentive controls* might be linked to output targets for their functions, whereas for the members of a product-development team, incentives will be tied to team performance.

The problem with such an arrangement is that the performance of the product development team is dependent upon the support it gets from the various functions. The support needed includes people and information from production, marketing, and R&D. Consequently, significant performance ambiguity might complicate the process of using output controls to assess the performance of a product development team. **Performance ambiguity** arises when it is difficult to identify with precision the reason for the high (or low) performance of a subunit such as a function or team. In this context, the failure of a cross-functional product development team to hit predetermined output targets might be due to the poor performance of team members, but it could just as well be due to the failure of the functions to provide an appropriate level of support to the team. Senior management cannot determine which explanation is correct simply by observing output controls tied to team performance, because such outputs are not an unambiguous indicator of performance. Identifying the true cause of performance variations requires senior managers to collect information, much of it subjective, which increases the time and energy they must devote to the control process, diverts their attention from other important issues, and hence increases the costs of monitoring and controlling the organization. Other things being equal, this reduces the span of control that senior managers can handle, suggesting the need for a taller hierarchy which, as we saw earlier, gives rise to all kinds of additional problems.

The nature of the performance ambiguity problem in such an enterprise raises the question of whether there is a better solution to the control problem. In fact, there is.

performance ambiguity

The difficulty of identifying with precision the reason for the high (or low) performance of a subunit such as a function or team.

One step is to make sure that the incentives of all key personnel are aligned; that is, to use *incentive controls* in a discriminating way. The classic way of doing this is to tie incentives to a higher level of organization performance. Thus, in addition to being rewarded on the basis of the performance of their function, functional heads might also be rewarded on the basis of the overall performance of the firm. Insofar as the success of product development teams increases firm performance, this gives functional heads an incentive to make sure that the product development teams receive adequate support from the functions. In addition, strong *cultural controls* can be very helpful in establishing companywide norms and values that emphasize the importance of cooperation between functions and teams for their mutual benefit.

12-7b Strategy and Organization in the Multibusiness Enterprise

As discussed earlier, multibusiness enterprises typically organize themselves along divisional lines (see Figure 12.4). Within each division, there will be a functional organization. The extent of integration between functions *within divisions* may differ from division to division depending upon the business-level strategy and the nature of the environment. The need for integration *between divisions*, on the other hand, depends upon the specific corporate strategy the firm is pursuing. This will have an impact not only on the integrating mechanisms used, but also on the type of control and incentive systems employed.⁵⁴

If the firm is pursuing a strategy of related diversification and trying to realize economies of scope by sharing inputs across product divisions, or is trying to boost profitability by transferring or leveraging valuable competencies across divisions, it will have a need for integrating mechanisms to coordinate the activities of the different product divisions. Liaison roles, temporary teams, and permanent teams can all be used to ensure such coordination. On the other hand, if top management is focusing primarily on boosting profitability through superior internal governance, and if each division is managed on a stand-alone basis, with no attempt to leverage competencies or realize economies of scope, as is the case in firms pursuing a strategy of unrelated diversification, the firm may well operate well with minimal or no integrating mechanisms between divisions.

Controls in the Diversified Firm with Low Integration In firms that focus primarily on boosting performance through superior internal governance where the strategy is one of unrelated diversification, the need for integration between divisions is low. Firms pursuing a strategy of unrelated diversification are not trying to share resources or leverage core competencies across divisions, so there is no need for complex integrating mechanisms, such as cross-divisional teams, to coordinate the activities of different divisions. In these enterprises, the head office typically controls the divisions in four main ways.⁵⁵

First, they use *bureaucratic controls* to regulate the financial budgets and capital spending of the divisions. Typically each division will have to have its financial budgets approved for the coming year by the head office. In addition, capital expenditures in excess of a certain amount have to be approved by the head office; for example, any item of spending by a division in excess of \$50,000 might have to be approved by the head office.

Second, the head office will use *output controls*, assigning each division output targets that are normally based on measurable financial criteria such as the profitability,

profit growth, and cash flow produced by each division. Typically targets for the coming year are set by negotiation between divisional heads and senior managers at the head office. As long as the divisions hit their targets, they are left alone to run their own operations. If performance falls short of targets, however, top managers will normally audit a division to discover why this occurred, and take corrective action if necessary by instituting a change in strategy and/or personnel.

Third, *incentive controls* will be used, with the incentives for divisional managers being tied to the financial performance of their divisions. To earn pay bonuses, divisional managers have to hit or exceed the performance targets previously negotiated between the head office and the divisions. To make sure that divisional managers do not try to “talk down” their performance targets for the year, making it easy for them to hit their targets and earn bonuses, the head office will normally benchmark a product division against its competitors, take a close look at industry conditions, and use this information to establish performance targets that are challenging but attainable.

Fourth, the head office will use *market controls* to allocate capital resources between different divisions.⁵⁶ As noted earlier, in multidivisional enterprises the cash generated by product divisions is normally viewed as belonging to the head office, which functions as an internal capital market, reallocating cash flows between the competing claims of different divisions based on an assessment of likely future performance. The competition between divisions for access to capital, which they need to grow their businesses, is assumed to create further incentives for divisional managers to run their operations as efficiently and effectively as possible. In addition, the head office might use market controls to allocate the right to develop and commercialize new products between divisions.

Within divisions, the control systems used will be those found within single-business enterprises. It should also be noticed that head office managers might utilize some *personal controls* to influence the behavior of divisional heads. In particular, the CEO might exercise control over divisional heads by meeting with them on a regular basis and probing them to get rich feedback about the operations of the entity for which they are responsible.

Controls in the Diversified Firm with High Integration The control problem is more complex in diversified firms pursuing a strategy of related diversification where they are trying to improve performance not only through superior internal governance, but also proactively attempting to leverage competencies across product divisions and realize economies of scope. Consider, for example, 3M, a highly diversified enterprise with multiple product divisions. The company devotes great effort trying to leverage core technology across divisions (for instance, by establishing internal knowledge networks). In addition, 3M tries to realize economies of scope, particularly in the areas of marketing and sales, where a marketing and sales division might sell the products of several 3M divisions. More generally, when a multidivisional enterprise tries to improve performance through the attainment of economies of scope, and via the leveraging of core competencies across divisions, the need for integration between divisions is high.

In such organizations, top managers use the standard repertoire of control mechanisms discussed in the last section (e.g., bureaucratic, output, incentive, and market controls). However, in addition, they have to deal with two control problems that are not found in multidivisional firms pursuing a strategy of unrelated diversification

where there is no cooperation and integration between divisions. First, they have to find a control mechanism that induces divisions to cooperate with each other for mutual gain. Second, they need to find a way to deal with the performance ambiguities that arise when divisions are tightly coupled with each other, share resources, and the performance on one cannot be understood in isolation but depends upon how well it cooperates with others.

The solution to both problems is in essence the same as that adopted by single-business firms with high integration between functions. Specifically, the firm needs to adopt incentive controls for divisional managers that are linked to higher-level performance, in this case the performance of the entire enterprise. Insofar as improving the performance of the entire firm requires cooperation between divisions, such incentive controls should facilitate that cooperation. In addition, strong cultural controls can be helpful in creating values and norms that emphasize the importance of cooperation between divisions for mutual gain. At 3M there is a long-established cultural norm that, while products belong to the divisions, the technology underlying those products belongs to the entire company. Thus, the surgical tape business might utilize adhesive technology developed by the office supply business to improve its own products.

Despite such solutions to control problems, there is no question that top managers in firms where divisions are tightly integrated have to deal with greater performance ambiguities than top managers in less complex multidivisional organizations. Integration between various product divisions means that it is hard for top managers to judge the performance of each division just by monitoring objective output criteria. To accurately gauge performance and achieve adequate controls, they probably have to spend time auditing the affairs of operating divisions, and talking to divisional managers to get a comprehensive, qualitative picture of performance than can help them “dig behind” objective output numbers. Other things being equal, this might limit the span of control managers can effectively handle, and thus the scope of the enterprise.⁵⁷

KEY TERMS

organizational architecture 391	vertical differentiation 393	span of control 397	subgoal 407
organizational structure 391	horizontal differentiation 393	influence costs 398	personal control 410
controls 392	integrating mechanisms 393	delaying 399	bureaucratic control 411
incentives 392	centralization 393	functional structure 399	output controls 412
organizational processes 392	decentralization 393	multidivisional structure 401	market controls 413
organizational culture 392	autonomous subunit 395	matrix structure 402	peer control 414
people 392	tall hierarchies 397	knowledge network 405	values 415
	flat hierarchies 397	control 407	norms 415
		goal 407	performance ambiguity 421
		standard 407	

TAKEAWAYS FOR STRATEGIC MANAGERS

1. Strategy is implemented through the organizational architecture of the enterprise.
2. It is useful to think of organizational architecture as a system that encompasses structure, controls, incentives, processes, culture, and human capital.
3. In general, a flat organizational structure where the performance of each subunit is visible, unambiguous, and can be measured by objective output controls is preferable.
4. Implementing strategy may require cooperation between functions and product divisions. The need for cooperation requires integrating mechanisms. Extensive use of integrating mechanisms may lead to performance ambiguity, and may require more complex and varied control mechanisms.
5. At the business level, the need for integrating mechanisms to coordinate functional activities is greater for firms whose business-level strategy requires ongoing product development efforts and product innovation, and for firms based in rapidly changing market environments.
6. At the corporate level, the need for integrating mechanisms to coordinate the activities of different divisions is greater for companies pursuing a strategy of related diversification than for those pursuing a strategy of unrelated diversification.

DISCUSSION QUESTIONS

1. What is the relationship among organizational structure, control systems, incentives, and culture? Give some examples of when and under what conditions a mismatch among these components might arise.
2. What kind of structure best describes the way your (a) business school and (b) university operate? Why is the structure appropriate? Would another structure be better?
3. When would a company choose a matrix structure? What are the problems associated with managing this type of structure? How might these problems be mitigated?
4. What kind of structure, controls, incentives, and culture would you be likely to find in (a) a small manufacturing company based in a stable environment, (b) a high-tech company based in a rapidly changing market, and (c) a Big Four accounting firm?
5. When would a company decide to change from a functional to a multidivisional structure?
6. How would you design structure, controls, incentives, processes, and culture to encourage entrepreneurship in a large, established corporation? How might the desire to encourage entrepreneurship influence your hiring and management development strategy?

CLOSING CASE

Organization Change at Google (Alphabet)

In April 2011, Larry Page, one of Google's two founders, became CEO of the company. Page had been CEO of Google from its establishment in 1998 through 2001, when Eric Schmidt took over.

After 10 years, Schmidt decided to step down and handed the reins back to Page. One of Page's first actions was to reorganize the company into business units.

(continued)

Under Schmidt, Google operated with a functional structure that was split into two main entities—an engineering function and a product management function. The engineering group was responsible for creating, building, and maintaining Google’s products. The product management group focused on selling Google’s offerings, particularly its advertising services. There were, however, two main exceptions to this structure: YouTube and the Android group. These were both acquisitions, and both were left to run their own operations in a largely autonomous manner. Notably, both had been more successful than many of Google’s own internally generated new-product ideas.

The alleged great virtue of Google’s functional structure was that it was flat, with very few layers in the hierarchy and wide spans of control. Innovation was encouraged. Indeed, numerous articles were written about Google’s “bottom-up” new product development process. Engineers were encouraged to spend 20% of their time on projects of their own choosing. They were empowered to form teams to flesh out product ideas, and could get funding to take those products to market by going through a formal process that ended with a presentation in front of Page and Google cofounder Sergey Brin. The products that emerged from this process included Google News, Google Earth, Google Maps, Gmail, and Google Apps.

By 2011, it was becoming increasingly clear that there were limitations to this structure. There was a lack of accountability for products once they had been developed. The core engineers might move on to other projects. Projects could stay in the beta stage for years, essentially unfinished offerings. No one was really responsible for taking products and making them into stand-alone businesses. Many engineers complained that the process for approving new products had become mired in red tape. It was too slow. A structure that had worked well when Google was still a small start-up was no longer scaling. Furthermore, the structure did not reflect the fact that Google had become a multibusiness enterprise, albeit one in which search-based advertising income was still the main driver of the company’s

revenues. Indeed, that in itself was viewed as an issue, for despite creating many new-product offerings, Google was still dependent upon search-based advertising for the bulk of its income.

Page’s solution to this problem was to reorganize Google into seven core business units: Search, Advertising, YouTube, Mobile (Android), Chrome, Social (Google + and Blogger), and Commerce (Google Apps). Senior vice presidents who report directly to Page head each unit. Each VP has full responsibility (and accountability) for the fate of his or her unit. Getting a new product started no longer requires convincing executives from across the company to get on board. And once a product ships, engineers and managers can’t jump to the next thing and leave important products like Gmail in unfinished beta for years. “Now you are accountable not only for delivering something, but for revising and fixing it,” said one Google spokesperson.

In 2015, Google reorganized again. A new corporate entity was created, Alphabet, which functions as a holding company for Google’s core businesses and several “moonshot bets” that the company is pursuing. Under the holding company structure, the Google subsidiary continues to be organized on a divisional basis (which now includes divisions for Internet Search, Google Cloud, YouTube, Android, and Chrome). In addition, as of 2018 there are 11 other subsidiaries that Larry Page refers to as “bets in area that might seem speculative or even strange.”

These businesses have included its self-driving car unit, a robotics unit, an artificial intelligence business, a unit focusing on longevity research, smart home technology maker Nest, and Google ventures (the company’s own venture capital unit). Page argued that the reorganization helped to separate out the core revenue generating businesses from the moonshots, which allowed for greater transparency, particularly for investors. He also stated that the reorganization created a leaner more efficient Alphabet. Currently the Google subsidiary generates 99% of Alphabet’s revenues and all of its profits.

Sources: Miguel Helft, “The Future According to Google’s Larry Page,” *CNNMoney*, January 3, 2013; Liz Gannes, “GoogQuake: The Larry Page Reorg Promotes Top Lieutenants to SVP,” *All Things Digital*, April 7, 2011; Jessica Guynn, “Google CEO Larry

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CASE DISCUSSION QUESTIONS

1. Describe the benefits of Google’s functional structure as it emerged during the early 2000s?
2. What were the limitations of Google’s functional structure? Why did these limitations start to become obvious by 2011?
3. What objective was Larry Page trying to achieve when he reorganized Google in 2011? Do you think he chose the correct organizational form?
4. Why do you think Page created the Alphabet holding company structure in 2015? What are the benefits of this structure? Can you see any drawbacks?

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5

CASES IN STRATEGIC MANAGEMENT

CASES

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Long Cases	Industry Analysis (Ch 2)	Competitive Advantage (Ch 3)	Functional Strategy (Ch 4)	Business level Strategy (Ch 5 & 6)	Technology Strategy (Ch 7)	Global Strategy (Ch 8)	Corporate Strategy (Ch 9 & 10)	Ethics/Social Responsibility (Ch 11)	Implementation through Organization (Ch 12)
Trader Joe's in 2018	Yes	Yes	Yes	Yes					
Small Package Express Delivery Industry, 1973–2018	Yes	Yes	Yes	Yes		Yes			
Airborne Express: The Underdog		Yes	Yes	Yes		Yes			Yes
Charles Schwab	Yes	Yes	Yes	Yes					Yes
Coca-Cola								Yes	
Uber in 2018	Yes	Yes	Yes	Yes		Yes			
Dell Inc (A) —Going Private	Yes	Yes	Yes	Yes	Yes		Yes		
Dell Inc (B) —Transforming the Company	Yes	Yes		Yes	Yes		Yes		
Apple at Fourty		Yes	Yes	Yes	Yes		Yes		Yes
Wal-Mart Stores	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Costco Wholesale Corporation in 2018		Yes	Yes	Yes				Yes	Yes
SpaceX: Disrupting the Space Industry				Yes			Yes		
Alibaba Group: The Rise of a Platform Giant	Yes	Yes		Yes	Yes		Yes		
Ending HIV? Sangamo and Gene Editing		Yes			Yes		Yes		
Tesla Inc. in 2018	Yes	Yes		Yes	Yes		Yes		
Chatukool: Challenges and Opportunities in Frugal Innovation		Yes		Yes				Yes	
IKEA in 2018: Furniture Retailer to the World		Yes	Yes	Yes		Yes			Yes
General Electric		Yes					Yes		Yes
3M: The Innovation Engine		Yes	Yes		Yes	Yes	Yes		Yes
Nike: The Sweatshop Debate 20 Years On						Yes			

Short Cases	Industry Analysis (Ch 2)	Competitive Advantage (Ch 3)	Functional Strategy (Ch 4)	Business level Strategy (Ch 5 & 6)	Technology Strategy (Ch 7)	Global Strategy (Ch 8)	Corporate Strategy (Ch 9 & 10)	Ethics/Social Responsibility (Ch 11)	Implementation through Organization (Ch 12)
Short Cases									
How to Make Money in Newspaper Advertising	Yes	Yes		Yes	Yes				
A Battle for Dominance in Mobile Payments									
The Market for Large Commercial Jet Aircraft	Yes			Yes					
Verizon Wireless: Competitive Advantage		Yes	Yes	Yes					
Amazon.com: Competitive Advantage and Functional Strategy		Yes	Yes	Yes					
Nordstrom: Business Level Strategy		Yes	Yes	Yes					
Procter & Gamble: Evolution of Global Strategy		Yes	Yes			Yes			Yes
JCB in India						Yes	Yes		
Outsourcing and Vertical Integration at Apple		Yes	Yes				Yes		
Citiigroup: The Opportunities and Risks of Diversification							Yes		
HP's Disastrous Acquisition of Autonomy							Yes	Yes	
Organization at Apple									Yes



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INTRODUCTION

ANALYZING A CASE STUDY AND WRITING A CASE STUDY ANALYSIS

WHAT IS CASE STUDY ANALYSIS?

Case study analysis is an integral part of a course in strategic management. The purpose of a case study is to provide students with experience of the strategic management problems that actual organizations face. A case study presents an account of what happened to a business or industry over a number of years. It chronicles the events that managers had to deal with, such as changes in the competitive environment, and charts the managers' response, which usually involved changing the business- or corporate-level strategy. The cases in this book cover a wide range of issues and problems that managers have had to confront. Some cases are about finding the right business-level strategy to compete in changing conditions. Some are about companies that grew by acquisition, with little concern for the rationale behind their growth, and how growth by acquisition affected their future profitability. Each case is different because each organization is different. The underlying thread in all cases, however, is the use of strategic management techniques to solve business problems.

Cases prove valuable in a strategic management course for several reasons. First, cases provide you, the student, with experience of organizational problems that you probably have not had the opportunity to experience firsthand. In a relatively short period of time, you will have the chance to appreciate and analyze the problems faced by many different companies and to understand how managers tried to deal with them.

Second, cases illustrate the theory and content of strategic management. The meaning and implications of this information are made clearer when they are applied to case studies. The theory and concepts help reveal what is going on in the companies studied and allow you to evaluate the solutions that specific companies adopted to deal with their problems. Consequently, when you analyze cases, you will be like a detective who, with a set of conceptual tools, probes what happened and what or who was responsible and then marshals the evidence that provides the solution. Top managers enjoy the thrill of testing their problem-solving abilities in the real world. It is important to remember that no one knows what the right answer is. All that managers can do is to make the best guess. In fact, managers say repeatedly that they are happy if they are right only half the time in solving strategic problems. Strategic management

is an uncertain game, and using cases to see how theory can be put into practice is one way of improving your skills of diagnostic investigation.

Third, case studies provide you with the opportunity to participate in class and to gain experience in presenting your ideas to others. Instructors may sometimes call on students as a group to identify what is going on in a case, and through classroom discussion the issues in and solutions to the case problem will reveal themselves. In such a situation, you will have to organize your views and conclusions so that you can present them to the class. Your classmates may have analyzed the issues differently from you, and they will want you to argue your points before they will accept your conclusions, so be prepared for debate. This mode of discussion is an example of the dialectical approach to decision making. This is how decisions are made in the actual business world.

Instructors also may assign an individual, but more commonly a group, to analyze the case before the whole class. The individual or group probably will be responsible for a 30 to 40 minute presentation of the case to the class. That presentation must cover the issues posed, the problems facing the company, and a series of recommendations for resolving the problems. The discussion then will be thrown open to the class, and you will have to defend your ideas. Through such discussions and presentations, you will experience how to convey your ideas effectively to others. Remember that a great deal of managers' time is spent in these kinds of situations: presenting their ideas and engaging in discussion with other managers who have their own views about what is going on. Thus, you will experience in the classroom the actual process of strategic management, and this will serve you well in your future career.

If you work in groups to analyze case studies, you also will learn about the group process involved in working as a team. When people work in groups, it is often difficult to schedule time and allocate responsibility for the case analysis. There are always group members who shirk their responsibilities and group members who are so sure of their own ideas that they try to dominate the group's analysis. Most of the strategic management takes place in groups, however, and it is best if you learn about these problems now.

ANALYZING A CASE STUDY

The purpose of the case study is to let you apply the concepts of strategic management when you analyze the issues facing a specific company. To analyze a case study, therefore, you must examine closely the issues confronting the company. Most often you will need to read the case several times—once to grasp the overall picture of what is happening to the company and then several times more to discover and grasp the specific problems.

Generally, detailed analysis of a case study should include eight areas:

1. The history, development, and growth of the company over time
2. The nature of the external environment surrounding the company
3. The identification of the company's internal strengths and weaknesses, and whether it has sources of sustainable competitive advantage
4. A SWOT analysis
5. The kind of corporate-level strategy that the company is pursuing
6. The nature of the company's business-level strategy
7. The company's structure and control systems and how they match its strategy
8. Recommendations

To analyze a case, you need to apply the concepts taught in this course to each of these areas. To help you further, we next offer a summary of the steps you can take to analyze the case material for each of the eight points we just noted:

1. *Analyze the company's history, development, and growth.* A convenient way to investigate how a company's past strategy and structure affect it in the present is to chart the critical incidents in its history—that is, the events that were the most unusual or the most essential for its development into the company it is today. Some of the events have to do with its founding, its initial products, how it makes new-product market decisions, and how it developed and chose functional competencies to pursue. Its entry into new businesses and shifts in its main lines of business are also important milestones to consider.
2. *Analyze the external environment.* To identify environmental opportunities and threats, apply all the concepts on industry and macroenvironments to analyze the environment the company is confronting. Of particular importance at the industry level are the Competitive Forces Model, adapted from Porter's Five Forces Model and the stage of the life-cycle model. Which factors in the macroenvironment will appear salient depends on the specific company being analyzed. Use each factor in turn (e.g., demographic factors) to see whether it is relevant for the company in question.

Table 1 A SWOT Checklist

Potential Internal Strengths	Potential Internal Weaknesses
Many product lines?	Obsolete, narrow product lines?
Broad market coverage?	Rising manufacturing costs?
Manufacturing competence?	Decline in R&D innovations?
Good marketing skills?	Poor marketing plan?
Good materials management systems?	Poor material management systems?
R&D skills and leadership?	Loss of customer good will?
Information system competencies?	Inadequate human resources?
Human resource competencies?	Inadequate information systems?
Brand name reputation?	Loss of brand name capital?
Portfolio management skills?	Growth without direction?
Cost of differentiation advantage?	Bad portfolio management?
New-venture management expertise?	Loss of corporate direction?
Appropriate management style?	Infighting among divisions?
Appropriate organizational structure?	Loss of corporate control?

Potential Internal Strengths	Potential Internal Weaknesses
Appropriate control systems?	Inappropriate organizational structure and control systems?
Ability to manage strategic change?	High conflict and politics?
Well-developed corporate strategy?	Poor financial management?
Good financial management?	Others?
Others?	Potential Environment Threats
Potential Environmental Opportunities	Attacks on core business(es)?
Expand core business(es)?	Increases in domestic competition?
Exploit new market segments?	Increase in foreign competition?
Widen product range?	Change in consumer tastes?
Extend cost or differentiation advantage?	Fall in barriers to entry?
Diversify into new growth businesses?	Rise in new or substitute products?
Expand into foreign markets?	Increase in industry rivalry?
Apply R&D skills in new areas?	New forms of industry competition?
Enter new related businesses?	Potential for takeover?
Vertically integrate forward?	Existence of corporate raiders?
Vertically integrate backward?	Increase in regional competition?
Enlarge corporate portfolio?	Changes in demographic factors?
Overcome barriers to entry?	Changes in economic factors?
Reduce rivalry among competitors?	Downturn in economy?
Make profitable new acquisitions?	Rising labor costs?
Apply brand name capital in new areas?	Slower market growth?
Seek fast market growth?	Others?
Others?	

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3. *Identify the company's internal strengths and weaknesses.* Once the historical profile is completed, you can begin the SWOT analysis. Use all the incidents you have charted to develop an account of the company's strengths and weaknesses as they have emerged historically. Examine each of the value creation functions of the company, and identify the functions in which the company is currently strong and currently weak. Some companies might be weak in marketing; some might be strong in research and development. Make lists of these strengths and weaknesses. The SWOT Checklist (Table 1) gives examples of what might go in these lists.

Having done this analysis, you will have generated both an analysis of the company's environment and a list of opportunities and threats. The SWOT Checklist table also lists some common environmental opportunities and threats that you may look for, but the list you generate will be specific to your company.

4. *Evaluate the SWOT analysis.* Having identified the company's external opportunities and threats as well as its internal strengths and weaknesses, consider what your findings mean. You need to balance strengths and weaknesses against opportunities and threats. Is the company in an overall strong competitive position? Can it continue to pursue its current business- or corporate-level strategy profitably? What can the company do to turn weaknesses into strengths and threats into opportunities? Can it develop new functional, business, or corporate strategies to accomplish this change? *Never merely generate the SWOT analysis and then put it aside.* Because it provides a succinct summary of the company's condition, a good SWOT analysis is the key to all the analyses that follow.
5. *Analyze corporate-level strategy.* To analyze corporate-level strategy, you first need to define the company's mission and goals. Sometimes the mission and goals are stated explicitly in the case; at other times, you will have to infer them from available information. The information you need to collect to find out the company's corporate strategy includes such factors as its lines of business and the nature of its subsidiaries and acquisitions. It is important to analyze the relationship among the company's businesses. Do they trade or exchange resources? Are there gains to be achieved from synergy? Alternatively, is the company just running a portfolio of investments? This analysis should enable you to define the corporate strategy that the company is pursuing (e.g., related or unrelated diversification, or a combination of both) and to conclude whether the company operates in just one core business. Then, using your SWOT analysis, debate the merits of this strategy. Is it appropriate given the environment the company is in? Could a change in corporate strategy provide the company with new opportunities or transform a weakness into a strength? For example, should the company diversify from its core business into new businesses?

Other issues should be considered as well. How and why has the company's strategy changed over time? What is the claimed rationale for any changes? Often, it is a good idea to analyze the company's businesses or products to assess its situation and identify which divisions contribute the most to or detract from its competitive advantage. It is also useful to explore how the company has built its portfolio over time. Did it acquire new businesses, or did it internally venture its own? All of these factors provide clues about the company and indicate ways of improving its future performance.

6. *Analyze business-level strategy.* Once you know the company's corporate-level strategy and have done the SWOT analysis, the next step is to identify the company's business-level strategy. If the company is in many businesses, each business will have its own business-level strategy. You will need to identify the company's generic competitive strategy—differentiation, low-cost, or focus—and its investment strategy, given its relative competitive position and the stage of the life cycle. The company also may market different products using different business-level strategies. For example, it may offer a low-cost product range and a line of differentiated products. Be sure to give a full account of a company's business-level strategy to show how it competes.

Identifying the functional strategies that a company pursues to build competitive advantage through superior efficiency, quality, innovation, and customer responsiveness and to achieve its business-level strategy is very important. The SWOT analysis will have provided you with information on the company's functional competencies. You should investigate its production, marketing, or research and development strategy further to gain a picture of where the company is going. For example, pursuing a low-cost or a differentiation strategy successfully requires very different sets of competencies. Has the company developed the right ones? If it has, how can it exploit them further? Can it pursue both a low-cost and a differentiation strategy simultaneously?

The SWOT analysis is especially important at this point if the industry analysis, particularly Porter's model, has revealed threats to the company from the environment. Can the company deal with these threats? How should it change its business-level strategy to counter them? To evaluate the potential of a company's business-level strategy, you must first perform a thorough SWOT analysis that captures the essence of its problems.

Once you complete this analysis, you will have a full picture of the way the company is operating and be in a position to evaluate the potential of its strategy. Thus, you will be able to make recommendations concerning the pattern of its future actions. However, first you need to consider strategy implementation, or the way the company tries to achieve its strategy.

7. *Analyze structure and control systems.* The aim of this analysis is to identify what structure and control systems the company is using to implement its strategy and to evaluate whether that structure is the appropriate one for the company. Different corporate and business strategies require different structures. You need to determine the *degree of fit between the company's strategy and structure*. For example, does the company have the right level of vertical differentiation (e.g., does it have the appropriate number of levels in the hierarchy or decentralized control?) or horizontal differentiation (e.g., does it use a functional structure when it should be using a product structure?)? Similarly, is the company using the right integration or control systems to manage its operations? Are managers being appropriately rewarded? Are the right rewards in place for encouraging cooperation among divisions? These are all issues to consider.

In some cases, there will be little information on these issues, whereas in others there will be a lot. In analyzing each case, you should gear the analysis toward its most salient issues. For example, organizational conflict, power, and politics will be important issues for some companies. Try to analyze why problems in these areas are occurring. Do they occur because of bad strategy formulation or because of bad strategy implementation?

Organizational change is an issue in many cases because the companies are attempting to alter their strategies or structures to solve strategic problems. Thus, as part of the analysis, you might suggest an action plan that the company in question could use to achieve its goals. For example, you might list in a logical sequence the steps the company would need to follow to alter its business-level strategy from differentiation to focus.

8. *Make recommendations.* The quality of your recommendations is a direct result of the thoroughness with which you prepared the case analysis. Recommendations are directed at solving whatever strategic problem the company is facing and increasing its future profitability. Your recommendations should be in line with

your analysis; that is, they should follow logically from the previous discussion. For example, your recommendation generally will center on the specific ways of changing functional, business, and corporate strategies and organizational structure and control to improve business performance. The set of recommendations will be specific to each case, and so it is difficult to discuss these recommendations here. Such recommendations might include an increase in spending on specific research and development projects, the divesting of certain businesses, a change from a strategy of unrelated to related diversification, an increase in the level of integration among divisions by using task forces and teams, or a move to a different kind of structure to implement a new business-level strategy. Make sure your recommendations are mutually consistent and written in the form of an action plan. The plan might contain a timetable that sequences the actions for changing the company's strategy and a description of how changes at the corporate level will necessitate changes at the business level and subsequently at the functional level.

After following all these stages, you will have performed a thorough analysis of the case and will be in a position to join in class discussion or present your ideas to the class, depending on the format used by your professor. Remember that you must tailor your analysis to suit the specific issue discussed in your case. In some cases, you might completely omit one of the steps in the analysis because it is not relevant to the situation you are considering. You must be sensitive to the needs of the case and not apply the framework we have discussed in this section blindly. The framework is meant only as a guide, not as an outline.

WRITING A CASE STUDY ANALYSIS

Often, as part of your course requirements, you will need to present a written case analysis. This may be an individual or a group report. Whatever the situation, there are certain guidelines to follow in writing a case analysis that will improve the evaluation your work will receive from your instructor. Before we discuss these guidelines and before you use them, make sure that they do not conflict with any directions your instructor has given you.

The structure of your written report is critical. Generally, if you follow the steps for analysis discussed in the previous section, *you already will have a good structure for your written discussion*. All reports begin with an *introduction* to the case. In it, outline briefly what the company does, how it developed historically, what problems it is experiencing, and how you are going to approach the issues in the case write-up. Do this sequentially by writing, for example, “First, we discuss the environment of Company. . . . Third, we discuss Company X’s business-level strategy. . . . Last, we provide recommendations for turning around Company X’s business.”

In the second part of the case write-up, the *strategic analysis* section, do the SWOT analysis, analyze and discuss the nature and problems of the company’s business-level and corporate strategies, and then analyze its structure and control systems. Make sure you use plenty of headings and subheadings to structure your analysis. For example, have separate sections on any important conceptual tool you use. Thus, you might have a section on the Competitive Forces Model as part of your analysis of the environment. You might offer a separate section on portfolio techniques when analyzing a company’s corporate strategy. Tailor the sections and subsections to the specific issues of importance in the case.

In the third part of the case write-up, present your *solutions and recommendations*. Be comprehensive, and make sure they are in line with the previous analysis so that the recommendations fit together and move logically from one to the next. The recommendations section is very revealing because your instructor will have a good idea of how much work you put into the case from the quality of your recommendations.

Following this framework will provide a good structure for most written reports, though it must be shaped to fit the individual case being considered. Some cases are about excellent companies experiencing no problems. In such instances, it is hard to write recommendations. Instead, you can focus on analyzing why the company is doing so well, using that analysis to structure the discussion. Following are some minor suggestions that can help make a good analysis even better:

1. Do not repeat in summary form large pieces of factual information from the case. The instructor has read the case and knows what is going on. Rather, use the information in the case to illustrate your statements, defend your arguments, or make salient points. Beyond the brief introduction to the company, you must avoid being *descriptive*; instead, you must be *analytical*.
2. Make sure the sections and subsections of your discussion flow logically and smoothly from one to the next. That is, try to build on what has gone before so that the analysis of the case study moves toward a climax. This is particularly important for group analysis, because there is a tendency for people in a group to split up the work and say, "I'll do the beginning, you take the middle, and I'll do the end." The result is a choppy, stilted analysis; the parts do not flow from one to the next, and it is obvious to the instructor that no real group work has been done.
3. Avoid grammatical and spelling errors. They make your work look sloppy.
4. In some instances, cases dealing with well-known companies end in 1998 or 1999 because no later information was available when the case was written. If possible, do a search for more information on what has happened to the company in subsequent years.

Many libraries now have comprehensive web-based electronic data search facilities that offer such sources as *ABI/Inform*, *The Wall Street Journal Index*, the *F&S Index*, and the *Nexis-Lexis* databases. These enable you to identify any article that has been written in the business press on the company of your choice within the past few years. A number of nonelectronic data sources are also useful. For example, *F&S Predicasts* publishes an annual list of articles relating to major companies that appeared in the national and international business press. *S&P Industry Surveys* is a great source for basic industry data, and *Value Line Ratings and Reports* can contain good summaries of a firm's financial position and future prospects. You will also want to collect full financial information on the company. Again, this can be accessed from web-based electronic databases such as the *Edgar* database, which archives all forms that publicly quoted companies have to file with the Securities and Exchange Commission (SEC; e.g., 10-K filings can be accessed from the SEC's *Edgar* database). Most SEC forms for public companies can now be accessed from Internet-based financial sites, such as Yahoo's finance site (<http://finance.yahoo.com/>).

5. Sometimes instructors hand out questions for each case to help you in your analysis. Use these as a guide for writing the case analysis. They often illuminate the important issues that have to be covered in the discussion.

If you follow the guidelines in this section, you should be able to write a thorough and effective evaluation.

THE ROLE OF FINANCIAL ANALYSIS IN CASE STUDY ANALYSIS

An important aspect of analyzing a case study and writing a case study analysis is the role and use of financial information. A careful analysis of the company's financial condition immensely improves a case write-up. After all, financial data represent the concrete results of the company's strategy and structure. Although analyzing financial statements can be quite complex, a general idea of a company's financial position can be determined through the use of ratio analysis. Financial performance ratios can be calculated from the balance sheet and income statement. These ratios can be classified into five subgroups: profit ratios, liquidity ratios, activity ratios, leverage ratios, and shareholder-return ratios. These ratios should be compared with the industry average or the company's prior years of performance. It should be noted, however, that deviation from the average is not necessarily bad; it simply warrants further investigation. For example, young companies will have purchased assets at a different price and will likely have a different capital structure than older companies do. In addition to ratio analysis, a company's cash flow position is of critical importance and should be assessed. Cash flow shows how much actual cash a company possesses.

Profit Ratios

Profit ratios measure the efficiency with which the company uses its resources. The more efficient the company, the greater is its profitability. It is useful to compare a company's profitability against that of its major competitors in its industry to determine whether the company is operating more or less efficiently than its rivals. In addition, the change in a company's profit ratios over time tells whether its performance is improving or declining.

A number of different profit ratios can be used, and each of them measures a different aspect of a company's performance. Here, we look at the most commonly used profit ratios.

Return on Invested Capital (ROIC) This ratio measures the profit earned on the capital invested in the company. It is defined as follows:

$$\text{Return on invested capital (ROIC)} = \frac{\text{Net profit}}{\text{Invested capital}}$$

Net profit is calculated by subtracting the total costs of operating the company away from its total revenues (total revenues – total costs). Total costs are the (1) costs of goods sold, (2) sales, general, and administrative expenses, (3) R&D expenses, and (4) other expenses. Net profit can be calculated before or after taxes, although many financial analysts prefer the before-tax figure. Invested capital is the amount that is invested in the operations of a company—that is, in property, plant, equipment, inventories, and other assets. Invested capital comes from two main sources: interest-bearing debt and shareholders' equity. Interest-bearing debt is money the company borrows from banks and from those who purchase its bonds. Shareholders' equity is the money

raised from selling shares to the public, *plus* earnings that have been retained by the company in prior years and are available to fund current investments. ROIC measures the effectiveness with which a company is using the capital funds that it has available for investment. As such, it is recognized to be an excellent measure of the value a company is creating.¹ Remember that a company's ROIC can be decomposed into its constituent parts.

Return on Total Assets (ROA) This ratio measures the profit earned on the employment of assets. It is defined as follows:

$$\text{Return on total assets} = \frac{\text{Net profit}}{\text{Total assets}}$$

Return on Stockholders' Equity (ROE) This ratio measures the percentage of profit earned on common stockholders' investment in the company. It is defined as follows:

$$\text{Return on stockholders equity} = \frac{\text{Net profit}}{\text{Stockholders equity}}$$

If a company has no debt, this will be the same as ROIC.

Liquidity Ratios

A company's liquidity is a measure of its ability to meet short-term obligations. An asset is deemed liquid if it can be readily converted into cash. Liquid assets are current assets such as cash, marketable securities, accounts receivable, and so on. Two liquidity ratios are commonly used.

Current Ratio The current ratio measures the extent to which the claims of short-term creditors are covered by assets that can be quickly converted into cash. Most companies should have a ratio of at least 1 because failure to meet these commitments can lead to bankruptcy. The ratio is defined as follows:

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Quick Ratio The quick ratio measures a company's ability to pay off the claims of short-term creditors without relying on selling its inventories. This is a valuable measure since in practice the sale of inventories is often difficult. It is defined as follows:

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{inventory}}{\text{Current liabilities}}$$

Activity Ratios

Activity ratios indicate how effectively a company is managing its assets. Two ratios are particularly useful.

Inventory Turnover This measures the number of times inventory is turned over. It is useful in determining whether a firm is carrying excess stock in inventory. It is defined as follows:

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Inventory}}$$

Cost of goods sold is a better measure of turnover than sales because it is the cost of the inventory items. Inventory is taken at the balance sheet date. Some companies choose to compute an average inventory, beginning inventory, and ending inventory, but for simplicity, use the inventory at the balance sheet date.

Days Sales Outstanding (DSO) or Average Collection Period This ratio is the average time a company has to wait to receive its cash after making a sale. It measures how effective the company's credit, billing, and collection procedures are. It is defined as follows:

$$\text{DSO} = \frac{\text{Accounts receivable}}{\text{Total sales}/360}$$

Accounts receivable is divided by average daily sales. The use of 360 is the standard number of days for most financial analysis.

Leverage Ratios

A company is said to be highly leveraged if it uses more debt than equity, including stock and retained earnings. The balance between debt and equity is called the *capital structure*. The optimal capital structure is determined by the individual company. Debt has a lower cost because creditors take less risk; they know they will get their interest and principal. However, debt can be risky to the firm because if enough profit is not made to cover the interest and principal payments, bankruptcy can result. Three leverage ratios are commonly used.

Debt-to-Assets Ratio The debt-to-assets ratio is the most direct measure of the extent to which borrowed funds have been used to finance a company's investments. It is defined as follows:

$$\text{Debt-to-assets ratio} = \frac{\text{Total debt}}{\text{Total assets}}$$

Total debt is the sum of a company's current liabilities and its long-term debt, and total assets are the sum of fixed assets and current assets.

Debt-to-Equity Ratio The debt-to-equity ratio indicates the balance between debt and equity in a company's capital structure. This is perhaps the most widely used measure of a company's leverage. It is defined as follows:

$$\text{Debt-to-equity ratio} = \frac{\text{Total debt}}{\text{Total equity}}$$

Times-Covered Ratio The times-covered ratio measures the extent to which a company's gross profit covers its annual interest payments. If this ratio declines to less than 1, the company is unable to meet its interest costs and is technically insolvent. The ratio is defined as follows:

$$\text{Times-covered ratio} = \frac{\text{Profit before interest and tax}}{\text{Total interest charges}}$$

Shareholder-Return Ratios

Shareholder-return ratios measure the return that shareholders earn from holding stock in the company. Given the goal of maximizing stockholders' wealth, providing shareholders with an adequate rate of return is a primary objective of most companies. As with profit ratios, it can be helpful to compare a company's shareholder returns against those of similar companies as a yardstick for determining how well the company is satisfying the demands of this particularly important group of organizational constituents. Four ratios are commonly used.

Total Shareholder Returns Total shareholder returns measure the returns earned by time $t + 1$ on an investment in a company's stock made at time t . (Time t is the time at which the initial investment is made.) Total shareholder returns include both dividend payments and appreciation in the value of the stock (adjusted for stock splits) and are defined as follows:

$$\text{Total shareholder returns} = \frac{\text{Stock price } (t + 1) - \text{stock price } (t) + \text{sum of annual dividends per share}}{\text{Stock price } (t)}$$

If a shareholder invests \$2 at time t and at time $t + 1$ the share is worth \$3, while the sum of annual dividends for the period t to $t + 1$ has amounted to \$0.20, total shareholder returns are equal to $(3 - 2 + 0.2)/2 = 0.6$, which is a 60% return on an initial investment of \$2 made at time t .

Price-Earnings Ratio The price-earnings ratio measures the amount investors are willing to pay per dollar of profit. It is defined as follows:

$$\text{Price-earnings ratio} = \frac{\text{Market price per share}}{\text{Earnings per share}}$$

Market-to-Book Value Market-to-book value measures a company's expected future growth prospects. It is defined as follows:

$$\text{Market-to-book value} = \frac{\text{Market price per share}}{\text{Earnings per share}}$$

Dividend Yield The dividend yield measures the return to shareholders received in the form of dividends. It is defined as follows:

$$\text{Dividend} = \frac{\text{Dividend per share}}{\text{Market price per share}}$$

Market price per share can be calculated for the first of the year, in which case the dividend yield refers to the return on an investment made at the beginning of the year. Alternatively, the average share price over the year may be used. A company must decide how much of its profits to pay to stockholders and how much to reinvest in the company. Companies with strong growth prospects should have a lower dividend payout ratio than mature companies. The rationale is that shareholders can invest the money elsewhere if the company is not growing. The optimal ratio depends on the individual firm, but the key decider is whether the company can produce better returns than the investor can earn elsewhere.

Cash Flow

Cash flow position is cash received minus cash distributed. The net cash flow can be taken from a company's statement of cash flows. Cash flow is important for what it reveals about a company's financing needs. A strong positive cash flow enables a company to fund future investments without having to borrow money from bankers or investors. This is desirable because the company avoids paying out interest or dividends. A weak or negative cash flow means that a company has to turn to external sources to fund future investments. Generally, companies in strong-growth industries often find themselves in a poor cash flow position (because their investment needs are substantial), whereas successful companies based in mature industries generally find themselves in a strong cash flow position.

A company's internally generated cash flow is calculated by adding back its depreciation provision to profits after interest, taxes, and dividend payments. If this figure is insufficient to cover proposed new investments, the company has little choice but to borrow funds to make up the shortfall or to curtail investments. If this figure exceeds proposed new investments, the company can use the excess to build up its liquidity (i.e., through investments in financial assets) or repay existing loans ahead of schedule.

CONCLUSION

When evaluating a case, it is important to be *systematic*. Analyze the case in a logical fashion, beginning with the identification of operating and financial strengths and weaknesses and environmental opportunities and threats. Move on to assess the value

of a company's current strategies only when you are fully conversant with the SWOT analysis of the company. Ask yourself whether the company's current strategies make sense given its SWOT analysis. If they do not, what changes need to be made? What are your recommendations? Above all, link any strategic recommendations you may make to the SWOT analysis. State explicitly how the strategies you identify take advantage of the company's strengths to exploit environmental opportunities, how they rectify the company's weaknesses, and how they counter environmental threats. Also, do not forget to outline what needs to be done to implement your recommendations.

Endnote

1. Tom Copeland, Tim Koller, and Jack Murrin, *Valuation: Measuring and Managing the Value of Companies* (New York: Wiley, 1996).



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CASE

1

TRADER JOE'S IN 2018

*This case was prepared by Melissa A. Schilling
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In the mid 1960's Joe Coulombe owned a chain of "Pronto Market" convenience stores in the greater Los Angeles area, but they were under heavy competitive pressure from 7-11. He began to ponder the idea of opening up a new kind of store—something with more unusual goods for people who had acquired more diverse tastes while traveling, and yearned for flavors they could not get at home. He went on vacation in the Caribbean and came home inspired: he opened up his first "Trader Joe's" (named after himself) in 1967. His store would focus on delivering innovative and hard-to-find foods with prices that would deliver great value. He also made a point of carrying every California wine available. He imbued his new store with a distinctive South Seas theme, by lining the walls with cedar planks, creating displays out of fishing nets, and having employees wear Hawaiian shirts.

The formula was a hit. By the late 1970s, there were twenty Trader Joe's in southern California, and by the late 1970s the chain had attracted the attention of the German Albrecht family, owners of a chain of discount supermarkets called Aldi Nord. In 1979, Theo Albrecht offered to buy Trader Joe's, keeping Joe on to run the business. Coulombe accepted; the Albrecht purchase enabled Trader Joe's to expand more rapidly than it could have otherwise, and Coulombe stayed on to run the company

until 1987. He then retired and was succeeded by his friend, John Shields, who expanded the company into Arizona, the Pacific Northwest, and Brookline and Cambridge (near Boston). When Shields retired in 2001, Dan Bane succeeded him, and continued to expand the chain. By October 2017, the company had 473 stores in 43 states, more than 38,000 employees, and an estimated \$13 billion in annual sales.

C1-1 A DISTINCTIVE PRODUCT STRATEGY

From the beginning Trader Joe's had a distinctive product strategy. Whereas a typical grocery store might carry 50,000 different items, Trader Joe's carried closer to 4,000, and most products (roughly 80%) bore one of Trader Joe's own brand names (see Figure 1). Many of the names are a fun twist on the name Trader Joe but modified to reflect the nature of the food, such as "Trader Jose's" (for Mexican food), "Trader Mings" (for Asian food), and "Pilgrim Joe" (for New England favorites such as clam chowder). The company focused on gourmet and organic foods, vegetarian offerings, and imported foods, as well as wines and interesting frozen entrees.

Figure 1 Examples of Trader Joe's Branded Items



Trader Joe's is very selective about the products it stocks. Trader Joe's biggest R&D expense is for its top buyers to travel the world looking for new trend-setting items, such as the wildly successful Trader Joe's cookie butter, which is a gooey Belgian spread known as "Speculoos" in its home country. The company does not charge slotting fees to suppliers to get on the shelves—instead it makes them compete to demonstrate they can sell in high enough volumes, and at low enough prices, to keep their spots. Trader Joe's routinely discontinues products that fail to deliver on these dimensions, cutting the 10% worst performers to make room for new items. Customers do not seem to mind the narrower selection—in fact, analysts speculated that customers actually felt *better* about their choices when there were fewer options. Trader Joe's had cultivated a reputation of choosing products very carefully, which in turn, inspired customer faith in the company's offerings. As articulated by a former employee, "If they're going to get behind only one jar of Greek olives, then they're sure as heck going to make sure it's the most fabulous jar of Greek olives they can find for the price."

Trader Joe's also took a fairly strict stance on issues pertaining to the environment, humane practices, and food safety. For example, products sold under the Trader Joe's brand name could not contain artificial colors, flavors, preservatives, or genetically modified ingredients; Trader Joe's eggs could only come from cage-free hens; and Trader Joe's dairy products had to come from cows that were not given artificial

hormones. It also announced in 2007 that it would discontinue stocking most products from China due to concerns about inadequate monitoring of food safety.

The carefully curated product line turned out to have big economic advantages: Selling a narrower selection of high-volume products helped to drive down supply costs because each item was bought in higher volumes, enabling Trader Joe's to negotiate deep discounts. At the same time, managing a narrower product line lowered inventory carrying costs, and stocking only items that turned quickly boosted sales per square foot. Trader Joe's stores sell roughly \$1,750 per square foot—more than double that of Whole Foods. As a result, many analysts speculated that Trader Joe's was significantly more profitable than a typical grocery retailer (actual profits were unknown as Trader Joe's was a privately held company and did not share its income figures).

C1-2 LOGISTICS AND MARKETING

Most Trader Joe's store locations were leased, and about two-thirds operated out of existing buildings rather than being newly built. The stores ranged from 8,000–15,000 square feet, and were typically opened in non-prime locations (though its Manhattan stores were notable exceptions). From its inception, Coulombe recognized that the stores would fare better in communities that had adventurous and educated people, and thus he targeted college towns and other educated communities.

Rather than working with national or regional distributors, Trader Joe's purchased directly from the manufacturers, which then shipped their products straight to Trader Joe's distribution centers. This process streamlined the distribution process and reduced costs, but also limited where, and how fast, Trader Joe's was able to expand. For example, it took Trader Joe's longer to enter states like Texas or Florida (despite entreaties from customers in those locations

who had become familiar with Trader Joe's stores) because they were not easily accessible to its distribution centers.

Trader Joe's spends very little on advertising, instead relying on regional radio advertising, word of mouth, and its newsletter, the "Fearless Flyer." The newsletter is customized by region and offers detailed and witty write-ups of new products that emphasize their authenticity and uniqueness.

C1-3 UNIQUELY FRIENDLY EMPLOYEES

A big part of Trader Joe's strategy and brand image is the friendliness of the experience in the stores. Employees are encouraged to interact with customers, getting to know the names of regulars, and generating a fun and informal vibe. Instead of a PA system, for example, Trader Joe's uses bells where one ding means another register should be opened, two dings means there's a question that needs answering, and three dings means a manager's assistance is needed. Store employees can work in any function in the store, and all are expected to be knowledgeable about the products and be able to make recommendations. If a customer asks a Trader Joe employee about a product, the employee will typically enthusiastically share their own experience with the product, will often accompany the customer to the location where the product is shelved, and may open a package to offer the customer a sample.

Management at Trader Joe's believed that a big part of why people shop in stores is not about the food at all—it's about interacting with people, sharing a smile or a joke, and feeling welcomed. For this reason, Trader Joe's did not offer online ordering, nor did management feel particularly threatened by the growth of online grocery shopping. The Trader Joe's experience was distinctive enough, and fun enough, management believed, that online shopping was not direct competition. However, creating this fun and friendly vibe in the stores had become a growing challenge as the chain grew: how would Trader Joe's ensure that its distinctive store culture of friendly interaction would be retained when

stores and employees were being added to the chain quickly? Protecting and reinforcing this culture was a challenge that Trader Joe's management took seriously.

One of the ways Trader Joe's attempted to preserve the employee culture was through its pay policies. When Joe Coulombe founded Trader Joe's, he decided to pay full-time employees the median California family income rather than the much lower salaries typically offered to workers at convenience and grocery stores. Today, store managers and full-time crew members at Trader Joe's are still paid better than typical store employees. According to Glassdoor, a company that gathers pay and benefits information from employees at over 300,000 companies, hourly store employees at Trader Joe's earned an average of \$13/hour in 2017, and store managers earned between \$52K and \$106K. Trader Joe's also contributes 15.4% of employees' gross income to tax-deferred retirement accounts.

C1-4 COMPETITION

The traditional grocery retail industry was mature and had very slim margins. Firms relied on rapid turnover and tight cost control, while also selling premium items such as made-to-order sandwiches, imported cheeses and cut flowers to bolster earnings. Even strongly differentiated grocers like Whole Foods had slim margins (see table below), and industry leaders like Kroger and Albertson's had net margins of 1.55% and 4.00% respectively. This meant there was little room for waste or error in the grocery industry.

Though Trader Joe's has a strong focus on value and many customers were attracted to its stores for its low prices, its emphasis on gourmet and healthy foods caused many people to view the store as being more like Whole Foods than a discounter grocer like Costco or Wal-Mart. Being a lower-cost Whole Foods was a valuable and unique niche position. However, there was growing risk that this particular niche would become more crowded as new alternative grocers emerged. For example, one such competitor was Sprouts Farmers Market. In 2018, Sprouts Farmers Market's 280 stores were primarily located in

Table 1 Revenues and Net Profit Margin at Select US Grocery Retailers, 2017

Grocery Retailer	Gross Revenues (\$millions)	Net Profit Margin
Kroger	122,662	1.55%
Albertsons	59,924	4.00%
Publix	34,837	6.58%
H-E-B	23,939	—
Safeway	22,934	—
Whole Foods	16,030	2.85%
Trader Joe's	13,300*	
Wegmans	8,720	—

*Data gathered from Hoovers and 10-K reports. Sales for Trader Joe's are estimated by Supermarket News, accessed October 2, 2018.

the Southwestern states of the United States, but the chain was growing fast. Its business model focused heavily on fresh produce, sold at 20–30% discounts to conventional competitors. Its low cost strategy was simple: whereas conventional grocery stores piled produce high in aesthetically attractive visual displays that connoted abundance, Sprout Farmers Market used smaller “low displays.” These displays resulted in far less waste than the nearly 15% of produce that is typically wasted in a grocery store.

Amazon's \$13.4 billion acquisition of Whole Foods also presented a further new threat: in addition to providing the convenience of Whole Foods groceries delivered to consumers' doors, Amazon also promised to slash prices on staples like eggs, milk, fruit, beef, and pasta. On many items Whole Foods prices matched, or occasionally even beat those of Trader Joe's. One research study reported that in the first week after the Amazon takeover, Whole Foods gained nearly ten percent of Trader Joe's customers, suggesting serious cause for concern for Trader Joe's management. Whole Foods also had plans to expand its chain of “365 by Whole Foods” stores, which were smaller, stripped-down versions of Whole Foods that would use auto-replenishing technology and order kiosks to reduce labor costs.

C1-5 REMARKABLY SUCCESSFUL, FAMOUSLY SECRETIVE

In 2017, a survey conducted by Market Force Information found that Trader Joe's was ranked as America's third favorite supermarket chain, behind Publix and Wegmans. Perhaps not coincidentally, this was just two spots ahead of Aldi, its lesser known parent. Both chains were praised for their courteous and fast service, and their high quality private-label lines. Trader Joe's success could also be observed in the growth in the number of its stores and its estimated revenues. It was unknown, however, just how much the company earned on those revenues. Was Trader Joe's profitable?

Trader Joe's had always been privately held and famously secretive. It did not reveal its sourcing, and made suppliers sign contracts forbidding them to publicize their relationship with Trader Joe's. There were no signs with the company's name or logo at the Monrovia California headquarters, and management routinely denied requests for interviews from

magazines and newspapers. Such secrecy made it hard for competitors to know either what kinds of profits Trader Joe's earned or how it generated those profits. Such secrecy also facilitated suppliers' ability to sell products for a lower cost to Trader Joe's without alienating their other retailers.

Remaining privately held, however, also came at a price. By not franchising or accessing capital through the stock market, Trader Joe's forfeited opportunities to grow faster. Some analysts expressed concern that this left a lot of opportunity for competitors to imitate Trader Joe's business model and product strategy and seize geographic regions that Trader Joe's had left unserved. This left many wondering: How much more profitable was Trader Joe's than other grocery retailers? Should the company be growing faster? And

if it did, how could it ensure that its company culture and store culture were preserved?

Sources: www.traderjoes.com; Kowitt, B. 2010. Inside Trader Joe's. *Fortune*, 162(4):86–96; E. Z. 2014. Trader Joe's doubles its growth rate. *SN: Supermarket News*, 62(9):24–26; Anonymous, 2014. America's favorite super: Trader Joe's. *MMR*, 31(9):87. Gustafson, M. 2008. Trader Joe's remarkable journey. *Private Label Buyer*, November 1st, pp 42–46; Nisen, M. 2014. The secret to America's most “disruptive” supermarket—fruits and vegetables. *Reuters*, June 30th; Frias, C, Herring, C, & Reyes, A. 2017. Here's how Whole Foods' new, cheaper prices compare to Publix and Trader Joe's. *Miami Herald*, August 30th; Clough, B. 2018. 10 quirky things to know about Trader Joe's. *Fresno Bee*, February 14th; Fickenscher, L. 2017. Whole Foods eats Trader Joe's lunch. *New York Post*, October 3rd; Dodson, C. 2017. The grocery wars take off. *Fast Company*, October 1st; Hoovers, 2018; Yahoo Finance 2018.

CASE 2

SMALL PACKAGE EXPRESS DELIVERY INDUSTRY, 1973–2018

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C2-1 INTRODUCTION

The small package express delivery industry is that segment of the broader postal and cargo industries that specializes in rapid (normally 1 to 3 days) delivery of small packages (defined as weighing less than 150 lbs or having less than 165 inches in combined length and girth). The modern small package express delivery industry in the United States began with Fred Smith's vision for Federal Express Company, which started operations in 1973. Federal Express (now known as FedEx) transformed the structure of the existing air cargo industry and paved the way for rapid growth in the express package segment of that industry.

A further impetus to the industry's development was the 1977 deregulation of the U.S. air cargo industry. This allowed Federal Express (and its emerging competitors) to buy large jets for the first time. The story of the industry during the 1980s was one of rapid growth and new entry. Between 1982 and 1989, small package express cargo shipments by air in the United States grew at an annual average rate of 31%. In contrast, shipments of air freight and air mail grew

at an annual rate of only 2.7%.¹ This rapid growth attracted new entrants such as United Parcel Service (UPS) and Airborne Freight (which operated under the name Airborne Express). Following the entry of UPS, there was severe price cutting, which ultimately drove some of the weaker competitors out of the market and touched off a wave of consolidation in the industry.

By the mid-1990s, the industry structure had stabilized with four organizations—Federal Express, UPS, Airborne Express, and the United States Postal Service—accounting for the vast majority of U.S. express shipments via air. During the first half of the 1990s, the small package express industry continued to grow at 16% per annum.² Nevertheless, the industry was hit by repeated rounds of price cutting as the three big private firms battled to capture major accounts. In addition to price cutting, the big three also competed vigorously on the basis of technology, service offerings, and the global reach of their operations. By the late 1990s and early 2000s, the intensity of price competition in the industry had moderated despite the fact that the growth rate for the industry slowed.

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Between 1995 and 2000, the industry grew at 9.8% per year, and continued to grow at around 4 to 6% per annum during the first two decades of the twenty-first century. For the most part, pricing discipline was maintained.

The biggest change to take place in the North American market during the early 2000s was the entry of DHL with its acquisition of Airborne Express for \$1 billion in 2003. DHL was owned by Deutsche Post World Net, formally the German post office, which following privatization in 1995 rapidly transformed itself into a global express mail and logistics operation. While DHL had long flown in and out of the United States, prior to 2003 it lacked a strong presence in the important United States domestic delivery market. The acquisition of Airborne gave DHL the capability to deliver between locations *within* the United States. DHL subsequently spent \$1.5 billion upgrading Airborne's delivery network in a quest for market share. Despite heavy investments, DHL failed to gain traction and after five years of losses, in 2009 it exited the United States domestic market, although it continued to fly in and out of the country.

With the exit of DHL, the U.S. market looked like a duopoly. In 2017, UPS held onto 55.6% of all small package shipments (express and “regular” delivery),

while FedEx accounted for 24.1%. FedEx led in the express segment, while UPS dominated in deliveries of more than 2 days.³ Internationally, the market was an oligopoly. Despite its failure in the U.S. market, DHL held onto 38% of the global market for cross-border, small package express deliveries in 2017, FedEx 24%, and UPS 22%. DHL was particularly strong in Europe and Asia. A fourth global player, TNT, was acquired by FedEx in 2016 for \$4.8 billion.⁴ In the twenty-first century, e-commerce sales emerged as a major driver of domestic demand, while expanding cross-border trade and the development of global supply chains was driving international demand for small package shipments.

One threat confronting the industry in 2018 was the potential entrance of Amazon into the small package shipment businesses. Amazon had long been a major customer of UPS and FedEx, but now it was starting to move into delivery. In 2016, it acquired the Wilmington delivery hub that was once operated by Airborne Express and then DHL. It also leased 20 Boeing 767 aircraft. The company spent the next two years steadily building its own internal delivery network to supplement that of its shipping partners, UPS and FedEx, and there was plenty of speculation that it had bigger plans.

Exhibit 1 UPS and FedEx in 2017

	UPS	FedEX
Aircraft	657	658
Delivery Vehicles	108,210	150,000
Staffed Corporate Locations	6,300+	3,400+
Daily Shipments	19 million	13 million
Countries Served	220+	220+
Employees	434,000	400,000+
Revenue	\$65.9 billion	\$60.32 billion
Net Income	\$4.91 billion	\$2.99 billion
Return on Invested Capital	25%	11.27%

C2-2 THE INDUSTRY BEFORE FEDEX

In 1973, roughly 1.5 billion tons of freight were shipped in the United States. Most of this freight was carried by surface transport, with air freight accounting for less than 2% of the total.⁵ While shipment by air freight was often quicker than shipment by surface freight, the high cost of air freight had kept down demand. The typical users of air freight at this time were suppliers of time-sensitive, high-priced goods, such as computer parts and medical instruments, which were needed at dispersed locations but were too expensive for their customers to hold as inventory.

The main cargo carriers in 1973 were major passenger airlines, which operated several all-cargo planes and carried additional cargo in the holds of their passenger planes, along with a handful of all-cargo airlines such as Flying Tiger. From 1973 onward, the passenger airlines moved steadily away from all-cargo planes and began to concentrate cargo freight in passenger planes. This change was a response to increases in fuel costs, which made the operation of many older cargo jets uneconomical.

With regard to distribution of cargo to and from airports, in 1973 about 20% of all air freight was delivered to airports by the shipper and/or picked up by the consignee. The bulk of the remaining 80% was accounted for by three major intermediaries: (1) Air Cargo Incorporated, (2) freight forwarders, and (3) the U.S. Postal Service. Air Cargo Incorporated was a trucking service, wholly owned by twenty-six airlines, which performed pickup and delivery service for the airlines' direct customers. Freight forwarders were trucking carriers who consolidated cargo going to the airlines. They purchased cargo space from the airlines and retailed this space in small amounts. They dealt primarily with small customers, providing pickup and delivery services in most cities, either in their own trucks or through contract agents. The U.S. Postal Service used air service for transportation of long-distance letter mail and air parcel post.⁶

C2-3 THE FEDERAL EXPRESS CONCEPT

Founded by Fred Smith, Jr., Federal Express was incorporated in 1971 and began operations in 1973. At that time, a significant proportion of small-package air freight flew on commercial passenger flights. Smith believed that there were major differences between packages and passengers, and he was convinced that the two had to be treated differently. Most passengers moved between major cities and wanted the convenience of daytime flights. Cargo shippers preferred nighttime service to coincide with late-afternoon pickups and next-day delivery. Because small-package air freight was subservient to the requirements of passengers' flight schedules, it was often difficult for the major airlines to achieve next-day delivery of air freight.

Smith's aim was to build a system that could achieve next-day delivery of small-package air freight (less than 70 pounds). He set up Federal Express with his \$8-million family inheritance and \$90 million in venture capital (the company's name was changed to FedEx in 1998). Federal Express established a hub-and-spoke route system, the first airline to do so. The hub of the system was Memphis, chosen for its good weather conditions, central location, and the fact that it was Smith's hometown. The spokes were regular routes between Memphis and shipping facilities at public airports in the cities serviced by Federal Express. Every weeknight, aircraft would leave their home cities with a load of packages and fly down the spokes to Memphis (often with one or two stops on the way). At Memphis, all packages were unloaded, sorted by destination, and reloaded. The aircraft then returned to their home cities in the early morning hours. Packages were ferried to and from airports by Federal Express couriers driving the company's vans and working to a tight schedule. Thus, from door to door, the package was in Federal Express's hands. This system guaranteed that a package picked up from a customer in New York at 5 p.m. would reach its final destination in Los Angeles (or any other major city) by noon the following day. It enabled Federal Express to realize economies in sorting and to utilize

its air cargo capacity efficiently. Federal Express also pioneered the use of standard packaging, with an upper weight limit of 70 pounds and a maximum length plus girth of 108 inches. This standard helped Federal Express gain further efficiencies from mechanized sorting at its Memphis hub. Later entrants into the industry copied Federal Express's package standards and hub-and-spoke operating system.

To accomplish overnight delivery, Federal Express had to operate its own planes. Restrictive regulations enforced by the Civil Aeronautics Board (CAB), however, prohibited the company from buying large jet aircraft. To get around this restriction, Federal Express bought a fleet of twin-engine executive jets, which it converted to minifreighters. These planes had a cargo capacity of 6,200 pounds, which enabled Federal Express to get a license as an air taxi operator.

After 1973, Federal Express quickly built up volume. By 1976, it had an average daily volume of 19,000 packages, a fleet of 32 aircraft, 500 delivery vans, and 2,000 employees, and it had initiated service in 75 cities. After three years of posting losses, the company turned in a profit of \$3.7 million on revenues of \$75 million.⁷ However, volume had grown so much that Federal Express desperately needed to use larger planes to maintain operating efficiencies. As a result, Smith's voice was added to those calling for Congress to deregulate the airline industry and allow greater competition.

C2-4 DEREGULATION AND ITS AFTERMATH

In November 1977, Congress relaxed regulations controlling competition in the air cargo industry, 1 year before passenger services were deregulated. This involved a drastic loosening of standards for entry into the industry. The old CAB authority of naming the carriers that could operate on the various routes was changed to the relatively simple authority of deciding which among candidate carriers was fit, willing, and able to operate an all-cargo route. In addition, CAB controls over pricing were significantly reduced.⁸

Freed from regulatory constraints, Federal Express began to purchase larger jets and quickly established itself as a major carrier of small-package air freight. Although several all-cargo carriers such as Flying Tiger increased their route structure following deregulation, only Federal Express specialized in next-day delivery for small packages. Demand for a next-day delivery service continued to boom. Industry estimates suggest that the small-package priority market had grown to about 82 million pieces in 1979, up from 43 million in 1974.⁹

As all cargo airlines increased their route structure following deregulation, the passenger airlines continued their retreat from the all-cargo business. Between 1973 and 1978, there was a 45% decline in the mileage of all-cargo flights by passenger airlines. This was followed by a 14% decline between 1978 and 1979. Instead of all-cargo flights, the airlines concentrated their attentions on carrying cargo in passenger flights. This practice hurt the freight forwarders badly. The freight forwarders had long relied on the all-cargo flights of major airlines to achieve next-day delivery. Now the freight forwarders were being squeezed out of this segment by a lack of available lift at the time needed to ensure next-day delivery.

This problem led a major postderegulation development in the industry: the acquisition and operation by freight forwarders of their own fleets of aircraft. Between 1979 and 1981, five of the six largest freight forwarders became involved in this activity. The two largest were Emery Air Freight and Airborne Express. Emery operated a fleet of 66 aircraft at the end of 1979, the majority of which were leased from other carriers. In mid-1980, this fleet was providing service to approximately 129 cities, carrying both large-volume shipments and small-package express.

Airborne Express acquired its own fleet of aircraft in April 1980 with the purchase of Midwest Charter Express, an Ohio-based, all-cargo airline. In 1981, Airborne opened a new hub in Ohio, which became the center of its small-package express operation. This enabled Airborne to provide next-day delivery for small packages to 125 cities in the United States.¹⁰ Other freight forwarders that moved into the overnight mail market included Purolator Courier and Gelco, both of which offered overnight delivery by air on a limited geographic scale.

C2-5 INDUSTRY EVOLUTION, 1980–1986

C2-5a New Products and Industry Growth

In 1981, Federal Express expanded its role in the overnight market with the introduction of an overnight letter service, with a limit of two ounces. This guaranteed overnight delivery service was set up in direct competition with the U.S. Postal Service's Priority Mail. The demand for such a service was illustrated by its expansion to about 17,000 letters per day within its first 3 months of operation. At this time, the focus of the air express industry was changing from being predominantly a conduit for goods to a distributor of information—particularly company documents, letters, contracts, drawings, and the like. As a result of the growth in demand for information distribution, new product offerings such as the overnight letter, and Federal Express's own marketing efforts, the air express industry enjoyed high growth during the early 1980s, averaging more than 30% per year.¹¹ Indeed, many observers attribute most of the growth in the overnight delivery business at this time to Federal Express's marketing efforts. According to one industry participant, "Federal Express pulled off one of the greatest marketing scams in the industry by making people believe they absolutely, positively, had to have something right away."¹²

C2-5b Increasing Price Competition

Competitive intensity in the industry increased sharply in 1982 following the entry of UPS into the overnight-delivery market. UPS was already by far the largest private package transporter in the United States, with an enormous, ground-oriented distribution network and revenues in excess of \$4 billion per year. In addition, for a long time, UPS had offered a second-day air service for priority packages, primarily by using the planes of all-cargo and passenger airlines. In 1982, UPS acquired a fleet of 24 used Boeing 727–100s and added four DC-8

freighters from Flying Tiger. These purchases allowed UPS to introduce next-day air service in September 1982—at roughly half the price Federal Express was charging at the time.¹³

Federal Express countered almost immediately by announcing that it would institute 10:30 a.m. priority overnight delivery (at a cost to the company of \$18 million). None of the other carriers followed suit, however, reasoning that most of their customers are usually busy or in meetings during the morning hours, so delivery before noon was not really that important. Instead, by March 1983, most major carriers in the market (including Federal Express) were offering their high-volume customers contract rates that matched the UPS price structure. Three new services introduced by Purolator, Emery, and Gelco Courier pushed prices even lower. A competitive free-for-all followed, with constant price changes and volume discounts being offered by all industry participants. These developments hit the profit margins of the express carriers. Between 1983 and 1984, Federal Express saw its average revenue per package fall nearly 14%, while Emery saw a 15% decline in its yield on small shipments.¹⁴

Around this time, customers began to group together and negotiate for lower prices. For example, Xerox set up accounts with Purolator and Emery that covered not only Xerox's express packages but also those of 50 other companies, including Mayflower Corp., the moving company, and the Chicago Board of Trade. By negotiating as a group, these companies could achieve prices as much as 60% lower than those they could get on their own.¹⁵

The main beneficiary of the price war was UPS, which by 1985 had gained the number 2 spot in the industry, with 15% of the market. Federal Express, meanwhile, had seen its market share slip to 37% from about 45% two years earlier. The other four major players in the industry at this time were Emery Air Freight (14% of market share), Purolator (10% of market share), Airborne Express (8% of market share), and the U.S. Postal Service (8% of market share).¹⁶ The survival of all four carriers in the air express business was in question by 1986. Emery, Purolator, and the U.S. Postal Service were all reporting losses on their air express business, while Airborne had seen its profits slump 66% in the first quarter of 1986 and now had razor-thin margins.

C2-6 INDUSTRY EVOLUTION, 1987–1996

C2-6a Industry Consolidation

A slowdown in the growth rate of the air express business due to increasing geographic saturation and inroads made by electronic transmission (primarily fax machines) stimulated further price discounting in 1987 and early 1988. This created problems for the weakest companies in the industry. The first to go was Purolator Courier, which had lost \$65 million during 1985 and 1986. Purolator's problems stemmed from a failure to install an adequate computer system. The company was unable to track shipments—a crucial asset in this industry—and some of Purolator's best corporate customers were billed 120 days late.¹⁷ In 1987, Purolator agreed to be acquired by Emery. Emery was unable to achieve a satisfactory integration of Purolator, and it sustained large losses in 1988 and early 1989.

Consolidated Freightways was a major trucking company and parent of CF Air Freight, the third largest heavy shipment specialist in the United States. In April 1989, Consolidated Freightways acquired Emery for \$478 million. However, its shipment specialist, CF Air Freight, soon found itself struggling to cope with Emery's problems. In its first 11 months with CF, Emery lost \$100 million. One of the main problems was Emery's billing and tracking system, described as a “rat's nest” of conflicting tariff schedules, which caused overbilling of customers and made tracking packages en route a major chore. In addition, CF enraged corporate customers by trying to add a “fuel surcharge” of 4 to 7% to prices in early 1989. Competitors held the line on prices and picked up business from CF/Emery.¹⁸

As a result of the decline of the CF/Emery/Purolator combination, the other firms in the industry were able to pick up market share. By 1994, industry estimates suggested that Federal Express accounted for 35% of domestic air freight and air express industry revenues; UPS had 26 %; Airborne Express was third with 9%; and Emery and the U.S. Postal Service each held onto 4% of the market. The remainder of

the market was split among numerous small cargo carriers and several combination carriers, such as Evergreen International and Atlas Air. (Combination carriers specialize mostly in heavy freight but do carry some express mail.)¹⁹

The other major acquisition in the industry during this time was the purchase of Flying Tiger by Federal Express for \$880 million in December 1988. Although Flying Tiger had some air express operations in the United States, its primary strength was as a heavy cargo carrier with a global route structure. The acquisition was part of Federal Express's goal of becoming a major player in the international air express market. However, the acquisition had its problems. Many of Flying Tiger's biggest customers, including UPS and Airborne Express, were Federal Express's competitors in the domestic market. These companies had long paid Tiger to carry packages to those countries where they had no landing rights. It seemed unlikely that these companies would continue to give international business to their biggest domestic competitor. Additional problems arose in the process of trying to integrate the two operations. These problems included the scheduling of aircraft and pilots, the servicing of Tiger's fleet, and the merging of Federal's nonunionized pilots with Tiger's unionized pilots.²⁰

During the late 1980s and early 1990s, there were hints of further consolidations. TNT Ltd., a large, Australian-based air cargo operation with a global network, made an unsuccessful attempt to acquire Airborne Express in 1986. TNT's bid was frustrated by opposition from Airborne and by the difficulties inherent in getting around U.S. law, which currently limits foreign firms from having more than a 25% stake in U.S. airlines. In addition, DHL Airways, the U.S. subsidiary of DHL International, was reportedly attempting to enlarge its presence in the United States and was on the lookout for an acquisition.²¹

C2-6b Pricing Trends

In October 1988, UPS offered new discounts to high-volume customers in domestic markets. For the first time since 1983, competitors declined to match the cuts. In January 1989, UPS announced a price increase of 5 % for next-day air service, its first price increase in nearly six years. Federal Express, Airborne, and Consolidated Freightways all followed suit with

moderate increases. Additional rate increases of 5.9 % on next-day air letters were announced by UPS in February 1990. Federal Express followed suit in April, and Airborne also implemented selective price hikes on noncontract business of 5%, or 50 cents, per package on packages up to 20 pounds.

Just as prices were stabilizing, however, the 1990–1991 recession came along. For the first time in the history of the U.S. air express industry, there was a decline in year-on-year shipments, with express freight falling from 4,455 million-ton miles in 1989 to 4,403 million-ton miles in 1990. This decline triggered off another round of competitive price cuts, and yields plummeted. Although demand rebounded strongly, repeated attempts to raise prices in 1992, 1993, and 1994 simply did not stick.²²

Much of the price cutting was focused on large corporate accounts, which by this time accounted for 75% by volume of express mail shipments. For example, as a result of deep price discounting in 1994, UPS was able to lure home shopping programmer QVC and computer mail-order company Gateway 2000 away from Federal Express. At about the same time, however, Federal Express used discounting to capture retailer Williams-Sonoma away from UPS.²³ This prolonged period of price discounting depressed profit margins and contributed to losses at all three major carriers during the early 1990s. Bolstered by a strong economy, prices finally began to stabilize during late 1995, when price increases announced by UPS were followed by similar announcements at Federal Express and Airborne.²⁴

C2-6c Product Trends

Second-Day Delivery Having seen a slowdown in the growth rate of the next-day document delivery business during the early 1990s, the major operators in the air express business began to look for new product opportunities to sustain their growth and margins. One trend was a move into the second-day delivery market, or deferred services, as it is called in the industry. The move toward second-day delivery was started by Airborne Express in 1991 and was soon imitated by its major competitors. Second-day delivery commands a substantially lower price point than next-day delivery. In 1994, Federal Express made an average of \$9.23 on second-day deliveries,

compared to \$16.37 on priority overnight service. The express mail operators see deferred services as a way to utilize excess capacity at the margin, thereby boosting revenues and profits. Since many second-day packages can be shipped on the ground, the cost of second-day delivery can more than compensate for the lower price.

In some ways, however, the service has been almost too successful. During the mid-1990s, the growth rate for deferred services was significantly higher than for priority overnight mail because many corporations came to the realization that they could live with a second-day service. At Airborne Express, for example, second-day delivery accounted for 42% of total volume in 1996, up from 37% in 1995.²⁵

Premium Services Another development was a move toward a premium service. In 1994, UPS introduced its Early AM service, which guaranteed delivery of packages and letters by 8:30 a.m. in select cities. UPS tailored Early AM toward a range of businesses that needed documents or materials before the start of the business day, including hospitals, which are expected to use the service to ship critical drugs and medical devices; architects, who need to have their blueprints sent to a construction site; and salespeople. Although demand for the service is predicted to be light, the premium price makes for high profit margins. In 1994, UPS's price for a letter delivered at 10:30 a.m. was \$10.75, while it charged \$40 for an equivalent Early AM delivery. UPS believes that it can provide the service at little extra cost because most of its planes arrive at their destination cities by 7:30 a.m. Federal Express and Airborne initially declined to follow UPS's lead.²⁶

Logistics Services A strategy of some note was the move by all major operators into third-party logistics services. Since the latter half of the 1980s, more and more companies had been relying on air express operations as part of their just-in-time inventory control systems. As a result, the content of packages carried by air express operators had been moving away from letters and documents and toward high-value, low-weight products. By 1994, less than 20% of FedEx's revenues came from documents.²⁷ To take advantage of this trend, all of the major operators started moving into logistics services designed to assist business customers in their warehousing, distribution, and

assembly operations. The emphasis was on helping their customers reduce the time involved in their production cycles and gain distribution efficiencies.

In the late 1980s, Federal Express set up a Business Logistics Services (BLS) division. The new division evolved from Federal Express's Parts Bank. The Parts Bank stored critical inventory for clients, most of whom were based in the high-tech electronics and medical industries. On request, Federal Express shipped this inventory to its client's customers. The service saves clients from having to invest in their own distribution systems. It also allowed their clients to achieve economies of scale by making large production runs and then storing the inventory at the Parts Bank.

The BLS division expanded this service to include some assembly operations and customs brokerage, and to assist in achieving just-in-time manufacturing. For example, one U.S. computer company relied on BLS to deliver electronic subassemblies from the Far East as a key part of its just-in-time system. Federal Express brought the products to the United States on its aircraft, cleared them through customs with the help of a broker, and managed truck transportation to the customer's dock.

UPS moved into the logistics business in 1993 when it established UPS Worldwide Logistics, which it positioned as a third-party provider of global supply chain management solutions, including transportation management, warehouse operations, inventory management, documentation for import and export, network optimization, and reverse logistics. UPS's logistics business is based at its Louisville, Kentucky, hub. In 1995, the company announced that it would invest \$75 million to expand the scope of this facility.²⁸

Airborne Express also made a significant push into this business. Several of Airborne's corporate accounts utilize a warehousing service called Stock Exchange. As with FedEx's Parts Bank, clients warehouse critical inventory at Airborne's hub in Wilmington, Ohio, and then ship those items on request to their customers. In addition, Airborne set up a commerce park on 1,000 acres around its Wilmington hub. The park was geared toward companies that wanted to outsource logistics to Airborne and could gain special advantages by locating at the company's hub. Not the least of these advantages was the ability to make shipping decisions as late as 2 a.m. Eastern time.

C2-6d Information Systems

From the late 1980s onwards, the major U.S. air express carriers devoted more and more attention to competing on the basis of information technology. The ability to track a package as it moves through an operator's delivery network has always been an important aspect of competition in an industry where reliability is so highly valued. All the major players in the industry invested heavily in bar-code technology, scanners, and computerized tracking systems. UPS, Federal Express, and Airborne also all invested in Internet-based technology that allowed customers to schedule pickups, print shipping labels, and track deliveries online.

C2-6e Globalization

Perhaps the most important development was the increasing globalization of the air freight industry. The combination of a healthy U.S. economy, strong and expanding East Asian economies, and the move toward closer economic integration in Western Europe all offered opportunities for growth in the international air cargo business. The increasing globalization of companies in a whole range of industries, from electronics to autos to fast food to clothing, started to dictate that the air express operators follow suit.

Global manufacturers want to keep inventories at a minimum and deliver just in time as a way of keeping down costs and fine-tuning production, which requires speedy supply routes. Thus, some electronics companies manufacture key components in one location, ship them by air to another for final assembly, and then deliver them by air to a third location for sale. This setup is particularly convenient for industries producing small, high-value items (for example, electronics, medical equipment, and computer software) that can be economically transported by air and for whom just-in-time inventory systems are crucial for keeping down costs. It is also true in the fashion industry, where timing is crucial. For example, a clothing company might manufacture clothes in Vietnam and then ship them by air to the United States to keep from missing out on fashion trends.²⁹ In addition, an increasing number of wholesalers turned to international air express as a way of meeting delivery deadlines.

The emergence of integrated global corporations also increased the demand for the global shipment of contracts, confidential papers, computer printouts, and other documents that were too confidential for Internet transmission or that require real signatures. More general, major U.S. corporations increasingly demanded the same kind of service that they receive from air express operators within the United States for their far-flung global operations.

As a consequence of these trends, rapid growth was predicted in the global arena. Faced with an increasingly mature market at home, by the late 1990s, the race was on among the major air cargo operators to build global air and ground transportation networks that would enable them to deliver goods and documents between any two points on the globe within 48 hours.

The company with the most extensive international operations by the mid-1990s was DHL. In 1995, DHL enjoyed a 44% share of the worldwide market for international air express services.³⁰ Started in California in 1969 and now based in Germany, DHL was smaller than many of its rivals, but it had managed to capture as much as an 80% share in some markets, such as documents leaving Japan, by concentrating solely on international air express.³¹

TNT Ltd., a \$6-billion Australian conglomerate, was another big player in the international air express market, with courier services from 184 countries as well as package express and mail services. In 1995, its share of the international air express market was 12%, down from 18% in 1990.³²

Among U.S. carriers, Federal Express was first in the race to build a global air express network. Between 1984 and 1989, Federal Express purchased 17 other companies worldwide in an attempt to build its global distribution capabilities, culminating in the \$880 million purchase of Flying Tiger. The main asset of Flying Tiger was not so much its aircraft, but its landing rights overseas. The Flying Tiger acquisition gave Federal Express service to 103 countries, a combined fleet of 328 aircraft, and revenues of \$5.2 billion in fiscal year 1989.³³

However, Federal Express had to suffer through years of losses in its international operations. Start-up costs were heavy, due in part to the enormous capital investments required to build an integrated air and ground network worldwide. Between 1985 and 1992, Federal Express spent \$2.5 billion to build an

international presence. Faced also with heavy competition, Federal Express found it difficult to generate the international volume required to fly its planes above the breakeven point on many international routes. Because the demand for outbound service from the United States was initially greater than the demand for inbound service, planes that left New York full often returned half empty.

Early on, trade barriers also proved very damaging to the bottom line. Customs regulations required a great deal of expensive, time-consuming labor such as checking paperwork and rating package contents for duties. These regulations obviously inhibit the ability of international air cargo carriers to effect express delivery.

Federal Express also found it extremely difficult to get landing rights in many markets. For example, it took three years to get permission from Japan to make four flights per week from Memphis to Tokyo, a key link in the overseas system. Then in 1988, just three days before the service was due to begin, the Japanese notified Federal Express that no packages weighing more than 70 pounds could pass through Tokyo. To make matters worse, until 1995, Japan limited Federal Express's ability to fly on from Tokyo and Osaka to other locations in Asia. The Japanese claimed, with some justification, that due to government regulations, the U.S. air traffic market is difficult for foreign carriers to enter, so they saw no urgency to help Federal Express build a market presence in Japan and elsewhere in Asia.³⁴

After heavy financial losses, Federal Express abruptly shifted its international strategy in 1992, selling off its expensive European ground network to local carriers to concentrate on intercontinental deliveries. Under the strategy, Federal Express relied on a network of local partners to deliver its packages. Also, Federal Express entered into an alliance with TNT to share space on Federal Express's daily trans-Atlantic flight.³⁵

UPS also built up an international presence. In 1988, UPS bought eight smaller European air freight companies and Hong Kong's Asian Courier Service, and it announced air service and ground delivery in 175 countries and territories. It was not all smooth sailing for UPS. UPS had been using Flying Tiger for its Pacific shipments. The acquisition of Flying Tiger by Federal Express left UPS in the difficult situation of shipping its parcels on a competitor's plane.

UPS was concerned that its shipments would be pushed to the back of the aircraft. Since there were few alternative carriers, UPS pushed for authority to run an all-cargo route to Tokyo, but approval was slow in coming. “Beyond rights,” to carry cargo from Tokyo to further destinations (such as Singapore and Hong Kong), were also difficult to gain.

In March 1996, UPS sidestepped years of frustrations associated with building an Asian hub in Tokyo by announcing that it would invest \$400 million in a Taiwan hub, which would henceforth be the central node in its Asian network. The decision to invest in an Asian hub followed closely on the heels of a 1995 decision by UPS to invest \$1.1 billion to build a ground network in Europe. In September 1996, UPS went one step further toward building an international air express service when it announced that it would start a pan-European, next-day delivery service for small packages. UPS hoped that these moves would push the international operations of the carrier into the black after eight years of losses.³⁶

C2-7 INDUSTRY EVOLUTION, 1997–2018

C2-7a Pricing Trends

The industry continued to grow at a solid rate through 2000. This helped to establish a stable pricing environment. In 2001, things took a turn for the worse. Recessionary conditions in the United States triggered a 7.6% decline in the number of domestic packages shipped by air. Even though the economy started to rebound in 2002, growth remained sluggish by historic comparison, averaging only 4% per annum.³⁷ Despite this, pricing discipline remained solid. Unlike the recession in 1990–1991, there was no price war in 2001–2002. Indeed, in early 2002, UPS pushed through a 3.5% increase in prices, which was quickly followed by the other carriers. The carriers were able to continue to raise prices at a fairly steady rate through until 2013. From

2007–2013, published rate increases averaged 4 to 5% per annum, although after negotiations the rate increases with large customers were more like 1 to 3% per annum.³⁸ FedEx and UPS were also successful in tacking on a fuel surcharge to the cost of packages to make up for sharply higher fuel costs.³⁹ Between 2002–2006, the average revenue per package at both UPS and FedEx increased as more customers opted for expedited shipments, and as both carriers shipped a high proportion of heavier packages.⁴⁰ The global financial crisis of 2008–2009 and the recession that it ushered in did lead to a slump in volume, a shift to deferred shipping, and more pricing pressures. At FedEx for example, the average revenue per overnight package fell from \$18.42 in 2008 to \$16.04 in 2010. However, volume and pricing trends improved between 2011 and 2012 along with the economy.⁴¹

C2-7b Continuing Growth of Logistics

During 1997–2018, players continued to build their logistics services. During the 2000s, UPS was much more aggressive in this area than FedEx. By 2017, UPS’s logistics business had revenues of \$12 billion. UPS had taken share from FedEx in this area. FedEx reportedly decided to stay more focused on the small package delivery business (although it continues to have a logistics business). Most analysts expected logistics services to continue to be a growth area. Outside of the North American market, DHL emerged as the world’s largest provider of logistics services, particularly following its 2006 acquisition of Britain’s Exel, a large, global logistics business.

C2-7c Expanding Ground Network

In the late 1990s and early 2000s, all the main carriers supplemented their air networks with extensive ground networks and ground hubs to ship packages overnight. With more customers moving from overnight mail to deferred services such as second-day delivery, this shift in emphasis became a necessity. Demand for deferred services helped up reasonably well during 2001, even as demand for overnight packages slumped. Prices for deferred

and ground services were considerably lower than prices for air services, but so were the costs.

UPS has been the most aggressive in building ground delivery capabilities (of course, it already had extensive ground capabilities before its move into the air). In 1999, UPS decided to integrate overnight delivery into its huge ground transportation network. The company spent about \$700 million to strengthen its ground delivery network by setting up regional ground hubs. By doing so, it found it could ship packages overnight on the ground within a 500-mile radius. Because ground shipments are cheaper than air shipments, the result was a significant cost savings for UPS. The company also deferred delivery of about 123 aircraft that were on order, reasoning that they would not be needed as quickly because more of UPS's overnight business was moved to the ground.⁴²

FedEx entered the ground transportation market in 1998 with its acquisition of Caliber Systems for \$500 million. This was followed by further acquisitions, in 2001 and 2006, of significant U.S. trucking companies, including the 2006 acquisition of Watkins Motor Lines, a provider of long-haul trucking services in the United States with sales around \$1 billion. Watkins was re-branded as FedEx National LTL. By 2002, FedEx was able to provide ground service to all U.S. homes, giving it a similar capability to UPS.

In addition, FedEx struck a deal in 2001 with the U.S. Postal Service (USPS), under which FedEx agreed to provide airport-to-airport transportation for 250,000 pounds of USPS Express Mail packages nightly, and about 3 million pounds of USPS Priority Mail packages. Priority Mail was to be moved on FedEx planes that normally sit idle during the day. The deal was reportedly worth \$7 billion in additional revenues to FedEx over the 7-year term of the agreement. In addition, FedEx reaped cost savings from the better utilization of its lift capacity.⁴³ As of 2018, FedEx and the USPS still cooperated with each other.

C2-7d Bundling

Another industry-wide trend has been a move toward selling various product offerings—including air delivery, ground package offerings, and logistics services—to business customers as a bundle. The basic idea behind bundling is to offer complementary products at a price that is less than would have been the case if

each item had been purchased separately. Yet again, UPS has been the most aggressive in offering bundled services to corporate clients. UPS is clearly aiming to set itself up as a one-stop shop offering a broad array of transportation solutions to customers. FedEx has also made moves in this area.⁴⁴

C2-7e Retail Presence

In 2001, UPS purchased Mail Boxes Etc. for \$185 million. Mail Boxes Etc. had 4,300 franchisees, mostly in the United States, who operated small retail packaging, printing and copying stores. At the time, Mail Boxes Etc. was shipping some 40 million packages a year, around 12 million of which were via UPS. UPS stated that it would continue to allow the Mail Boxes stores to ship packages for other carriers. In 2003, the stores were rebranded as the UPS Store. While some franchisees objected to this move, the vast majority ultimately switched to the new brand.⁴⁵ In addition to the franchise stores, UPS also opened wholly-owned UPS stores not just in the United States, but internationally, and by 2006 had 5,600 outlets. In addition to the UPS Store, UPS put UPS Centers in office supplies stores, such as Office Depot, and by 2006 it had some 2,200 of these.

In 2004, FedEx followed UPS by purchasing Kinko's for \$2.4 billion. Kinko's, which had 1,200 retail locations, 90% in the United States, focused on providing photocopying, printing, and other office services to individuals and small businesses. FedEx has plans to increase the network of Kinko's stores to 4,000. In addition to providing printing, photocopying, and package services, FedEx is also experimenting using Kinko's stores as miniwarehouses to store high-value goods, such as medical equipment, for its supply chain management division.⁴⁶

C2-7f The Entry and Exit of DHL

In the late 1990s, DHL was acquired by Deutsche Post. Deutsche Post also spent approximately \$5 billion to acquire several companies in the logistics business between 1997 and 1999. In November 2000, Deutsche Post went private with an initial public offering that raised \$5.5 billion, and announced its intention to build an integrated global delivery and logistics network. Many believed it was only a matter of time

before the company entered the United States. Thus, few were surprised when, in 2003, DHL acquired Airborne. Under the terms of their agreement, Airborne Express sold its truck delivery system to DHL for \$1.05 billion. Airborne's fleet of planes were spun off into an independent company called ABX Air, owned by Airborne's shareholders, and which continues to serve DHL Worldwide Express under a long-term contract. This arrangement overcame the U.S. law that prohibits foreign control of more than 25% of a domestic airline. In the meantime, DHL spun its own fleet of U.S.-based planes into a U.S.-owned company, Astar, to also escape the charge that its U.S. airline was foreign owned. Between 2003 and 2005, DHL reportedly invested some \$1.2 billion to upgrade the capabilities of assets acquired from Airborne.⁴⁷

The DHL acquisition created three major competitors in both the United States and global delivery markets. By Fall 2003, DHL had launched an ad campaign aimed at UPS and FedEx customers promoting the service and cost advantages that they would benefit from because of its merger with Airborne. DHL targeted specific zip code areas in its advertising promoting its claim to be number one in international markets, something important to many companies given the increasing importance of global commerce. In its ads, DHL reported that “current Airborne customers will be connected to DHL's extensive international delivery system in more than 200 countries.”⁴⁸

DHL's stated goal was to become a powerhouse in the U.S. delivery market. While its share of the U.S. small package express market remained small after the acquisition at around 10%, many thought that DHL would benefit from ownership by Deutsche Post, and from its own extensive ex-U.S. operations. When it first acquired Airborne, Deutsche Post stated that the U.S. operation would be profitable by the end of 2006.

However, the company ran into “integration problems” and suffered from reports of poor customer service and missed delivery deadlines. In 2006, DHL management stated that it now did not see the North American unit turning profitable until 2009. DHL lost some \$500 million in the United States in 2006.⁴⁹ In 2007, it lost close to \$1 billion. With corporate customers leaving for rivals, and market share sliding, in late 2008, DHL announced that it would exit the

U.S. market. DHL shut down its air and ground hubs, laid off 9,600 employees, and took a charge against earnings of some \$3.9 billion. In explaining the exit decision, DHL management stated that the underestimated just how tough it would be to gain share against FedEx and UPS.⁵⁰

C2-7g Continued Globalization

Between 1997 and 2018, UPS and FedEx continued to build out their global infrastructure. By 2018, UPS delivered to more than 220 countries. Much within-country delivery is handled by local enterprises. The company has five main hubs. In addition to its main U.S. hub in Louisville, Kentucky, it has hubs in Cologne (for Europe), Shanghai (for Asia), Miami (serving Latin American traffic), and Shenzhen China (again, Asia). In 2004, UPS acquired Menio World Wide Forwarding, a global freight forwarder, to boost its global logistics business. In the same year, it also acquired complete ownership of its Japanese delivery operation (which was formally a joint venture with Yamato Transport Company). In 2005, UPS acquired operators of local ground networks in the United Kingdom and Poland, and it is pushing into mainland China, which it sees as a major growth opportunity.

Like UPS, FedEx serves more than 220 countries around the world, although also like UPS, most local ground delivery is in the hands of local partners. FedEx has recently been focusing upon building a presence in both China and India. The company developed a new Asian Pacific hub in Guangzhou China. This is FedEx's fifth international hub. The others are in Paris (handling intra-European express), the Philippines (handling intra-Asian express), Alaska (handles packages flowing between Asia, North America, and Europe) and Miami (for Latin America). In 2006, FedEx signaled its commitment to the Chinese market by buying out its joint venture partner, Tianjin Datian W. Group, for \$400 million. The acquisition gave FedEx control of 90 parcel handling facilities and a 3,000-strong work force in China.⁵¹

While UPS and FedEx dominate the U.S. market for small package express delivery services, internationally DHL remains the largest carrier with a 38% global market share for small package express shipments across borders (see Exhibit 2). In 2012, UPS made a \$6.7-billion takeover bid for TNT, which

Exhibit 2 International Express Shipments Market Share 2017⁵²

	Americas	Europe	Asia Pacific	Global
DHL	20%	44%	49%	38%
UPS	33%	24%	11%	22%
FedEX	43%	10%	19%	24%
TNT	1%	11%	17%	11%

would have significantly strengthened its position in Europe. However, the European Commission signaled that it would block the takeover due to its adverse impact on competition within the European Union, and UPS abandoned the proposed acquisition. In 2016, FedEx made a successful \$4.8-billion bid for TNT and is now in the process of integrating TNT into its business. FedEx's smaller position in Europe was enough to convince European regulators to greenlight the deal.

C2-7h Amazon's Entry

Since 2016, Amazon has been investing in its own small package express delivery network in the United States. Amazon shipped some 1.2 billion packages in 2017, double the figure in 2012. Roughly half of its \$1 billion U.S. shipments go through the US Postal Service, with UPS and FedEx carrying much of the remainder. Shipping cost Amazon \$21.72 billion in 2017, or about 12% of the company's revenue, making Amazon a major customer of the shippers.⁵³

Amazon's relationships with delivery networks have hit some speed bumps. In 2013 UPS' network was overwhelmed with last minute purchases at Christmas, causing some deliveries to be delayed and prompting an internal decision at Amazon that it had to build out its own delivery capabilities quickly. Since then, UPS and FedEx have continued to struggle to fulfill Christmas volumes. During the 2017 Christmas holiday season, both UPS and FedEx were reportedly unable to deliver all small packages on time due to very high volumes.⁵⁴ UPS incurred an extra \$125 million in costs as it scrambled to lease planes and trucks to handle the extra volume. In early 2018,

UPS announced that it would invest up to \$7 billion in its delivery network, adding jumbo jets and automating its facilities, as it tried to hit the service issues that hit deliveries in late 2017.⁵⁵

In 2016, Amazon announced that it had purchased the Wilmington, Ohio, airport that was once the hub of Airborne Express and then DHL. It also announced that it had leased 20 Boeing 767 cargo aircraft that would operate under the name Prime Air.⁵⁶ By 2018, Amazon had built out more than 70 delivery stations, purchased more than 7,500 truck trailers, and leased roughly 35 aircraft. Utilizing this capacity, Amazon is delivering orders in dozens of cities across the United States. The company also has plans to launch a delivery service for businesses, called Shipping with Amazon. The service could potentially undercut UPS and FedEx on pricing according to people familiar with the company's plans.

In June 2018, Amazon signaled its intention to push further into the delivery business when the company stated that it would invite entrepreneurs to form small delivery companies employing up to 100 drivers and leasing about 20 to 40 Amazon branded trucks. Amazon announced that it would provide training as well as access to its delivery technology, along with discounts on vehicle leases, insurance, Amazon branded uniforms, fuel and more. This announcement led to rife speculation about Amazon's ultimate intentions. Was it just trying to supplement the existing delivery system, or would it ultimately emerge as a full-scale competitor to UPS and FedEx?

This case is intended to be used as a basis for class discussion rather than as an illustration of either effective or ineffective handling of the situation. Reprinted by permission of Charles W. L. Hill.

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CASE 3

AIRBORNE EXPRESS: THE UNDERDOG

*This case was prepared by Charles W. L. Hill of the
School of Business, University of Washington, Seattle.*

This case was made possible by the generous assistance of Airborne Express. The information given in this case was provided by Airborne Express. Unless otherwise indicated, Airborne Express, and the Securities and Exchange Commission's 10-K filings, are the sources of all information contained within this case. The case is based on an earlier case, which was prepared with the assistance of Daniel Bodnar, Laurie Martinelli, Brian McMullen, Lisa Mutty, and Stephen Schmidt. The case is intended as a basis for classroom discussion rather than as an illustration of either effective or ineffective handling of an administrative situation. This case was prepared by Charles W. L. Hill, University of Washington. Used by permission.

C3-1 INTRODUCTION

Airborne Inc., which operated under the name Airborne Express, was an air-express transportation company providing express and second-day delivery of small packages (less than 70 pounds) and documents throughout the United States and to and from many foreign countries. The company owned and operates an airline and a fleet of ground-transportation

vehicles to provide complete door-to-door service. It was also an airfreight forwarder, moving shipments of any size on a worldwide basis. In 2003 Airborne Express held third place in the U.S. air express industry, with 9% of the market for small package deliveries. Its main domestic competitors were Federal Express, which had 26% of the market; United Parcel Service (UPS), which had 53% of the market. There were several smaller players in the market at the time, including DHL Airways, Consolidated Freightways (CF) and the U.S. Postal Service, each of which held under 5% of the market share.¹ DHL however, had a huge presence outside of North America and was in fact the largest small package delivery company in the world. In 2003, after years of struggling to survive in the fiercely competitive small package express delivery industry, Airborne was acquired by DHL, which was itself owned by Deutsche Post, the large German postal, express package, and logistics company.

The evolution of the air express industry and the current state of competition in the industry were discussed in a companion case to this one, "The Evolution of the Air Express Industry, 1973–2010." The current case focuses on the operating structure, competitive strategy, organizational structure, and cultures of Airborne Express from its inception until it was acquired by DHL in 2003. It also deals with the aftermath of the DHL acquisition.

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C3-2 HISTORY OF AIRBORNE EXPRESS

Airborne Express was originally known as Pacific Air Freight when it was founded in Seattle at the close of World War II by Holt W. Webster, a former Army Air Corps officer. (See Table 1 for a listing of major

milestones in the history of Airborne Express.) The company merged with Airborne Freight Corporation of California in 1968, taking the name of the California company but retaining management direction by the former officers of Pacific Air Freight. Airborne was initially an exclusive airfreight forwarder. Freight forwarders such as Airborne arrange for the transportation of air cargo between any two destinations. They purchase cargo space from the airlines and retail this

Table 1 Major Milestones at Airborne Express²

1946:	Airborne Flower Traffic Association of California is founded to fly fresh flowers from Hawaii to the mainland.
1968:	Airborne of California and Pacific Air Freight of Seattle merge to form Airborne Freight Corporation. Headquarters are in Seattle, Washington.
1979–81:	Airborne Express is born. After purchasing Midwest Air Charter, Airborne buys Clinton County Air Force Base in Wilmington, Ohio, becoming the only carrier to own and operate an airport. The package sort center opens, creating the “hub” for the hub-and-spoke system.
1984–86:	Airborne is first carrier to establish a privately operated Foreign Trade Zone in an air industrial park.
1987:	Airborne opens the Airborne Stock Exchange, a third-party inventory management and distribution service. In the same year, service begins to and from more than 8,000 Canadian locations.
1988:	Airborne becomes the first air express carrier to provide same-day delivery, through its purchase of Sky Courier.
1990:	The International Cargo Forum and Exposition names Airborne the carrier with the most outstanding integrated cargo system over the previous two years.
1991:	A trio of accolades: Airborne is the first transportation company to receive Volvo-Flyg Motors’ Excellent Performance Award. <i>Computerworld</i> ranks Airborne the “most effective user of information systems in the U.S. transportation industry.” In addition, it receives the “Spread the Word!” Electronic Data Interchange (EDI) award for having the largest number of EDI users worldwide in the air express and freight forwarding industry.
1992:	Airborne introduces Flight-ReadySM—the first prepaid Express Letters and Packs.
1993:	Airborne introduces Airborne Logistics Services (ALS), a new subsidiary providing outsourced warehousing and distribution services. IBM consolidates its international shipping operation with Airborne.
1994:	Airborne opens its Ocean Service Division, becoming the first express carrier to introduce ocean shipping services. Airborne Logistics Services (ALS) establishes the first new film distribution program for the movie industry in 50 years. We also become the first company to provide on-line communication to Vietnam.
1995:	Airborne Alliance Group, a consortium of transportation, logistics, third-party customer service operations and high-tech companies providing value-added services, is formed. Airborne opens a second runway at its hub, which is now the United States’ largest privately owned airport. It also expands its fleet, acquiring Boeing 767-200 aircraft.
1996:	Airborne Express celebrates 50 years of providing value-added distribution solutions to business.

(continued)

Table 1 Major Milestones at Airborne Express² (continued)

1997:	Airborne Express has its best year ever, with net earnings increasing three-and-a-half-fold over the previous year. Airborne's stock triples, leading to a two-for-one stock split in February, 1998.
1998:	Airborne posts record profits and enters the Fortune 500. The first of 30 Boeing 767s is introduced to our fleet. The Business Consumer Guide rates Airborne as the Best Air Express Carrier for the 4th consecutive year.
1999:	Airborne@home, a unique alliance with the United States Postal Service, is introduced. It enables e-tailers, catalog companies and similar businesses to ship quickly and economically to the residential marketplace. Optical Village is created. Part of Airborne Logistics Services, this new division brings together some of the biggest competitors in the optical industry to share many costs and a single location for their assembly, storage, inventory, logistics, and delivery options.
2000:	Airborne announces several changes in senior management, including a new President and Chief Operating Officer, Carl Donaway. Several new business initiatives are announced, most notably a ground service scheduled to begin April 1, 2001. Airborne also wins the Brand Keys Customer Loyalty Award, edging out the competition for the second consecutive year.
2001:	Airborne launches Ground Delivery Service and 10:30 A.M. Service, giving Airborne a comprehensive, full-service industry competitive capability. Airborne.com launches its Small Business Center, as well as a variety of enhancements to help all business customers speed and simplify the shipping process. We also release the Corporate Exchange shipping application, simplifying desktop shipping for customers while giving them greater control. Advanced tracking features are added to airborne.com, and Airborne eCourier is released, enabling customers to send confidential, signed documents electronically.
2003:	Airborne's ground operations are acquired by DHL for \$1.1 billion.

in small amounts. They deal primarily with small customers, providing pickup and delivery services in most cities, either in their own trucks or through contract agents.

Following the 1977 deregulation of the airline industry, Airborne entered the air express industry by leasing the airplanes and pilots of Midwest Charter, a small airline operating out of its own airport in Wilmington, Ohio. However, Airborne quickly became dissatisfied with the limited amount of control they were able to exercise over Midwest, which made it very difficult to achieve the kind of tight coordination and control of logistics that was necessary to become a successful air express operator. Instead of continuing to lease Midwest's planes and facility, in 1980 Airborne decided to buy "the entire bucket of slop; company, planes, pilots, airport and all."

Among other things, the Midwest acquisition put Airborne in the position of being the only industry participant to own an airport. Airborne immediately began the job of developing a hub-and-spoke system capable of supporting a nationwide distribution system. An efficient sorting facility was established at the Wilmington hub. Airborne upgraded

Midwest's fleet of prop and propjet aircraft, building a modern fleet of DC-8s, DC-9s, and YS-11 aircraft. These planes left major cities every evening, flying down the spokes carrying letters and packages to the central sort facility in Wilmington, Ohio. There the letters and packages were unloaded, sorted according to their final destination, and then reloaded and flown to their final destination for delivery before noon the next day.

During the late 1970s and early 1980s, dramatic growth in the industry attracted many competitors. As a consequence, despite a high-growth rate price competition became intense, forcing a number of companies to the sidelines by the late 1980s. Between 1984 and 1990 average revenues per domestic shipment at Airborne fell from around \$30 to under \$15 (in 2003 they were just under \$9).

Airborne was able to survive this period by pursuing a number of strategies that increased productivity and drove costs down to the lowest levels in the industry. Airborne's operating costs per shipment fell from \$28 in 1984 to around \$14 by 1990, and to \$9.79 by 2001. As a consequence, by the late 1980s, Airborne had pulled away from a pack of struggling

competitors to become one of the top-three companies in the industry, a position it still held when acquired by DHL in 2003.

C3-3 AIR EXPRESS OPERATIONS

C3-3a The Domestic Delivery Network

As of 2002, its last full year as an independent enterprise, Airborne Express had 305 ground stations within the United States. The stations were the ends of the spokes in Airborne's hub-and-spoke system and the distribution of stations allows Airborne to reach all major population centers in the country. In each station there were about fifty to fifty-five or so drivers plus staff. About 80% of Airborne's 115,300 full-time and 7,200 part-time employees were found at this level. The stations were the basic units in Airborne's delivery organization. Their primary task was to ferry packages between clients and the local air terminal. Airborne utilized approximately 14,900 radio-dispatch delivery vans and trucks to transport packages, of which 6,000 were owned by the company. Independent contractors under contract with the company provided the balance of the company's pickup and delivery services.

Airborne's drivers made their last round of major clients at 5 P.M. The drivers either collected packages directly from clients or from one of the company's 15,300-plus drop boxes. The drop boxes were placed at strategic locations such as the lobbies of major commercial buildings. To give clients a little more time, in most major cities there were also a few central drop boxes that are not emptied until 6 P.M. If a client needed still more time, so long as the package could be delivered to the airport by 7 P.M., it would make the evening flight.

When a driver picked up a package, he or she read a bar code that is attached to the package with a hand-held scanner. This information was fed directly into Airborne's proprietary Freight, On-Line Control and Update System (FOCUS) computer system. The FOCUS system, which had global coverage, records shipment status at key points in the life cycle of a shipment. Thus, a customer could call Airborne on a 24-hour basis to locate their package in Airborne's

system. FOCUS also allowed a customer direct access to shipment information through the Internet. The customer needed only to access Airborne's website and enter the code number assigned to a package, and the FOCUS system would track it.

When a driver completed a pickup route, she or he headed to Airborne's loading docks at the local airport. (Airborne served all 99 major metropolitan airports in the United States.) There the packages were loaded into C-containers (discussed later in this case study). C-containers were then towed by hand or by tractor to a waiting aircraft, where they were loaded onto a conveyor belt and in turn pass through the passenger door of the aircraft. Before long the aircraft was loaded and would either fly directly to the company's hub at Wilmington, or make one or two stops along the way to pick up more packages.

Sometime between midnight and 2 A.M., most of the aircraft would have landed at Wilmington. An old, strategic air-command base, Wilmington's location places it within a 600-mile radius (an overnight drive or one-hour flying time) of 60% of the U.S. population. Wilmington has the advantage of a good weather record. In all the years that Airborne operated at Wilmington, air operations were "fogged out" on only a handful of days. In 1995, Airborne opened a second runway at Wilmington. Developed at a cost of \$60 million, the second runway made Wilmington the largest privately owned airport in the country. The runway expansion was part of a \$120 million upgrade of the Wilmington sort facility.

After arrival at Wilmington, the plane taxied down the runway and parked alongside a group of aircraft that were already disgorging their load of C-containers. Within minutes the C-containers were unloaded from the plane down a conveyor belt and towed to the sort facility by a tractor. The sort facility had the capacity to handle 1.2 million packages per night. At the end of 2001 the facility handled an average of 1 million packages a night. The bar codes on the packages were read, and then the packages were directed through a labyrinth of conveyor belts and sorted according to final destination. The sorting was partly done by hand and partly automated. At the end of this process, packages were grouped together by final destination and loaded into a C-container. An aircraft bound for the final destination was then loaded with C-containers, and by 5 A.M. most aircraft had departed.

Upon arrival at the final destination, the plane was unloaded and the packages sorted according to their delivery points within the surrounding area. Airborne couriers then took the packages on the final leg of their journey. Packages had a 75% probability of being delivered to clients by 10:30 A.M., and a 98% probability of being delivered by noon.

C3-3b Regional Trucking Hubs

Although about 71% of packages were transported by air and passed through Wilmington, Airborne also established ten regional trucking hubs that dealt with the remaining 29% of the company's domestic volume. These hubs sorted shipments that originate and had a destination within approximately a 300-mile radius. The first one opened was in Allentown, Pennsylvania, centrally located on the East Coast. This hub handled packages transported between points within the Washington, D.C., to Boston area. Instead of transporting packages by air, packages to be transported within this area were sorted by the drivers at pickup and delivered from the driver's home station by scheduled truck runs to the Allentown hub. There they were sorted according to destination and taken to the appropriate station on another scheduled truck run for final delivery.

One advantage of ground-based transportation through trucking hubs is that operating costs are much lower than for air transportation. The average cost of a package transported by air is more than five times greater than the cost of a package transported on the ground. However, this cost differential is transparent to the customer, who assumes that all packages are flown. Thus, Airborne could charge the same price for ground-transported packages as for air-transported packages, but the former yielded a much higher return. The trucking hubs also had the advantage of taking some of the load of the Wilmington sorting facility, which was operating at about 90% capacity by 2003.

C3-3c International Operations

In addition to its domestic express operations, Airborne was also an international company providing service to more than 200 countries worldwide. International operations accounted for about 11% of total

revenues in 2002. Airborne offered two international products: freight products and express products. Freight products were commercial-sized, larger-unit shipments. This service provided door-to-airport service. Goods were picked up domestically from the customer and then shipped to the destination airport. A consignee or an agent of the consignee got the paperwork and cleared the shipment through customs. Express packages were small parcels, documents, and letters. This was a door-to-door service, and all shipments were cleared through customs by Airborne. Most of Airborne's international revenues came from freight products.

Airborne did not fly any of its own aircraft overseas. Rather, it contracted for space on all-cargo airlines or in the cargo holds of passenger airlines. Airborne-owned facilities overseas in Japan, Taiwan, Hong Kong, Singapore, Australia, New Zealand, and London functioned in a manner similar to Airborne's domestic stations. (That is, they had their own trucks and drivers and were hooked into the FOCUS tracking system.) The majority of foreign distribution, however, was carried out by foreign agents—large, local, well-established surface delivery companies. Airborne entered into a number of exclusive strategic alliances with large foreign agents. It had alliances in Japan, Thailand, Malaysia, and South Africa. The rationale for entering strategic alliances, along with Airborne's approach to global expansion, is discussed in greater detail later in this case.

Another aspect of Airborne's international operations was the creation at its Wilmington hub of the only privately certified Foreign Trade Zone (FTZ) in the United States. While in an FTZ, merchandise is tax free and no customs duty is paid on it until it leaves. Thus, a foreign-based company could store critical inventory in the FTZ and have Airborne deliver it just-in-time to U.S. customers. This allowed the foreign company to hold inventory in the United States without having to pay customs duty on it until the need arose.

C3-3d Aircraft Purchase and Maintenance

As of 2002, Airborne Express owned a fleet of 118 aircraft, including 24 DC-8s, 74 DC-9s, and twenty Boeing 767s. In addition, approximately

70 smaller aircraft were chartered nightly to connect smaller cities with company aircraft that then operated to and from the Wilmington hub. To keep down capital expenditures, Airborne preferred to purchase used planes. Airborne converted the planes to suit its specifications at a maintenance facility based at its Wilmington hub. Once it got a plane, Airborne typically gutted the interior and installed state-of-the-art electronics and avionics equipment. The company's philosophy was to get all of the upgrades that it could into an aircraft. Although this could cost a lot up front, there was a payback in terms of increased aircraft reliability and a reduction in service downtime. Airborne also standardized cockpits as much as possible. This made it easier for crews to switch from one aircraft to another if the need arose. According to the company, in the early 1990s the total purchase and modification of a secondhand DC-9 cost about \$10 million, compared with an equivalent new plane cost of \$40 million. An additional factor reducing operating costs was that Airborne's DC-9 aircraft only required a two-person cockpit crew, as opposed to the three-person crews required in most Federal Express and UPS aircraft at the time.

After conversion, Airborne strove to keep aircraft maintenance costs down by carrying out virtually all of its own fleet repairs. (It was the only all-cargo carrier to do so.) The Wilmington maintenance facility could handle everything except major engine repairs and had the capability to machine critical aircraft parts if needed. The company saw this in-house facility as a major source of cost savings. It estimated that maintenance labor costs were 50 to 60% below the costs of having the same work performed outside.

In December 1995, Airborne announced a deal to purchase 12 used Boeing 767-200 aircraft between the years 1997 and 2000, and announced plans to purchase a further 10 to 15 used 767-200s between the years 2000 and 2004. These were the first wide-bodied aircraft in Airborne's fleet. The cost of introducing the first 12 aircraft was about \$290 million, and the additional aircraft would cost a further \$360 million. The shift to wide-bodied aircraft was promoted by an internal study, which concluded that, with growing volume, wide-bodied aircraft would lead to greater operating efficiencies.

During 2001, Airborne was using about 66.6% of its lift capacity on a typical business day. This compared with 76.7% capacity utilization in 1997 and 70%

utilization in 2000. In late 2001, Airborne reduced its total lift capacity by some 100,000 pounds (to about 4 million pounds a day) in an effort to reduce excess capacity of certain routes and better match supply with demand conditions.

C3-3e C-Containers

C-containers, uniquely shaped, 60-cubic-foot containers, were developed by Airborne Express in 1985 at a cost of \$3.5 million. Designed to fit through the passenger doors of DC-8 and DC-9 aircraft, they replaced the much larger A-containers widely used in the air cargo business. At six times the size of a C-container, A-containers can only be loaded through specially built cargo doors and require specialized loading equipment. The loading equipment required for C-containers is a modified belt loader, similar to that used for loading baggage onto a plane, and about 80% less expensive than the equipment needed to load A-containers. The use of C-containers meant that Airborne did not have to bear the \$1 million per plane cost required to install cargo doors that would take A-containers. The C-containers were shaped to allow maximum utilization of the planes' interior loading space. Fifty of the containers fit into a converted DC-9, and about 83 fit into a DC-8-62. Moreover, a C-container filled with packages can be moved by a single person, making them easy to load and unload. Airborne Express took out a patent on the design of the C-containers.

C3-3f Information Systems

Airborne utilized three information systems to help it boost productivity and improve customer service. The first was the LIBRA II system. LIBRA II equipment, which included a metering device and PC computer software, was installed in the mailroom of clients. With minimum data entry, the metering device weighed the package, calculated the shipping charges, generated the shipping labels, and provided a daily shipping report. By 2002, the system was in use at approximately 9,900 domestic customer locations. The use of LIBRA II not only benefited customers but also lowered Airborne's operating costs, because LIBRA II shipment data were transferred into Airborne's FOCUS shipment tracking system automatically, thereby avoiding duplicate data entry.

FOCUS was the second of Airborne's three main information systems. As discussed earlier, the FOCUS system was a worldwide tracking system. The bar codes on each package were read at various points (for example, at pickup, at sorting in Wilmington, at arrival, and so forth) using hand-held scanners, and this information was fed into Airborne's computer system. Using FOCUS, Airborne could track the progress of a shipment through its national and international logistics system. The major benefit was in terms of customer service. Through an Internet link, Airborne's customers could track their shipment through Airborne's system on a 24-hour basis.

For its highest-volume corporate customers, Airborne developed Customer Linkage, an electronic data interchange (EDI) program and the third information system. The EDI system was designed to eliminate the flow of paperwork between Airborne and its major clients. It allowed customers to create shipping documentation at the same time they were entering orders for their goods. At the end of each day, shipping activities were transmitted electronically to Airborne's FOCUS system, where they are captured for shipment tracking and billing. Customer Linkage benefited the customer by eliminating repetitive data entry and paperwork. It also lowered the company's operating costs by eliminating manual data entry. (In essence, both LIBRA II and Customer Linkage pushed off a lot of the data-entry work into the hands of customers.) The EDI system also included electronic invoicing and payment remittance processing. Airborne also offered its customers a program known as Quicklink, which significantly reduced the programming time required by customers to take advantage of linkage benefits.

To build broad market coverage, Airborne followed Federal Express's lead of funding a television advertising campaign designed to build consumer awareness. However, by the mid-1980s Airborne decided that this was an expensive way of building market share. The advertising campaign bought recognition but little penetration. One of the principal problems was that it was expensive to serve infrequent users. Infrequent users demanded the same level of service as frequent users, but Airborne would typically only get one shipment per pickup with an infrequent user, compared with 10 or more shipments per pickup with a frequent user, so far more pickups were required to generate the same volume of business. Given the extremely competitive nature of the industry at this time, such an inefficient utilization of capacity was of great concern to Airborne.

Consequently, in the mid-1980s, Airborne became a niche player in the industry and focused on serving the needs of high-volume corporate accounts. The company slashed its advertising expenditure, pulling the plug on its TV ad campaign, and invested more resources in building a direct sales force, which grew to be 460 strong. By focusing upon high-volume corporate accounts, Airborne was able to establish scheduled pickup routes and use its ground capacity more efficiently. This enabled the company to achieve significant reductions in its unit cost structure. Partly due to this factor, Airborne executives reckoned that their cost structure was as much as \$3 per shipment less than that of FedEx. Another estimate suggested that Airborne's strategy reduced labor costs by 20% per unit for pickup, and 10% for delivery.

Of course, there was a downside to this strategy. High-volume corporate customers have a great deal more bargaining power than do infrequent users, so they can and do demand substantial discounts. For example, in March 1987, Airborne achieved a major coup when it won an exclusive, three-year contract to handle all of IBM's express packages weighing less than 150 pounds. However, to win the IBM account, Airborne had to offer rates up to 84% below Federal Express's list prices. Nevertheless, the strategy seemed to work. As of 1995, approximately 80% of Airborne's revenues came from corporate accounts, most of them secured through competitive bidding. The concentrated volume that this business represented helped Airborne to drive down costs.

C3-4 STRATEGY

C3-4a Market Positioning

In the early 1980s, Airborne Express tried hard to compete head-to-head with Federal Express. This included an attempt to establish broad market coverage, including both frequent and infrequent users. Frequent users generated more than \$20,000 of business per month, or more than 1,000 shipments per month. Infrequent users generated less than \$20,000 per month, or less than 1,000 shipments per month.

C3-4b Delivery Time, Reliability, and Flexibility

A further feature of Airborne's strategy was the decision not to try to compete with Federal Express on delivery time. Federal Express and UPS have long guaranteed delivery by 10:30 A.M. Airborne guaranteed delivery by midday, although it offered a 10:30 guarantee to some very large corporate customers. Guaranteeing delivery by 10:30 A.M. would mean stretching Airborne's already tight scheduling system to the limit. To meet its 10:30 A.M. deadline, FedEx has to operate with a deadline for previous days' pickups of 6:30 P.M. Airborne could afford to be a little more flexible and arrange pickups at 6:00 P.M. if that suited a corporate client's particular needs. Later pickups clearly benefit the shipper, who is, after all, the paying party.

In addition, Airborne executives felt that a guaranteed 10:30 A.M. delivery was unnecessary. They argued that the extra hour and a half does not make a great deal of difference to most clients, and they were willing to accept the extra time in exchange for lower prices. In addition, Airborne stressed the reliability of its delivery schedules. As one executive put it, "A package delivered consistently at 11:15 A.M. is as good as delivery at 10:30 A.M." This reliability was enhanced by Airborne's ability to provide shipment tracking through its FOCUS system.

C3-4c Deferred Services

With a slowdown in the growth rate of the express mail market toward the end of the 1980s, in 1990 Airborne decided to enter the deferred-delivery business with its Select Delivery Service (SDS) product. The SDS service provides for next-afternoon or second-day delivery. Packages weighing 5 pounds or less are generally delivered on a next-afternoon basis, with packages of more than 5 pounds being delivered on a second-day basis. SDS shipment comprised approximately 42% of total domestic shipments in 1995. They were priced lower than overnight express products, reflecting the less time-sensitive nature of these deliveries. The company utilized any spare capacity on its express flights to carry SDS shipments. In addition, Airborne used other carriers, such as passenger carriers with spare cargo capacity in

the bellies of their planes, to carry less urgent SDS shipments.

Early in 1996 Airborne began to phase in two new services to replace its SDS service. Next Afternoon Service was available for shipments weighing 5 pounds or less, and Second Day Service was offered for shipments of all weights. By 2001, deferred shipments accounted for 46% of total domestic shipments.

C3-4d Ground Delivery Service

In April 2001, Airborne launched a Ground delivery Service (GDS) in response to similar offerings from FedEx and UPS. Airborne came to the conclusion that it was very important to offer this service in order to retain parity with its principle competitors, and to be able to offer bundled services to its principle customers (that is, to offer them air, ground, and logistics services for a single bundled price). Airborne also felt that they could add the service with a relatively minor initial investment, \$30 million, since it leveraged of existing assets, including trucks, tracking systems, and regional ground hubs and sorting facilities.

The new service was initially been introduced on a limited basis, and targeted at large corporate customers. GDS was priced less than deferred services, reflecting the less time sensitive nature of the GDS offering. GDS accounted for 1.5% of domestic shipments in 2001, and 4% in the fourth quarter of 2001.

C3-4e Logistics Services

Although small-package express mail remained Airborne's main business, through its Advanced Logistics Services Corp. (ALS) subsidiary the company increasingly promoted a range of third-party logistics services. These services provided customers with the ability to maintain inventories in a 1-million-square-foot "stock exchange" facility located at Airborne's Wilmington hub or at sixty smaller "stock exchange" facilities located around the country. The inventory could be managed either by the company or by the customer's personnel. Inventory stored at Wilmington could be delivered utilizing either Airborne's airline system or, if required, commercial airlines on a next-flight-out basis.

ALS's central print computer program allowed information on inventories to be sent electronically to customers' computers located at Wilmington, where Airborne's personnel monitored printed output and shipped inventories according to customers' instructions.

For example, consider the case of Data Products Corp., a producer of computer printers. Data Products takes advantage of low labor costs to carry out significant assembly operations in Hong Kong. Many of the primary component parts for its printers, however, such as microprocessors, are manufactured in the United States and have to be shipped to Hong Kong. The finished product is then shipped back to the United States for sale. In setting up a global manufacturing system, Data Products had a decision to make: either consolidate the parts from its hundreds of suppliers in-house and then arrange for shipment to Hong Kong, or contract out to someone who could handle the whole logistics process. Data Products decided to contract out, and they picked Airborne Express to consolidate the component parts and arrange for shipments.

Airborne controlled the consolidation and movement of component parts from the component part suppliers through to the Hong Kong assembly operation in such a way as to minimize inventory-holding costs. The key feature of Airborne's service was that all of Data Products' materials were collected at Airborne's facility at Los Angeles International Airport. Data Products' Hong Kong assembly plants could then tell Airborne what parts to ship by air and when they were needed. Airborne was thus able to provide inventory control for Data Products. In addition, by scheduling deliveries that guaranteed year-round traffic between Los Angeles and Hong Kong, Airborne was able to negotiate a better air rate from Japan Air Lines (JAL) for the transportation of component parts.

C3-4f International Strategy

One of the major strategic challenges that Airborne faced (along with the other express mail carriers) was how best to establish an international service that is comparable to their domestic service. Many of Airborne's major corporate clients were becoming

ever more global in their own strategic orientation. As this occurred, they were increasingly demanding a compatible express mail service. In addition, the rise of companies with globally dispersed manufacturing operations that relied upon just-in-time delivery systems to keep inventory holding costs down created a demand for a global air-express services that could transport critical inventory between operations located in different areas of the globe (consider the example of Data Products discussed earlier in this case study).

The initial response of FedEx and UPS to this challenge was to undertake massive capital investments to establish international airlift capability and international ground operations based upon the U.S. model. Their rationale was that a wholly-owned global delivery network was necessary to establish the tight control, coordination, and scheduling required for a successful air express operation. In the 1990s, however, FedEx pulled out of its European ground operations, while continuing to fly its own aircraft overseas.

Airborne decided upon a quite different strategy. In part born of financial necessity (Airborne lacks the capital necessary to imitate FedEx and UPS), Airborne decided to pursue what they referred to as a *variable cost strategy*. This involved two main elements: (1) the utilization of international airlift on existing air cargo operators and passenger aircraft to get their packages overseas, and (2) entry into strategic alliances with foreign companies that already had established ground delivery networks. In these two ways, Airborne hoped to establish global coverage without having to undertake the kind of capital investments that Federal Express and UPS had borne.

Airborne executives defended their decision to continue to purchase space on international flights rather than fly their own aircraft overseas. First, they pointed out that Airborne's international business was 70% outbound and 30% inbound. If Airborne were to fly its own aircraft overseas, this would mean flying them back half-empty. Second, on many routes Airborne simply didn't have the volume necessary to justify flying its own planes. Third, national air carriers were giving Airborne good prices. If Airborne began to fly directly overseas, the company would be seen as

a competitor and might no longer be given price breaks. Fourth, getting international airlift space was not a problem. While space could be limited in the third and fourth quarters of the year, Airborne was such a big customer that it usually had few problems getting lift.

On the other hand, the long-term viability of this strategy was questionable given the rapid evolution in the international air express business. Flying Tiger was once one of Airborne's major providers of international lift. However, following the purchase of Flying Tiger by FedEx, Airborne reduced its business with Flying Tiger. Airborne worried that its packages would be "pushed to the back of the plane" whenever Flying Tiger had problems of capacity overload.

With regard to strategic alliances, Airborne had joint venture operations in Japan, Thailand, Malaysia, and South Africa. The alliance with Mitsui was announced in December 1989. Mitsui is one of the world's leading trading companies. Together with Tonami Transportation Co., Mitsui owns Panther Express, one of the top-five express carriers in Japan and a company with a substantial ground network. The deal called for the establishment of a joint venture between Airborne, Mitsui, and Tonami. To be known as Airborne Express Japan, the joint venture combined Airborne's existing Japanese operations with Panther Express. Airborne handled all of the shipments to and from Japan. The joint venture was 40% owned by Airborne, 40% by Mitsui, and 20% by Tonami. The agreement specified that board decisions had to be made by consensus between the three partners. A majority of two could not outvote the third. In addition, the deal called for Mitsui to invest \$40 million in Airborne Express through the purchase of a new issue of nonvoting 6.9% cumulative convertible preferred stock and a commitment to Airborne from Mitsui of up to \$100 million for aircraft financing. There is no doubt that Airborne executives saw the Mitsui deal as a major coup, both financially and in terms of market penetration into the Japanese market. The primary advantage claimed by Airborne executives for expanding via strategic alliances was that the company got an established, ground-based delivery network overseas without having to make capital investments.

C3-4g Organization

In 2001, Carl Donaway became CEO, replacing the long-time top management team of Robert Cline, CEO, and Robert Brazier, president and COO, both of whom had been with the company since the early 1960s. Prior to becoming CEO, Donaway was responsible for the airline operations, included managing the Wilmington hub, the package sorting facility, and all aircraft and flight maintenance operations. The philosophy at Airborne was to keep the organizational structure as flat as possible, shorten lines of communication, and allow for a free flow of ideas within the managerial hierarchy. The top managers generally felt that they were open to ideas suggested by lower-level managers. At the same time, the decision-making process was fairly centralized. The view was that interdependence between functions made centralized decision making necessary. To quote one executive, "Coordination is the essence of this business. We need centralized decision making in order to achieve this."

Control at Airborne Express was geared toward boosting productivity, lowering costs, and maintaining a reliable high-quality service. This was achieved through a combination of budgetary controls, pay-for-performance incentive systems, and a corporate culture that continually stressed key values.

For example, consider the procedure used to control stations (which contained about 80% of all employees). Station operations were reviewed on a quarterly basis using a budgetary process. Control and evaluation of station effectiveness stressed four categories. The first was service, measured by the time between pickup and delivery. The goal was to achieve 95 to 97% of all deliveries before noon. The second category was productivity, measured by total shipments per employee hour. The third category was controllable cost, and the fourth station profitability. Goals for each of these categories were determined each quarter in a bottom-up procedure that involved station managers in the goal-setting process. These goals are then linked to an incentive pay system whereby station managers can earn up to 10% of their quarterly salary just by meeting their goals with no maximum on the upside if they go over the goals.

The direct sales force also had an incentive pay system. The target pay structure for the sales organization was 70% base pay and a 30% commission. There was, however, no cap on the commissions for salespeople. So, in theory, there was no limit to what a salesperson could earn. There were also contests designed to boost performance; for example, a so-called Top Gun competition for the sales force, in which the top salesperson for each quarter won a \$20,000 prize.

Incentive pay systems apart, however, Airborne was not known as a high payer. The company's approach was not to be the compensation leader. Rather, it tried to set its salary structure to position it in the middle of the labor market. According to a senior human resource executive, "We target our pay philosophy (total package—compensation plus benefits) to be right at the 50th percentile plus or minus 5 percent."

A degree of self-control was also achieved by trying to establish a corporate culture that focused employees' attention upon the key values required to maintain a competitive edge in the air-express industry. The values continually stressed by top managers at Airborne, and communicated throughout the organization by the company's newsletter and quarterly videos, emphasized serving customers' needs, maintaining quality, doing it right the first time around, and excellent service. There was also a companywide emphasis on productivity and cost control. One executive, when describing the company's attitude to expenditures, said, "We challenge everything ... We're the toughest sons of bitches on the block." Another noted that "among managers I feel that there is a universal agreement on the need to control costs. This is a very tough business, and our people are aware of that. Airborne has an underdog mentality—a desire to be a survivor."

C3-4h The DHL Acquisition and Its Aftermath

By 2002, Airborne Express faced a number of key strategic opportunities and threats. These included (1) the rapid globalization of the air express industry, (2) the development of logistics services based on rapid air transportation, (3) the growth

potential for deferred services and ground based delivery services, (4) lower margins associated with the new GDS offering, (5) the superior scale and scope of its two main competitors, FedEx and UPS, (6) an economic slowdown in the United States, and (7) persistently high fuel costs (oil prices rose from \$18 a barrel in mid-1995 to \$25 a barrel in 2002). The company's financial performance, which had always been volatile, was poor during 2001, when the company lost \$12 million on revenues of \$3.2 billion. In 2002, Airborne earned \$58 million on revenues of \$3.3 billion, even though average revenue per shipment declined to \$8.46 from \$8.79 a year earlier. Management attributed the improved performance to strong employee productivity, which improved 9.4% over the prior year. In their guidance for 2003, management stated that they would be able to further improve operating performance; then, in March, DHL made its takeover bid for the company. Under the terms of the deal, finalized in 2003, DHL acquired the ground assets of Airborne Express, while the airline continued as an independent entity.

In the late 1990s, DHL had been acquired by Deutsche Post, the German postal service. Deutsche Post had been privatized years earlier. Deutsche Post spent approximately \$5 billion to acquire several companies in the logistics business between 1997 and 1999. In November 2000, Deutsche Post went private with an initial public offering that raised \$5.5 billion, and announced its intention to build an integrated global delivery and logistics network.

DHL's goal with the Airborne acquisition was to expand its presence in the United States, where it had long been a marginal player. In 2004–2005, DHL spent some \$1.5 billion upgrading Airborne's network to handle higher volumes. The company also embarked upon an aggressive media advertising campaign, presenting itself as a viable alternative to FedEx and UPS. In so doing, DHL seemed to be departing from Airborne's highly focused niche strategy.

The results were disappointing. The company reportedly ran into significant "integration problems" and suffered from reports of poor customer services and missed delivery deadlines. In 2006, DHL management stated that they now did not see the North American unit turning profitable until 2009. DHL lost

some \$500 million in the United States in 2006.³ In 2007, they lost close to \$1 billion. With corporate customers leaving for rivals, and market share sliding, in November 2008, DHL announced that it would exit the U.S. market. DHL shut down its air and ground

hubs, laid off 9,600 employees, and took a charge against earnings of some \$3.9 billion. In explaining the exit decision, DHL management stated that they underestimated how tough it would be to gain share against FedEx and UPS.⁴

NOTES

¹Standard & Poor's Industry Survey, Airlines, March 2002.

²Source: <http://www.airborne.com/Company/History.asp?nav=AboutAirborne/CompanyInfo/History>.

³B. Barnard, "Logistics Spurs Deutsche Post," *Journal of Commerce*, November 8, 2006, page 1.

⁴A. Roth and M. Esterl, "DHL Beats a Retreat from the United States," *The Wall Street Journal*, November 11, 2008, page B1.



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CASE 4

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C4-1 INTRODUCTION

In 1971, Charles Schwab, who was 32 at the time, set up his own stock brokerage concern, First Commander. Later he would change the name to Charles Schwab & Company, Inc. In 1975, when the Securities and Exchange Commission abolished mandatory fixed commissions on stock trades, Schwab moved rapidly into the discount brokerage business, offering rates that were as much as 60% below those offered by full commission brokers. Over the next 25 years, the company experienced strong growth, fueled by a customer-centric focus, savvy investments in information technology, and a number of product innovations, including a bold move into online trading in 1996.

By 2000, the company was widely regarded as one of the great success stories of the era. Revenues had grown to \$7.1 billion and net income to \$803 million, up from \$1.1 billion and \$124 million, respectively, in 1993. Online trading had grown to account for 84% of all stock trades made through Schwab, up from zero in 1995. The company's stock price had appreciated by more than that of Microsoft over the prior 10 years. In 1999, the market value of Schwab eclipsed that of Merrill Lynch, the country's largest full-service broker, despite Schwab's revenues being over 60% lower.

The 2000s proved to be a more difficult environment for the company. Between March 2000 and mid-2003, share prices in the United States tumbled, with the technology-heavy NASDAQ index losing C-50

80% of its value from peak to trough. The volume of online trading at Schwab slumped from an average of 204,000 trades a day in 2000 to 112,000 trades a day in 2002. In 2003, Schwab's revenues and net income fell sharply, and the stock price tumbled from a high of \$51.70 a share in 1999 to a low of \$6.30 in early 2003. During this period, Schwab expanded through acquisition into the asset management business for high-net-worth clients with the acquisition of U.S. Trust, a move that potentially put it in competition with independent investment advisors, many of whom used Schwab accounts for their clients. Schwab also entered the investment banking business with the purchase of Soundview Technology Bank.

In July 2004, founder and chairman Charles Schwab, who had relinquished the CEO role to David Pottruck in 1998, fired Pottruck and returned as CEO. Before stepping down in 2008, he refocused the company on its discount brokering roots, selling off Soundview and U.S. Trust. At the same time, he pushed for an expansion of Schwab's retail banking business, allowing individual investors to hold investment accounts and traditional bank accounts at Schwab. Schwab remains chairman of the company.

In 2007–2009, a serious crisis gripped the financial services industry. Some major financial institutions went bankrupt, including Lehman Brothers and Washington Mutual. The widely watched Dow Industrial Average Index plunged from over 14,000 in October 2007 to 6,600 in March 2007. Widespread financial collapse was only averted when the government stepped in to support the sector with a

\$700-billion loan to troubled companies. Almost alone amongst major financial service firms, Schwab was able to navigate through the crisis with relative ease, remaining solidly profitable and having no need to place a call on government funds. By 2010–2017, the company was once again on a growth path, fueled by expanded offerings including the establishment of a marketplace for exchange traded funds (ETFs). Schwab's asset base expanded at around 6% per annum during this period, and by early 2018 it was managing almost \$3.4 trillion in client assets. In 2017, Schwab reported record net income of \$2.18 billion on record revenues of \$8.62 billion. The major strategic question going forward was how to continue to grow profitably in what remained a price-competitive environment for brokerage firms.

C4-2 THE SECURITIES BROKERAGE INDUSTRY¹

A security is a financial instrument such as a stock, bond, commodity contract, stock option contract, or foreign exchange contract. The securities brokerage industry is concerned with the issuance and trading of financial securities, as well as a number of related activities. A broker's clients may be individuals, corporations, or government bodies. Brokers undertake one or more of the following functions: assist corporations to raise capital by offering stocks and bonds; help governments raise capital through bond issues; advise businesses on their foreign currency needs; assist corporations with mergers and acquisitions; help individuals plan their financial future and trade financial securities; and provide detailed investment research to individuals and institutions so that they can make more informed investment decisions.

C4-2a Industry Background

In 2016, there were 3,816 broker-dealers registered in the United States, down from 9,515 in 1987. The industry is concentrated, with some 200 firms that are members of the New York Stock Exchange (NYSE)

accounting for 87% of the assets of all broker-dealers, and 80% of the capital. The 10 largest NYSE firms accounted for around 57% of the gross revenue in the industry in 2016, up from 48% in 1998. The consolidation of the industry has been driven in part by deregulation, which is discussed in more detail below.

Broker-dealers make money in a number of ways. They earn commissions (or fees) for executing a customer's order to buy or sell a given security (stocks, bonds, option contracts, etc.). They earn trading income, which is the realized and unrealized gains and losses on securities held and traded by the brokerage firm. They earn money from underwriting fees, which are the fees charged to corporate and government clients for managing an issue of stocks or bonds on their behalf. They earn asset management fees, which represent income from the sale of mutual fund securities, from account supervision fees, or from investment advisory or administrative service fees. They earn margin interest, which is the interest that customers pay to the brokerage when they borrow against the value of their securities to finance purchases. They earn other securities related revenue comes from private placement fees (i.e., fees from private equity deals) subscription fees for research services, charges for advisory work on proposed mergers and acquisitions, fees for options done away from an exchange and so on. Finally, many brokerages earn nonsecurities revenue from other financial services, such as credit card operations or mortgage services.

C4-2b Industry Groups

Historically, brokerage firms have been segmented into five groups. First, there are national, full-line firms, which are the largest full-service brokers with extensive branch systems. They provide virtually every financial service and product that a brokerage can offer to both households (retail customers) and institutions (corporations, governments, and other nonprofit organizations such as universities). Examples of such firms include Merrill Lynch and Morgan Stanley. Most of these firms are headquartered in New York. For retail customers, national, full-line firms provide access to a personal financial consultant, traditional brokerage services, securities research reports, asset management services, financial planning advice, and a range of other services such as margin loans, mortgage loans, and credit cards. For institutional clients,

these firms will also arrange and underwrite the issuance of financial securities, manage their financial assets, provide advice on mergers and acquisitions, and provide more detailed research reports than those normally provided to retail customers, often for a fee.

Large investment banks are a second group. This group includes Goldman Sachs. These banks have a limited branch network and focus primarily on institutional clients, although they also may have a retail business focused on high-net-worth individuals (typically individuals with more than \$1 million to invest). In 2008, Lehman Brothers went bankrupt, a casualty of bad bets on mortgage-backed securities, while the large bank, J.P. Morgan, acquired Bear Stearns, leaving Goldman Sachs as the sole stand-alone representative in this class.

A third group are regional brokers, which are full-service brokerage operations with a branch network in certain regions of the country. Regional brokers typically focus on retail customers, although some have an institutional presence.

Fourth, there are a number of New York City-based brokers who conduct a broad array of financial services, including brokerage, investment banking, traditional money management, and so on.

Finally, there are the discounters, who are primarily involved in the discount brokerage business and focus on executing orders to buy and sell stocks for retail customers. Commissions are their main source of business revenue. They charge lower commissions than full-service brokers, but do not offer the same infrastructure, such as personal financial consultants and detailed research reports. The discounters provide trading and execution services at deep discounts online via the Web. Many discounters, such as Ameritrade and E*Trade, do not maintain branch offices. Schwab, which was one of the first discounters and remains the largest, has a network of brick-and-mortar offices, as well as a leading online presence.

C4-2c Earnings Trends

Industry revenues and earnings are volatile, being driven by variations in the volume of trading activity (and commissions), underwriting, and merger and acquisition activity. All of these tend to be highly correlated with changes in the value of interest rates and the stock market. In general, when interest rates fall, the cost of borrowing declines, so corporations and

governments tend to issue more securities, which increases underwriting income. Also, low interest rates tend to stimulate economic growth, which leads to higher corporate profits, and thus higher stock values. When interest rates decline, individuals typically move some of their money out of low-interest-bearing cash accounts or low-yielding bonds, and into stocks, in an attempt to earn higher returns. This drives up trading volume and hence commissions. Low interest rates, by reducing the cost of borrowing, can also increase merger and acquisition activity. Moreover, in a rising stock market, corporations often use their stock as currency with which to make acquisitions of other companies. This drives up merger and acquisition activity, and the fees brokerages earn from such activity.

The 1990s were characterized by one of the strongest stock market advances in history. This boom was driven by a favorable economic environment, including falling interest rates, new information technology, productivity gains in American industry, and steady economic expansion, all of which translated into growing corporate profits and rising stock prices.

Also feeding the stock market's advance during the 1990s were favorable demographic trends. During the 1990s, American Baby Boomers started to save for retirement, pumping significant assets into equity funds. The percentage of household liquid assets held in equities and mutual funds increased from 33.8% in 1990 to 66.9% in 1999, while the number of households that owned equities increased from 32.5 to 50.1% over the same period.

Adding fuel to the fire, by the late 1990s, stock market mania had taken hold. Stock prices rose to speculative highs rarely seen before as "irrationally exuberant" retail investors, who seemed to believe that stock prices could only go up, made increasingly risky and speculative "investments" in richly valued equities.² The market peaked in late 2000 as the extent of overvaluation became apparent. It fell significantly over the next 2 years as the economy struggled with a recession. This was followed by a recovery in both the economy and the stock market, with the S&P 500 returning to its old highs by October 2007. However, as the global credit crunch unfolded in 2008, the market crashed, falling precipitously in the second half of 2008 to return to levels not seen since the mid-1990s. The market has since recovered, and by 2016 almost 60% of the financial

assets of U.S. households was once again held in equities and mutual funds.

The long stock market boom of the 1990s drove an expansion of industry revenues, which for brokerages that were members of the NYSE, grew from \$54 billion in 1990 to \$245 billion in 2000. As the bubble burst and the stock market slumped in 2001 and 2002, brokerage revenues plummeted to \$144 billion in 2003, forcing brokerages to cut expenses. By 2007, revenues had recovered again and were a record \$352 billion. In 2008, the financial crisis hit, and industry revenues contracted \$178 billion. In that year the industry lost \$42.6 billion. By 2016, with the stock market booming again, revenues were back up to \$276 billion and the industry booked \$27 billion in net income.

The expense structure of the brokerage industry is dominated by two big items: interest expenses and compensation expenses. Together these account for about three-quarters of industry expenses. Interest expenses reflect the interest rate paid on cash deposits at brokerages; they rise or fall with the size of deposits and interest rates. As such, they are generally not regarded as a controllable expense (because the interest rate is ultimately set by the U.S. Federal Reserve and market forces). Compensation expenses reflect both employee headcount and bonuses. For some brokerage firms, particularly those dealing with institutional clients, bonuses can be enormous, with multimillion-dollar bonuses being awarded to productive employees. Compensation expenses and employee headcount tend to grow during bull markets, only to be rapidly curtailed once a bear market sets in.

The profitability of the industry is volatile and depends critically upon the overall level of stock market activity. Profits were high during the boom years of the 1990s. The bursting of the stock market bubble in 2000–2001 bought a period of low profitability, and although profitability improved after 2002, it did not return to the levels of the 1990s. The financial crisis and stock market crash of 2007–2009 resulted in large losses for the industry, but profits have since improved since.

C4-2d Deregulation

The industry had been progressively deregulated since May 1, 1975, when a fixed commission structure on securities trades was dismantled. This development

allowed for the emergence of discount brokers such as Charles Schwab. Until the mid-1980s, however, the financial services industry was highly segmented due to a 1933 Act of Congress known as the Glass-Steagall Act. This Act, which was passed in the wake of widespread bank failures following the stock market crash of 1929, erected regulatory barriers between different sectors of the financial services industry, such as commercial banking, insurance, saving and loans, and investment services (including brokerages). Most significantly, Section 20 of the Act erected a wall between commercial banking and investment services, barring commercial banks from investing in shares of stocks, limiting them to buying and selling securities as an agent, prohibiting them from underwriting and dealing in securities, and from being affiliated with any organization that did so.

In 1987, Section 20 was relaxed to allow banks to earn up to 5% of their revenue from securities underwriting. The limit was raised to 10% in 1989 and 25% in 1996. In 1999, the Gramm-Leach-Bliley (GLB) Act was passed finalizing the repeal of the Glass-Steagall Act. By removing the walls between commercial banks, broker-dealers, and insurance companies, many predicted that the GLB Act would lead to massive industry consolidation, with commercial banks purchasing brokers and insurance companies. The rationale was that such diversified financial services firms would become one stop financial supermarkets, cross-selling products to their expanded client base. For example, a financial supermarket might sell insurance to brokerage customers, or brokerage services to commercial bank customers. The leader in this process was Citigroup, which was formed in 1998 by a merger between Citicorp, a commercial bank, and Traveler's, an insurance company. Since Traveler's had already acquired Salomon Smith Barney, a major brokerage firm, the new Citigroup seemed to signal a new wave of consolidation in the industry. The passage of the GLB Act allowed Citigroup to start cross-selling products.

However, industry reports suggested that cross-selling was easier in theory than in practice, in part because customers were not ready for the development.³ In an apparent admission that this was the case, in 2002, Citigroup announced that it would spin off Traveler's Insurance as a separate company. At the same time, the fact remained that the GLB Act had made it easier for commercial banks to get into the

brokerage business, and there were several acquisitions to this effect. Most notably, in 2008, Bank of America purchased Merrill Lynch, and J.P. Morgan Chase purchased Bear Stearns. Both of the acquired enterprises were suffering from serious financial troubles due to their exposure to mortgage-backed securities.

C4-3 THE GROWTH OF SCHWAB

The son of an assistant district attorney in California, Charles Schwab started to exhibit an entrepreneurial streak from an early age. As a boy, he picked walnuts and bagged them for \$5 per 100 pound sack. He raised chicken in his backyard, sold the eggs door to door, killed and plucked the fryers for market, and peddled the manure as fertilizer. Schwab called it “my first fully integrated businesses.”⁴

As a child, Schwab had to struggle with a severe case of dyslexia, a disorder that makes it difficult to process written information. To keep up with his classes, he had to resort to *Cliffs Notes* and *Classics Illustrated* comic books. Schwab believes, however, that his dyslexia was ultimately a motivator, spurring him on to overcome the disability and excel. Schwab gained admission to Stanford, where he received a degree in economics, followed by an MBA from Stanford Business School.

Fresh out of Stanford in the 1960s, Schwab embarked upon his first entrepreneurial effort, an investment advisory newsletter, which grew to include a mutual fund with \$20 million under management. However, after the stock market fell sharply in 1969, the State of Texas ordered Schwab to stop accepting investments through the mail from its citizens because the fund was not registered to do business in the state. Schwab went to court and lost. Ultimately, he had to close his business, leaving him with \$100,000 in debt and a marriage that had collapsed under the emotional strain.

C4-3a The Early Days

Schwab soon bounced back. Capitalized by \$100,000 that he borrowed from his Uncle Bill, who had a

successful industrial company of his own called Commander Corp, in 1971 Schwab started a new company, First Commander. Based in San Francisco, a world away from Wall Street, First Commander was a conventional brokerage that charged clients fixed commissions for securities trades. The name was changed to Charles Schwab the following year.

In 1974, at the suggestion of a friend, Schwab joined a pilot test of discount brokerage being conducted by the Securities and Exchange Commission. The discount brokerage idea instantly appealed to Schwab. He personally hated selling, particularly cold calling. the constant calling on actual or prospective customers to encourage them to make a stock trade. Moreover, Schwab was deeply disturbed by the conflict of interest that seemed everywhere in the brokerage world, with stock brokers encouraging customers to make questionable trades in order to boost commissions. Schwab also questioned the worth of the investment advice brokers gave clients, feeling that it reflected the inherent conflict of interest in the brokerage business and did not empower customers.

Schwab used the pilot test to fine-tune his model for a discount brokerage. When the SEC abolished mandatory fixed commission the following year, Schwab quickly moved into the business. His basic thrust was to empower investors by giving them the information and tools required to make their own decisions about securities investments, while keeping Schwab's costs low so that this service could be offered at a deep discount to the commissions charged by full-service brokers. Driving down costs meant that, unlike full-service brokers, Schwab did not employ financial analysts and researchers who developed proprietary investment research for the firm's clients. Instead, Schwab focused on providing clients with third-party investment research. These “reports” evolved to include a company's financial history, a smatter of comments from securities analysts at other brokerage firms that had appeared in the news, and a tabulation of buy and sell recommendations from full-commission brokerage houses. The reports were sold to Schwab's customers at cost (in 1992, this was \$9.50 for each report plus \$4.75 for each additional report).⁵

A founding principle of the company was a desire to be the most useful and ethical provider of financial services. Underpinning this move was Schwab's belief in the inherent conflict of interest between brokers at

full-service firms and their clients. The desire to avoid a conflict of interest caused Schwab to rethink the traditional commission based pay structure. As an alternative to commission-based pay, Schwab paid all its employees, including its brokers, a salary plus a bonus that was tied to attracting and satisfying customers and achieving productivity and efficiency targets. Commissions were taken out of the compensation equation.

The chief promoter of Schwab's approach to business, and marker of the Schwab brand, was none other than Charles Schwab himself. In 1977, the firm started to use pictures of Charles Schwab in its advertisements, a practice it still follows today.

The customer-centric focus of the company led Schwab to think of ways to make the company accessible to customers. In 1975, Schwab became the first discount broker to open a branch office and to offer access 24 hours a day, 7 days a week. Interestingly, however, the decision to open a branch was not something that Charles Schwab initially embraced. He wanted to keep costs low and thought it would be better if everything could be managed by telephone. However, Schwab was forced to ask his Uncle Bill for more capital to get his nascent discount brokerage off the ground. Uncle Bill agreed to invest \$300,000 in the company, but on one condition: He insisted that Schwab open a branch office in Sacramento and employ Uncle Bill's son-in-law as manager!⁶ Reluctantly, Schwab agreed to Uncle Bill's demand for a show of nepotism, hoping that the branch would not be too much of a drain on the company's business.

What happened next was a surprise; there was an immediate and dramatic increase in activity at Schwab, most of it from Sacramento. Customer inquiries, the number of trades per day, and the number of new accounts, all spiked upwards. Yet there was also a puzzle here, for the increase was not linked to an increase in foot traffic in the branch. Intrigued, Schwab opened several more branches over the next year, and each time noticed the same pattern. For example, when Schwab opened its first branch in Denver, it had 300 customers. It added another 1,700 new accounts in the months following the opening of the branch, and yet there was a big spike up in foot traffic at the Denver branch.

Schwab began to realize that the branches served a powerful psychological purpose—they gave customers a sense of security that Schwab was a real

company. Customers were reassured by seeing a branch with people in it. In practice, many clients would rarely visit a branch. They would open an account, and execute trades over the telephone (or later, via the Internet). But the branch helped them to make that first commitment. Far from being a drain, Schwab realized that the branches were a marketing tool. People wanted to be "perceptually close to their money," and the branches satisfied that deep psychological need. From 1 branch in 1975, Schwab grew to have 52 branches in 1982, 175 by 1992, and 430 in 2002. The next few years brought retrenchment, however, and Schwab's branches fell to around 300 by 2008.

By the mid-1980s, customers could access Schwab in person at a branch during office hours, by phone day or night, by a telephone voice recognition quote and trading service known as TeleBroker, and by an innovative proprietary online network. To encourage customers to use TeleBroker or its online trading network, Schwab reduced commissions on transactions executed this way by 10%, but it saved much more than that because doing business via computer was cheaper. By 1995, TeleBroker was handling 80 million calls and 10 million trades a year, 75% of Schwab's annual volume. To service this system, in the mid-1980s, Schwab invested \$20 million in four regional customer call centers, routing all calls to them rather than branches. Today, these call centers have 4,000 employees.

Schwab was the first to establish a PC-based online trading system in 1986, with the introduction of its Equalizer service. The system had 15,000 customers in 1987, and 30,000 by the end of 1988. The online system, which required a PC with a modem, allowed investors to check current stock prices, place orders, and check their portfolios. In addition, an "offline" program for PCs enabled investors to do fundamental and technical analysis on securities. To encourage customers to start using the system, there was no additional charge for using the online system after a \$99 sign-up fee. In contrast, other discount brokers with PC-based online systems, such as Quick and Riley's (which had a service known as "Quick Way"), or Fidelity's (whose service was called "Fidelity Express") charged users between 10 cents and 44 cents a minute for online access depending on the time of day.⁷

Schwab's pioneering move into online trading was in many ways just an evolution of the company's

early utilization of technology. In 1979, Schwab spent \$2 million, an amount equivalent to the company's entire net worth at the time, to purchase a used IBM System 360 computer, plus software, that was left over from CBS's 1976 election coverage. At the time, brokerages generated and had to process massive amounts of paper to execute buy and sell orders. The computer gave Schwab a capability that no other brokerage had at the time: take a buy or sell order that came in over the phone, edit it on a computer screen, and then submit the order for processing without generating paper. Not only did the software provide for instant execution of orders, it also offered what were then sophisticated quality controls, checking a customer's account to see if funds were available before executing a transaction. As a result of this system, Schwab's costs plummeted as it removed paper from the system. Moreover, the cancel and rebill rate—a measure of the accuracy of trade executions—dropped from an average of 4 to 0.1%.⁸ Schwab soon found it could handle twice the transaction volume of other brokers, at less cost, and with much greater accuracy. With 2 years, every other broker in the nation had developed similar systems, but Schwab's early investment had given it an edge and underpinned the company's belief in the value of technology to reduce costs and empower customers.

By 1982, the technology at Schwab was well ahead of that used by most full-service brokers. This commitment to technology allowed Schwab to offer a product that was similar in conception to Merrill Lynch's revolutionary cash management account (CMA), which was introduced in 1980. The CMA account automatically sweeps idle cash into money market funds and allows customers to draw on their money by check or credit card. Schwab's system, known as the Schwab One Account, was introduced in 1982. It went beyond Merrill's in that it allowed brokers to execute orders instantly through Schwab's computer link to the exchange floor.

In 1984, Schwab moved into the mutual fund business, not by offering its own mutual funds, but by launching a mutual fund marketplace, which allowed customers to invest in some 140 no-load mutual funds (a "no-load" fund has no sales commission). By 1990, the number of funds in the market place was 400 and the total assets involved exceeded \$2 billion. For the mutual fund companies, the marketplace offered distribution to Schwab's growing customer base.

For its part, Schwab kept a small portion of the revenue stream that flowed to the fund companies from Schwab clients.

In 1986, Schwab made a gutsy move to eliminate the fees for managing individual retirement accounts (IRAs). IRAs allow customers to deposit money in an account where it accumulates tax free until withdrawal at retirement. The legislation establishing IRAs had been passed by Congress in 1982. At the time, estimates suggested that IRA accounts could attract as much as \$50 billion in assets within 10 years. In actual fact, the figure turned out to be \$725 billion.

Initially, Schwab followed industry practice and collected a small fee for each IRA. By 1986, the fees amounted to \$9 million a year, not a trivial amount for Schwab in those days. After looking at the issue, Charles Schwab himself made the call to scrap the fee, commenting that "It's a nuisance, and we'll get it back."⁹ He was right; Schwab's No-Annual Fee IRA immediately exceeded the company's most optimistic projections.

Despite technological and product innovations, by 1983, Schwab was strapped for capital to fund expansion. To raise funds, he sold the company to Bank of America for \$55 million in stock and a seat on the bank's board of directors. The marriage did not last long. By 1987, the bank was reeling under loan losses, and the entrepreneurially minded Schwab was frustrated by banking regulations that inhibited his desire to introduce new products. Using a mix of loans, his own money, and contributions from other managers, friends, and family, Schwab led a management buyout of the company for \$324 million in cash and securities.

On September 22, 1987, Schwab went public with an IPO that raised some \$440 million, enabling the company to pay down debt and leaving it with capital to fund an aggressive expansion. At the time, Schwab had 1.6 million customers, revenues of \$308 million, and a pre-tax profit margin of 21%. Schwab announced plans to increase its branch network by 30% to around 120 offices over the next year. Then, on Monday, October 19, 1987, the U.S. stock market crashed, dropping over 22%, the greatest 1-day decline in history.

C4-3b October 1987–1995

After a strong run up over the year, on Friday, October 16, the stock market dropped 4.6%. During

the weekend, nervous investors jammed the call centers and branch offices, not just at Schwab, but at many other brokerages, as they tried to place sell orders. At Schwab, 99% of the orders taken over the weekend for Monday morning were sell orders. As the market opened on Monday morning, it went into free fall. At Schwab, the computers were overwhelmed by 8 a.m. The toll-free number to the call centers was also totally overwhelmed. All customers got when they called were busy signals. When the dust had settled, Schwab announced that it had lost \$22 million in the fourth quarter of 1987, \$15 million of which came from a single customer who had been unable to meet margin calls.

The loss, which amounted to 13% of the company's capital, effectively wiped out the company's profit for the year. Moreover, the inability of customers to execute trades during the crash damaged Schwab's hard-earned reputation for customer service. Schwab responded by posting a two-page ad in *The Wall Street Journal* on October 28, 1987. On one page there was a message from Charles Schwab thanking customers for their patience, on the other an ad thanking employees for their dedication.

In the aftermath of the October 1987 crash, trading volume fell by 15% as customers, spooked by the volatility of the market, sat on cash balances. The slowdown prompted Schwab to cut back on its expansion plans. Ironically, however, Schwab added a significant number of new accounts in the aftermath of the crash as people looked for cheaper ways to invest.¹⁰

Beset by week trading volume through the next 18 months, and reluctant to lay off employees, Schwab sought ways to boost activity. One strategy started out as a compliance issue within Schwab. A compliance officer in the company noticed a disturbing pattern. A number of people had given other people limited power of attorney over their accounts. This in itself was not unusual—for example, the middle-aged children of an elderly individual might have power of attorney over an account—but the Schwab officer noticed that some individuals had power of attorney over dozens, if not hundreds, of accounts.

Further investigation turned up the reason. Schwab had been serving an entirely unknown set of customers, independent financial advisors who were managing the financial assets of their clients using Schwab accounts. In early 1989, some 500 financial advisors

managed assets totaling \$1.5 billion at Schwab, about 8% of all assets at Schwab.

The advisors were attracted to Schwab for a number of reasons, including cost and the company's commitment not to give advice—which was the business of the advisors. Schwab immediately saw an opportunity here. Financial advisors, he reasoned, represented a powerful way to acquire customers. In 1989, the company rolled out a program to aggressively court this group. Schwab hired a marketing team to focus explicitly on financial planners, set apart a dedicated trading desk for them, and gave discounts of as much as 15% on commissions to financial planners with significant assets under management at Schwab accounts. Schwab also established its Financial Advisors Service, which provided clients with a list of financial planners who were willing to work solely for a fee, and who had no incentive to push the products of a particular client. At the same time, the company stated that it wasn't endorsing the planners' advice, which would run contrary to the company's commitment to offer no advice. Within a year, financial advisors had some \$3 billion of client's assets under management at Schwab.

Schwab also continued to expand its branch network during this period, at a time while many brokerages, still stunned by the October 1987 debacle, were retrenching. Between 1987 and 1989, Schwab's branch network increased by just 5, from 106 to 111, but in 1990 it opened an additional 29 branches, and another 28 in 1991.

By 1990, Schwab's positioning in the industry had become clear. Although a discounter, Schwab was by no means the lowest price discount broker in the country. Its average commission structure was similar to that of Fidelity, the Boston-based mutual fund company that had moved into the discount brokerage business, and Quick & Reilly, a major national competitor (see Exhibit 1). While significantly below that of full-service brokers, the fee structure was also above that of deep-discount brokers. Schwab differentiated itself from the deep-discount brokers, however, by its branch network, technology, and the information (not advice) that it gave to investors.

In 1992, Schwab rolled out another strategy aimed at acquiring assets—OneSource, the first mutual fund “supermarket.” OneSource was created to take advantage of America's growing appetite for mutual funds. By the early 1990s, there were more mutual funds

Exhibit 1 Commission Structure in 1990

Type of Broker	Average Commission Price on 20 Trades Averaging \$8,975 Each
Deep-Discount Brokers	\$ 54
Average Discounters	\$ 73
Banks	\$ 88
Schwab, Fidelity, and Quick & Reilly	\$ 92
Full-Service Brokers	\$ 206

Source: E. C. Gottschalk, "Schwab Forges Ahead as Other Brokers Hesitate," *The Wall Street Journal*, May 11, 1990, p. C1.

than individual equities. On some days, Fidelity, the largest mutual fund company, accounted for 10% of the trading volume on the New York Stock Exchange. As American Baby Boomers aged, they seemed to have an insatiable appetite for mutual funds. But the process of buying and selling mutual funds had never been easy. As Charles Schwab explained in 1996:

"In the days before the supermarkets, to buy a mutual fund you had to write or call the fund distributor. On Day Six, you'd get a prospectus. On Day Seven or Eight you call up and they say you've got to put your money in. If you're lucky, by Day Ten you've bought it . . . It was even more cumbersome when you redeemed. You had to send a notarized redemption form."¹¹

OneSource took the hassle out of owning funds. With a single visit to a branch office, a telephone call, or a PC-based computer transaction, a Schwab client could buy and sell mutual funds. Schwab imposed no fee at all on investors for the service. Rather, in return for shelf space in Schwab's distribution channel and access to the more than 2 million accounts at Schwab, Schwab charged the fund companies a fee amounting to 0.35% of the assets under management. By inserting itself between the fund managers and customers, Schwab changed the balance of power in the mutual fund industry. When Schwab sold a fund through One Source, it passed along the assets to the fund managers, but not the customers' names. Many fund managers did not like this, because it limited their ability to build a direct relationship with customers, but they had little choice if they wanted access to Schwab's customer base.

OneSource quickly propelled Schwab to the number three position in direct mutual fund distribution, behind the fund companies Fidelity and Vanguard. By 1997, Schwab customers could choose from nearly 1,400 funds offered by 200 different fund families, and Schwab customers had nearly \$56 billion in assets invested through One Source.

C4-3c 1996–2000: eSchwab

In 1994, as access to the Web began to diffuse rapidly throughout America, a 2-year-old start-up run by Bill Porter, a physicist and inventor, launched its first dedicated website for online trading. The company was E*Trade. E*Trade announced a flat \$14.95 commission on stock trades, significantly below Schwab's average commission, at the time \$65. It was clear from the outset that E*Trade and other online brokers such as Ameritrade offered a direct threat to Schwab. Not only were their commission rates considerably below those of Schwab, but the ease, speed, and flexibility of trading stocks over the Web suddenly made Schwab's proprietary online trading software, Street Smart, seem limited. (Street Smart was the Windows-based successor to Schwab's DOSbased Equalizer program). To compound matters, talented people left Schwab for E*Trade and its brethren, which they saw as the wave of the future.

At the time, deep within Schwab, William Pearson, a young software specialist who had worked on the development of Street Smart, quickly saw the transformational power of the Web and believed that it would make proprietary systems like Street Smart

obsolete. Pearson believed that Schwab needed to develop its own web-based software, and quickly. Try as he might, though, Pearson could not get the attention of his supervisor. He tried a number of other executives, but found support hard to come by. Eventually, he approached Anne Hennegar, a former Schwab manager that he knew who now worked as a consultant to the company. Hennegar suggested that Pearson meet with Tom Seip, an executive vice president at Schwab who known for his ability to think outside of the box. Hennegar approached Seip on Pearson's behalf, and Seip responded positively, asking her to set up a meeting. Hennegar and Pearson turned up expecting to meet just Seip, but to their surprise in walked Charles Schwab, his COO, David Pottruck, and the vice presidents in charge of strategic planning and the electronic brokerage arena.

As the group watched Pearson's demo of how a web-based system would look and work, they became increasingly excited. It was clear to those in the room that a web-based system based on real time information, personalization, customization, and interactivity all advanced Schwab's commitment to empowering customers. By the end of the meeting, Pearson had received a green light to start work on the project.

It soon transpired that several other groups within Schwab had been working on projects similar to Pearson's. These were all pulled together under the control of Dawn Lepore, Schwab's chief information officer, who headed up the effort to develop the web-based service that would ultimately become eSchwab. Meanwhile, significant strategic issues were now beginning to preoccupy Schwab and Pottruck. They realized that Schwab's established brokerage and a web-based brokerage business were based on very different revenue and cost models. The web-based business would probably cannibalize business from Schwab's established brokerage operations, and that might lead personnel in Schwab to slow down or even derail the web-based initiative. As Pottruck later put it:

"The new enterprise was going to use a different model for making money than our traditional business, and we didn't want the comparisons to form the basis for a measurement of success or failure. For example, eSchwab's per trade revenue would be less than half that of the mainstream of the company, and that could be seen as a drain on resources rather than a response to what customer would be using in the future."¹²

Pottruck and Schwab understood that unless eSchwab was placed in its own organization, isolated and protected from the established business, it might never get off the ground. They also knew that if they did not cannibalize their own business with eSchwab, someone would do it for them. Thus, they set up a separate organization to develop eSchwab, headed by Beth Sawi, a highly regarded marketing manager at Schwab who had very good relations with other managers in the company. Sawi set up the development center in a unit physically separated from other Schwab facilities.

eSchwab was launched in May 1996, but without the normal publicity that accompanied most new products at Schwab. Schwab abandoned its sliding scale commission for a flat rate commission of \$39 (which was quickly dropped to \$29.95) for any stock trade up to 1,000 shares. Within 2 weeks 25,000 people had opened eSchwab accounts. By the end of 1997, the figure would soar to 1.2 million, bringing in assets of about \$81 billion, 10 times the assets of E*Trade.

Schwab initially kept the two businesses segmented. Schwab's traditional customers were still paying an average of \$65 per trade while eSchwab customers were paying \$29.95. While Schwab's traditional customers could make toll-free calls to Schwab brokers, eSchwab clients could not. Moreover, Schwab's regular customers couldn't access eSchwab at all. The segmentation soon gave rise to problems. Schwab's branch employees were placed in the uncomfortable position of telling customers that they couldn't set up eSchwab accounts. Some eSchwab customers started to set up traditional Schwab accounts with small sums of money so that they could access Schwab's brokers and information services, while continuing to trade via eSchwab. Clearly the segmentation was not sustainable.

Schwab analyzed the situation. The company's leaders realized that the cleanest way to deal with the problem would be to give every Schwab customer online access, adopt a commission of \$29.95 on trading across all channels, and maintain existing levels of customer service at the branch level, and on the phone. However, internal estimates suggested that the cut in commission rates would reduce revenues by \$125 million, which would hit Schwab's stock. The problem was compounded by two factors. First, employees owned 40% of Schwab stock, so they would be hurt by any fall in stock price; second, employees

were worried that going to the Web would result in a decline in business at the branch level, and hence a loss of jobs there.

An internal debate ranged within the company for much of 1997, when Schwab's revenues surged 24% to \$2.3 billion. The online trading business grew by more than 90% during the year, with online trades accounting for 37% of all Schwab trades during 1997, and the trend was up throughout the year.

Looking at these figures, Pottruck, the COO, knew that Schwab had to bite the bullet and give all Schwab customers access to eSchwab (Pottruck was now running the day-to-day operations of Schwab, leaving Charles Schwab to focus on his corporate marketing and PR role). His first task was to enroll the support of the company's largest shareholder, Charles Schwab. With 52 million shares, Schwab would take the biggest hit from any share price decline. According to a Fortune article, the conversation between Schwab and Pottruck went something like this:¹³

Pottruck: "We don't know exactly what will happen. The budget is shaky. We'll be winging it."

Schwab: "We can always adjust our costs."

Pottruck: "Yes, but we don't have to do this now. The whole year could be lousy. And the stock!"

Schwab: "This isn't that hard a decision, because we really have no choice. It's just a question of when, and it will be harder later."

Having got Schwab's founder to agree, Pottruck formed a task force to look at how best to implement the decision. The plan that emerged was to merge all the company's electronic services into Schwab.com, which would then coordinate Schwab's online and off-line business. The base commission rate would be \$29.95, whatever channel was used to make a trade—online, branch, or telephone. The role of the branches would change as they started to focus more on customer support. This required a change in incentive systems. Branch employees had been paid bonuses on the basis of the assets they accrued to their branches, but now they would be paid bonuses on assets that came in via the branch or the Web. They would be rewarded for directing clients to the Web.

Schwab implemented the change of strategy on January 15, 1998. Revenues dropped 3% in the first quarter as the average commission declined from \$63 to \$57. Earnings also came in short of expectations

by some \$6 million. The company's stock had lost 20% of its value by August 1998. However, over much of 1998 new money poured in. Total accounts surged, with Schwab gaining a million new customers in 1998—a 20% increase—while assets grew by 32%. As the year progressed, trading volume grew, doubling by year end. By the third quarter, Schwab's revenues and earnings were surging past analysts' expectations. The company ultimately achieved record revenues and earnings in 1998. Net income ended up 29% over the prior year, despite falling commission rates, aided by surging trading volume and the lower cost of executing trades over the Web. By year-end, 61% of all trades at Schwab were made over the Web. After its summer lows, the stock price recovered, ending the year up 130% and pushing Schwab's market capitalization past that of Merrill Lynch.¹⁴

C4-3d 2000–2004: After the Boom

In 1998, Charles Schwab appointed his long-time number two, David Pottruck, co-CEO. The appointment signaled the beginning of a leadership transition, with Schwab easing himself out of day-to-day operations. Soon Pottruck had to deal with some major issues. The end of the long stock market boom of the 1990s hit Schwab hard. The average number of trades made per day through Schwab fell from 300 million to 190 million between 2000 and 2002. Reflecting this, revenues slumped from \$7.1 billion to \$4.14 billion and net income from \$803 million to \$109 million. To cope with the decline, Schwab was forced to cut back on its employee headcount, which fell from a peak of nearly 26,000 employees in 2000 to just over 16,000 in late 2003.

Schwab's strategic reaction to the sea change in market conditions was already taking form as the market implosion began. In January 2000, Schwab acquired U.S. Trust for \$2.7 billion. U.S. Trust, a 149-year-old investment advisement business, managed money for high-net-worth individuals whose invested assets exceed \$2 million. When acquired, U.S. Trust had 7,000 customers and assets of \$84 billion, compared to 6.4 million customers and assets of \$725 billion at Schwab.¹⁵

According to Pottruck, widely regarded as the architect of the acquisition, Schwab made the acquisition because it discovered that high net worth individuals were starting to defect from Schwab for

money managers like U.S. Trust. The main reason: As Schwab's clients grew older and richer, they needed institutions that specialized in services that Schwab didn't offer—including personal trusts, estate planning, tax services, and private banking. With baby boomers starting to enter middle to late middle age, and their average net worth projected to rise, Schwab decided it needed to get into this business or lose high-net-worth clients.

The decision, though, began to bring Schwab into conflict with the network of 6,000 or so independent financial advisors that the company had long fostered through the Schwab Advisers Network, and who funneled customers and assets into Schwab accounts. Some advisors felt that Schwab was starting to move in on their turf, and they were not too happy about it.

In May 2002, Schwab made another move in this direction when it announced that it would launch a new service targeted at clients with more than \$500,000 in assets. Known as Schwab Private Client, and developed with the help of U.S. Trust employees, for a fee of 0.6% of assets Private Client customers could meet face to face with a financial consultant to work out an investment plan and return to the same consultant for further advice. Schwab stressed that the consultant would not tell clients what to buy and sell—that was still left to the client. Nor would clients get the legal, tax and estate planning advice offered by U.S. Trust and independent financial advisors. Rather, they got a financial plan and consultation regarding industry and market conditions.¹⁶

To add power to this strategy, Schwab announced that it would start a new stock rating system. It would be not the work of financial analysts but rather the product of a computer model, developed at Schwab, to analyze more than 3,000 stocks on 24 basic measures such as free cash flow, sales growth, insider trades, and so on, and then assigns grades. The top 10% get an A, the next 20% a B, the middle 40% a C, the next 20% a D, and the lowest 10% an F. Schwab claimed that the new system was “a systematic approach with nothing but objectivity, not influenced by corporate relationships, investment banking, or any of the above.”¹⁷

Critics of this strategy were quick to point out that many of Schwab's branch employees lacked the qualifications and expertise to give financial advice. At the time the service was announced, Schwab had some 150 qualified financial advisers in place, and planned to have

300 by early 2003. These elite employees required a higher salary than the traditional Schwab branch employees, who in many respects were little more than order takers and providers of prepackaged information.

The Schwab Private Client service caused further grumbling among the private financial advisors affiliated with Schwab. In 2002, there were 5,900 of these. In total their clients amounted to \$222 billion of Schwab's \$765 billion in client assets. Several stated that they would no longer keep clients' money at Schwab. However, Schwab stated that it would use the Private Client Service as a device for referring people who wanted more sophisticated advice than Schwab could offer to its network of registered financial advisers, and particularly an inner circle of 330 advisers who have an average of \$500 million in assets under management and 17 years of experience.¹⁸ According to one member of this group, “Schwab is not a threat to us. Most people realize the hand holding it takes to do that kind of work and Schwab wants us to do it. There's just more money behind the Schwab Advisers Network. The dead wood is gone, and firms like ours stand to benefit from even more additional leads.”¹⁹

In 2003, Schwab stepped down as co-CEO, leaving Pottruck in charge of the business but staying on as chairman). In late 2003, Pottruck announced that Schwab would acquire Soundview Technology Group for \$321 million. Soundview was a boutique investment bank with a research arm that covered a couple of hundred companies and offered this research to institutional investors such as mutual fund managers. Pottruck justified the acquisition by arguing that it would have taken Schwab years to build similar investment research capabilities internally. His plan was to have Soundview's research bundles for Schwab's retail investors.

C4-3e 2004–2008: The Return of Charles Schwab

The Soundview acquisition proved to be Pottruck's undoing. It soon became apparent that it was a huge mistake. There was little value to be had for Schwab's retail business from Soundview. Moreover, the move had raised Schwab's operating costs. By mid-2004, Pottruck was trying to sell Soundview. The board, disturbed by Pottruck's vacillating strategic leadership, expressed their concerns to Charles Schwab. On

July 15, 2004, Pottruck was fired, and 66-year-old Charles Schwab returned as CEO.

He moved quickly to refocus the company. Soundview was sold to the investment bank UBS for \$265 million. Schwab reduced the workforce by another 2,400 employees, closed underperforming branches, and removed \$600 million in annual cost. This allowed him to reduce commissions on stock trades by 45%, and take market share from other discount brokers such as Ameritrade and E*Trade.

Going forward, Schwab reemphasized the firm's traditional mission—to empower investors and provide them with ethical financial services. He also reemphasized the importance of the relationships that Schwab had with independent investment advisors. He noted: “Trading has become commoditized. The future is really about competing for client relationships.”²⁰ One major new focus was the company's retail banking business. Established in 2002, it had been a low priority for Pottruck. Now Schwab wanted to make the company a single source for banking, brokerage, and credit card services—one that would give Schwab's customers something of value: a personal relationship they could trust. The goal was to lessen Schwab's dependence on trading income, and give it a more reliable earnings stream and a deeper relationship with clients.

In mid-2007, Schwab's reorientation back to its traditional mission reached a logical conclusion when U.S. Trust was sold to Bank of America for \$3.3 billion. Unlike in the past, however, Schwab was no longer earning the bulk of its money from trading commissions. As a percentage of net revenues, trading revenues (mostly commissions on stock trades) were down from 36% in 2002 to 17% in 2007. By 2007, asset management fees accounted for 47% of Schwab's net revenue—up from 41% in 2002—while net interest revenue (the difference between earned interest on assets such as loans and interest paid on deposits) was 33%, up from 19% in 2002.²¹ Schwab's overall performance had also improved markedly. Net income in 2007 was \$1.12 billion, up from a low of \$396 million in 2003.

C4-3f The Great Financial Crisis and Its Aftermath

The great financial crisis that hit the financial services industry in 2008–2009 had its roots in a bubble

in housing prices in the United States. Financial service firms had been bundling thousands of home mortgages together into bonds, and selling them to investors worldwide. The purchasers of those bonds thought that they were buying a solid financial asset with a guaranteed payout—but it turned out that the quality of many of the bonds was much lower than indicated by bond-rating agencies such as Standard & Poor's. Put differently, there was an unexpectedly high rate of default on home mortgages in the United States.

At the top of the housing bubble, many people were paying more than they could afford to for homes. Banks were only too happy to lend them money because they assumed, incorrectly as it turned out, that if the borrower faced default, the home could be sold for a profit and the balance on the mortgage paid off. The flaw in this reasoning was the assumption that the underlying asset—the house—could be sold, and that home pricing would continue to advance. There had been massive overbuilding in the United States. By 2007, home prices were falling as it became apparent that there was too much excess inventory in the system. The net result: many supposedly high-quality mortgage-backed bonds turned out to be nothing more than junk, and prices for these bonds fell precipitously. Institutions holding these bonds had to write down their value, and their balance sheets started to deteriorate rapidly. As this occurred, other financial institutions became increasingly reluctant to lend money to those institutions seen as being overexposed to the housing market. Suddenly, the banking system was facing a major credit crunch.

As the crisis unfolded, several major financial institutions went bankrupt, including Lehman Brothers (a major player in the market for mortgage-backed securities) and Washington Mutual (one of the nation's largest mortgage originators). AIG, a major insurance company which had built a big business in the 2000s selling default insurance to the holders of mortgage-backed securities, faced massive potential claims and had to be rescued from bankruptcy by the U.S. government, which took an 80% stake in AIG in return for providing loans worth \$182 billion. The government also created a \$700-billion fund—the Troubled Asset Relief Program—that banks could draw upon the shore up their balance sheets and meet short-term obligations. While these actions managed to arrest the most serious crisis to hit the global

financial system since the Great Depression of 1929, they could not stave off a severe, prolonged recession and a major decline of the market value of most financial institutions.

Almost alone among major financial institutions, Schwab sailed through the financial crisis with relative ease. The firm had steered well clear of the feeding frenzy in the U.S. housing and mortgage markets. Schwab did not originate mortgages, and nor did it hold mortgage-backed securities on its balance sheet. Schwab had no need to draw on government funds to shore up its balance sheet. The company remained profitable, and although revenues and earnings did fall from 2007 to 2009, the balance sheet remained strong.

By 2010, Schwab was once more on a growth path, although extremely low interest rates in the United States and elsewhere limited its ability to earn money from the spread between what it paid to depositors and the amount it could earn by investing depositors' money on the short-term money markets. Some 40% of Schwab's revenues are tied to interest rates, and as long as interest rates remain very low, Schwab's ability to earn profit here is limited. On the other hand, earnings could expand significantly if rates return to pre-crisis levels.

Charles Schwab stepped down as CEO on July 22, 2008, passing the reins of leadership to Walter Bettinger, although Schwab continues to be involved in major strategic decisions as an active chairman. Under Bettinger, the company has charted a conservative course. The main goal has been to grow the net asset base of the firm by attracting more clients. The stellar performance of Schwab through the financial crisis, and its continuing strong brand, has certainly helped in this regard. From 2008 to 2016, Schwab has generated 5 to 8% annual growth in its asset base. To keep doing so going forward, the company has launched couple of other initiatives.

First, in 2011, it announced a plan to expand its physical retail presence. Schwab's branches had declined in number from 400 in 2003 to around 300 by 2011 as more and more customers transacted online with the company. Despite this decline, Schwab has concluded that a physical retail presence remains a powerful means of gathering in new accounts and holding onto existing accounts. Rather than open more storefronts, however, which entails significant costs, the company has opted for a different strategy; it has decided to open additional retail branches

using independent operators in what amounts to a franchise system. The ultimate goal is to triple the branch network to around 1,000. Detractors worry that Schwab risks diluting its powerful brand if the independent operators do not offer the same level of service that people have become accustomed to at traditional Schwab branches. For its part, Schwab executives have stated that it is their intention that a client walking into an independently owned Schwab branch will not know the difference and would get the same service and products as at company-owned branches.²²

Second, Schwab has made a big push into the exchange traded fund business (ETFs). ETFs are passively managed index funds, such as an S&P 500 index fund. ETFs have grown into a \$4 trillion-dollar industry since the first ETF was introduced 25 years ago. ETFs are attractive because they trade like stocks on a regulated exchange while providing diversity within a single investment product. Since ETFs are passively managed, expense ratios are typically lower than those for actively managed mutual funds. Schwab started to offer ETFs in the 2000s, and in 2013 it announced the launch of Schwab EFT OneSource trading platform. Modeled on Schwab's successful mutual fund market place, this provides access to more than 200 ETFs and offers \$0 online trade commissions. Schwab will make money from charging fund distribution fees, as it does with mutual funds.

C4-4 CONCLUSION

As of 2018, Schwab seemed to be firing on all cylinders. During 2017, the company increased its assets under management by \$199 billion, to \$3.4 trillion. The total client assets under management had doubled in just 6 years. Some 1.4 million new accounts were opened at Schwab in 2017, the highest number in 17 years. Schwab was profitable, boasted one of the lowest cost structures in the industry, and was gaining market share from competitors. Twice as many assets were transferred in from rivals during 2017 as were transferred out.

The top-line goal was to continue to grow the business by offering low costs, excellent customer service, and a wide range of investment options. The company articulated five principles to guide its

growth over the next decade: (1) Trust is everything, earned over time, lost in an instant. (2) Price matters, more than ever, and in our industry, more than most. (3) Clients deserve efficient experiences, every time. (4) Every prospective or existing client is critical to our future growth, no matter how large or small.

(5) Actions matter more than words; clients, press, influencers, and employees will give credit to what we do rather than what we say. The company was clear that to achieve its growth goal and be true to its principles, it would have to continue to innovate and challenge the status quo.²³

NOTES

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CASE 5 COCA-COLA

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C5-1 INTRODUCTION

On May 1, 2017, James Quincey became CEO of Coca-Cola (hereafter called Coke). The 52-year-old British businessman had worked at Coke since 1996. He had held leadership positions in Coke's operations in Latin America and Europe before being made COO in 2015. He lost no time in signaling that he would push for a major shift in Coke's strategy. He stated that the 130-year-old company must speed up the development of products beyond soda to become a "total beverage company," and that the company "needs to be bigger than the core brand." To do that, he has said, the company must not be afraid to make mistakes.¹

Quincey became CEO at a challenging time for Coke. Consumption of carbonated soft drinks (CSD), which still accounted for 70% of Coke's business, had been declining. In 2000, Americans drank 53 gallons of CSDs per capita, up from 23 gallons per capita in 1970. By 2016, consumption had fallen back to 38.5 gallons per capita.² Similar declines were occurring elsewhere in the world. Sales of Coke's core megabrand (which included Coke and all its variants) had fallen by 5% over the last three years in the United States and 1% worldwide. Overall, CSDs accounted for about 24% of all nonalcoholic beverage consumption in the United States in 2017, down from around 37% in 2000. Sugary drinks were being attacked as a major source of obesity. In a possible harbinger of things to come, several national and local

governments had placed "sin taxes" on sugary drinks in an effort to reduce their consumption. Coke's core brands were also being pressured by its perennial rival, Pepsi Cola, and by numerous boutique beverage companies that had found it easier to bring new niche products to market. Some of these newer brands were using stevia, a natural, plant-based, zero-calorie sweetener, as an alternative to the synthetic sweetener aspartame that is widely used in diet CSD. The growth of such alternatives may have played a role in a sharp decline in consumption of diet CSDs such as Diet Coke, which has seen its U.S. sales volume fall every year since 2006. Paralleling the fall in CSD consumption, in the United States consumption of bottled water has grown dramatically from 13.2 gallons per capita in 2000 to 39.3 gallons per capita in 2016, when for the first time Americans consumed more bottled water than CSDs.

Complicating matters, Coke was in the midst of a major reorganization of its bottling network. In 2010, Coke bought North American bottling operations from its minority-owned bottler, Coca-Cola Enterprises. It did the same with hundreds of bottlers around the world. Now it was refranchising those bottling plants under terms aimed at making the asset-heavy bottling and distribution operations more efficient, while freeing Coke to focus on marketing and product development.³

One of Quincey's first actions as CEO was to announce the company would eliminate 1,200 jobs at its headquarters in Atlanta, reducing the number of corporate positions by 20%. The cuts were part of a

plan to save \$800 million by 2019. Quincey's objective was to use about half of those cost savings to increase investments in new products and marketing. His goal was to raise Coke's revenue and profit growth to 4 to 6% per year. That was a challenging target—Coke's net profits had peaked at \$12 billion in 2010 and had steadily fallen to \$6.5 billion by 2016.

C5-2 AN OVERVIEW OF COKE'S BUSINESS⁴

Coke is the world's largest beverage company, with annual sales of \$35 billion in 2017 (see Financial exhibits at the end of the case). In recent years, the non-carbonated segments have been growing, accounting for 30% of volume in 2017, up from 20% in 2010. The company is a global enterprise, selling its products in over 200 countries around the world. The company claims that beverages bearing trademarks owned or licensed by Coke account for more than 1.9 billion of the roughly 60 billion servings of all beverages consumed around the world every day.

The company owns or licenses more than 500 non-alcoholic beverages grouped into five "category clusters": (1) sparkling (carbonated) soft drinks; (2) water, enhanced water, and sports drinks; (3) juice, dairy, and plant-based beverages; (4) tea and coffee; and (5) energy drinks. Coke's sparkling soft drinks (CSDs) account for 70% of volume. Coke owns four of the five top-selling CSDs in the world.

For CSD products like Coke, Diet Coke, Fanta and Sprite, Coke manufactures syrup concentrates, which are then sold to the company's network of more than 250 licensed bottlers worldwide. In recent years, the noncarbonated segments have been growing, accounting for 30% of volume in 2017, up from 20% in 2010. The company is a global enterprise, selling its products in over 200 countries around the world. The company claims that beverages bearing trademarks owned or licensed by Coke account for more than 1.9 billion of the roughly 60 billion servings of all beverages consumed around the world every day.

Coke manufactures syrup concentrates, which are then sold to the company's network of more than

250 licensed bottlers worldwide. Concentrates are flavoring ingredients and, depending on the product, sweeteners. Coke maintains ownership of the brands and formula, and is responsible for national consumer brand marketing. The bottlers manufacture, package, sell, and distribute the branded beverages to retailers and vending machine partners, who then sell the products to end consumers. Bottlers are also responsible for marketing and promotions within their territory.

Concentrate manufacturing involves relatively little capital. According to some estimates, a concentrate plant of sufficient scale to serve the entire United States probably costs on the order of \$100 million to construct. In 2017, Coke had 32 concentrate plants around the world, 11 of which were in North America. In the concentrate part of its business Coke enjoys gross margins of around 60%, with most of its remaining costs being in the form of product development and marketing.

Historically, Coke has relied on a network of independent bottling franchises to manufacture and distribute its products, a system that the company believes served it well. The cost of an efficiently scaled modern plant with multiple bottling lines and warehousing can reportedly reach \$250 million.⁵ As of 2010, Coke and Pepsi each had about 100 company-owned and partner bottling plants in the United States. While Coke long relied upon independent bottlers to manufacture and distribute its product, in the early 1980s it started to purchase bottlers. It spun them off in 1986 into a minority owned subsidiary, Coca-Cola Enterprises, but started to acquire them again in 2010, only to reduce its exposure to the bottling business once more after 2015. In 2015, Coke had 63 company-owned bottling plants in North America. By 2017, this number has been reduced to just 9.

In 2015, 63% of Coke's net operating revenues came from finished product operations (i.e. selling bottled drinks) and 37% from concentrate operations. In 2017, as a result of bottler spinoffs, 49% came from finished product operations and 51% from concentrate operations. The reduction in ownership of bottling had reduced the amount of physical assets on Coke's balance sheet. As of December 31, 2017, the carrying value of Coke's property, plant, and

equipment, net of depreciation, was \$8,203 million, or 9% of total assets, down from \$12,571 million, or 14%, of total assets in December 2015.

Although Coke relies upon bottlers for much of its distribution, in the United States it has long reserved the right to sell its concentrate directly to owners of soda fountains, which include restaurants, sports arenas, and convenience stores. Outside the United States bottlers are typically authorized to sell to fountain owners and fountain wholesalers.

C5-3 THE EARLY HISTORY OF COKE⁶

Coke was invented by an Atlanta pharmacist, John Pemberton, in 1886. Pemberton, who had been wounded in the American Civil War and subsequently became addicted to morphine, was seeking a cure for his addiction. The product he concocted contained two main ingredients, coca (the basis for cocaine, which remained an ingredient of Coke until 1904) and kola, a tropical nut with a high concentration of caffeine, hence the name Coke. Pemberton produced a concentrate syrup, which he sold to drug stores with soda fountains, who added carbonated water and sold the refreshing drink as a medicinal tonic. Pemberton claimed that the drink was a valuable brain tonic and a cure for all manner of nervous afflictions. It was particularly valued as a hangover cure. In making these claims, Pemberton was hardly unique. All sorts of tonic drinks were being sold out of drugstores at that time. Pemberton applied for, and was granted, a trademark patent for Coke in 1887. In 1888, an ailing Pemberton sold the rights to Coke to one of his business partners, Asa Candler. Pemberton died shortly afterwards. Candler went on to transform Coke into a national drink.

Candler formally incorporated Coke in 1892. Rather than sell his drink directly to consumers, Candler continued to sell the concentrate to distributors and fountain owners. Like Pemberton before him, he kept the formula of the concentrate secret to limit imitation, a tactic to which the company still adheres. The concentrate was priced low, giving distributors a

healthy profit margin. In 1895, Frank Robinson, who had worked first for Pemberton and then Candler, observed to Candler that by focusing on the medicinal uses of Coke the company was limiting its market. After all, he argued, not everyone got sick, but everyone got thirsty. Robinson had been the person who coined the name Coke, and was also responsible for the classic Coke logo with its recognizable Spencerian Script. After consulting with Candler, Robinson, who was now in charge of Coke's advertising, made a brilliant tactical move. He created simple ads that emphasized how refreshing Coke was. His goal was to advertise to the masses, rather than the few. It worked: Sales accelerated.

In 1899, two lawyers from Tennessee, Benjamin Thomas and Joseph Whitehead, came to see Candler with a proposition: They wanted to bottle Coke. Candler was skeptical; he thought the fountain business was where the money was. Moreover, bottling was an imperfect technology with a reputation for poor seals and spoiled product. However, the lawyers were persuasive. Wouldn't it be wonderful, one said, "if a fellow could put this stuff in a bottle and stop it up so the gas wouldn't get away, and he could drink it whenever he wanted?" They also pointed out that a company called Crown Cork and Seal had recently developed a crimped crown bottle cap with a much tighter seal, solving the problem of spoiled product. Convinced by their arguments, Candler signed the 600-word contract the lawyers had prepared. It was a momentous decision.

Although the contract went through several iterations as Coke grew, the original bottling contract with the two Tennessee lawyers proved to be a template for bottler relations for the next 80 years. What in essence was a franchising contract bound the bottlers to use only Coke syrup, banning any imitation colas. The contract excluded the soda fountain business, which would remain solely under the purview of Coke. Bottlers were allowed to bottle noncola carbonated beverages made by other companies, although there were few of those in evidence at the time the original contract was drafted. Each bottler was given an exclusive geographic territory. The contract specified that if the bottlers failed to supply the demand in the territory they embraced, the contract would be forfeit. The syrup concentrate was sold

to the bottlers at a fixed price. There was no provision for modifying the price of the syrup should the cost of the ingredients increase. Nor was there any specified time limit to the contract. If the bottlers fulfilled their end of the deal, the contract was in effect permanent. For their part, the bottlers agreed to be responsible for advertising and promotion in their territory. The bottlers paid \$1 for these rights and obligations. As Candler saw it, there was little risk in the contract. If the bottlers were successful, Coke would make a lot of money selling concentrate to them. If they were not, the company had no money at risk, the bottlers having put up the capital to build their plants.

By 1904, there were over 120 bottlers, with bottlers in almost every state in the Union. By 1919, there were 1,200 Coke bottling plants across America, putting almost every town within reach of a bottler. The number of franchisees peaked at 1,263 in 1928, gradually consolidating over the next 50 years to around 800. The distribution efficiency of the bottlers had been vastly increased by the development of the automobile. Coke trucks were becoming a familiar sight on America's rapidly expanding paved road network. The bottlers blanketed their territories with the Coke logo, placing advertising signs wherever they could. As one bottler noted, the bottling agreement put Coke into the hands of thousands of merchants in the suburbs and outlying districts of every city, in the stores of every country town and village, and in the homes of thousands of people where it had not been possible to put Coke. As a result, "an enormous field was opened up . . . and hundreds of thousands of people who had never before tasted or seen Coke were introduced to this product first in bottles." Along the way, the bottlers became the richest men in their communities.

As the bottling network expanded at a rapid clip, and Coke appeared everywhere, so did imitators. Soon there were a multitude of them, many with names that played off the Coke brand, such as Coca and Cola, Coca-Kola, Cola Coke, and Pepsi Cola. In 1905, Congress passed the Trademark Law. Coke registered under a clause giving legal status to any trademark that had been in continuous use since 1895. Encouraged by the trademark's secure status, Coke's top lawyer, Harold Hirsch, began to bring cases against the imitators. Hirsch sued any cola drink that dared to use a script logo, a diamond label like Coke, or red barrels. If the name was too similar,

Hirsch objected. Hirsch opposed registration of many colas at the U.S. Patent Office, nipping them in the bud. It was Hirsch who pushed for the development of Coke's distinctive "Hobble skirt" bottle, a design that Coke patented, and he encouraged all bottlers to rapidly adopt the unique design.

By 1926, one reporter estimated that more than 7,000 copycat imitators had been buried under Hirsch's sustained legal assault. Hirsch was relentless. Adverse decisions were appealed all the way to the Supreme Court if necessary. Writing for the majority in one famous case, Supreme Court Justice Oliver Wendell Holmes noted that Coke "was a single thing coming from a single source, and well known to the community." Hirsch virtually created American trademark law, filing an average of one case per week. Despite his efforts, Hirsch couldn't shut down every rival. Among the handful of survivors was Pepsi Cola.

In 1919, Asa Candler had sold Coke to a group of investors. They took the company public the same year. By 1923, the son of one investor, Robert Woodruff, became president of Coke. Only 33 at the time, Woodruff would stay at the helm until 1954 and remained on the board of directors until 1984. It was Woodruff who articulated the vision that Coke should be "within arm's reach of desire." He identified the service station as a major new outlet, and started an initiative that led to the development of Coke's distinctive, red, open-top coolers, which were placed in service stations and stores all over the nation. Coke was also one of the early adopters of the vending machine. The first Coke vending machines started to appear in the 1930s, although they had to be attended by a clerk. Coin operated versions started to arrive after World War II.

Woodruff was a stickler for product standardization. He wanted Coke to taste the same, and be packaged and advertised the same way, no matter where it was sold. In 1924, he formed a standardization committee to ensure that bottlers adopted the same packaging. The committee worked with bottlers and fountain outlets to make sure that the taste was consistent.

Under Woodruff's leadership, Coke's advertising evolved in the direction of lifestyle marketing. The company had long shown a flare for advertising. By 1912, it was spending well over a million dollars a year on advertising. Coke was already probably the single best advertised product in the United States.

During 1913, Coke advertised on over 100 million items, including thermometers, cardboard cutouts, metal signs, calendars, matchboxes, and baseball cards. The Coke logo started to permeate every aspect of American life. No matter where you were, you could hardly avoid seeing the logo. Celebrities started to promote it. The movies and Coke were made for each other. Buster Keaton drank it onscreen. Film stars appeared in Coke ads and there were “Coke girls,” who appeared in ads or on calendars clutching a bottle of Coke. As one critic noted, they were the “bewitching sirens who lure us to Coke with their display of charms.”

Under Woodruff’s early years, the ad message that resonated was that Coke was always delightful and could be enjoyed at work or at play. Copy was kept to a minimum, while pictures conveyed the message that active, contented, good-looking, successful young men and women enjoyed the drink. By 1929, the company had coined the phrase that Coke was “The Pause that Refreshes,” a tagline that was used in one form or another for the next three decades. Increasingly, Coke ads made an appeal to American nostalgia. Images included the Coke Santa Claus, and Norman Rockwell ads with freckle-faced boys at the old fishing hole, complete with a dog and a bottle of Coke. Through these means, Coke became tightly woven into the fabric of American life. It became the American drink.

Woodruff pushed Coke to establish foreign operations. His early efforts in the 1920s met with limited success. However, America’s entry into the Second World War after Pearl Harbor gave him a golden opportunity to extend the company’s reach. As America went to war, Woodruff proclaimed “We will see that every man in uniform gets a bottle of Coke for five cents, wherever he is and whatever the costs to our company.” Woodruff’s commitment yielded benefits for the company—Coke was exempted from the wartime sugar rationing that bedeviled other soft-drink companies (and nearly bankrupted Pepsi). Coke employees followed the military overseas, establishing 64 bottling plants in the process on every continent except Antarctica—largely at government expense. Coke was apparently indispensable to the war effort. General Patton reputedly regarded Coke as a necessity, perhaps because he himself drank it constantly, and he made sure Coke transported a bottling plant wherever he went. When he was in

North Africa, General Eisenhower requested enough bottling equipment to fill 20,000 bottles a day. In 1944, Army Chief of Staff George Marshall issued an order specifically allowing commanders to requisition Coke plants by name, along with the company personnel to install and operate them. This expansion set the stage for a boom in Coke’s international sales after the war.

C5-4 THE POSTWAR PERIOD: PEPSI STRIKES BACK⁷

Coke emerged from the second World War in a dominant position domestically, and with the benefit of a fast-growing international presence. The company had 70% of the domestic market for colas, far ahead of second-place Pepsi, which had 20%. Unlike many other cola companies, Pepsi had managed to survive despite three brushes with bankruptcy and Coke’s legal assault. Following a blizzard of lawsuits and countersuits between the two companies, in 1941, Robert Woodruff had signed a deal with Walter Mack, Pepsi’s President, under which Coke agreed to recognize Pepsi’s trademark in the United States. Mack, an old friend of Woodruff, had been brought in to run Pepsi by outside investors in 1938. The friendship may have influenced Woodruff’s decision to make a deal. The agreement was drafted without the input or knowledge of Coke’s lawyers, who were furious when they found out.

Pepsi’s survival through the Great Depression owed much to its strategy of promoting a 12-ounce bottled drink for the same nickel Coke got for its 6½ ounce bottle, which made it a hit in blue-collar neighborhoods. Under Mack’s leadership, Pepsi doubled down on this strategy. In 1939 the company started to promote Pepsi using a 30-second radio jingle with a catchy tune that immediately caught on: “Pepsi-Cola hits the spot, twelve full ounces that’s a lot, twice as much for a nickel too, Pepsi Cola is the drink for you.” The jingle was the first of its kind; most radio ads at the time lasted 5 minutes were full of hard-sell verbiage. In 1941, the jingle was played nearly 300,000 times on the airwaves.

Mack also had a clever strategy for building out Pepsi's network of franchised bottlers. He found that the Coke bottler was always the wealthy bottler in each region, so he focused on well-run small bottlers who had missed the Coke train, and tried to persuade them to hitch their wagon to Pepsi. Mack awarded larger territories to Pepsi bottlers than Coke, the former company having started building out its franchisee bottler network at a time when a territory was defined by how far a horse drawn carriage could go.

Under Mack's leadership Pepsi started to claw market share away from Coke. Woodruff's lieutenants tried to persuade him to match Pepsi's offering with larger Coke bottles, but he refused. One of those lieutenants was the brash vice president of marketing at Coke, Alfred Steele. In 1949, Steele left Coke for Pepsi; in 1950, he became president of the company. Steele's vision for Pepsi was simple: "Beat Coke." Steele reduced the sugar content of Pepsi and promoted the drink as "the light refreshment which would refresh without filling." He pushed into the vending machine market, which Mack had seceded to Coke because a 12-ounce Pepsi bottle wouldn't fit in the standard machine. Steele created an 8-ounce bottle that did fit.

He arranged for low-interest loans for the machines, with payment to start 6 months after purchase. This allowed poorer bottlers to purchase the \$1,000 machines on credit and pay for them out of profits. Steele also pushed bottlers to focus their attention on the take-home market, and build distribution in supermarkets, which were rapidly springing up all over America, particularly in the suburbs. To support the take-home market, Pepsi introduced a 26-ounce bottle.

Steele was a master at motivating Pepsi's bottlers, persuading franchisees to plow money back into their business and local advertising. You can "conserve yourself into bankruptcy," he told them, or "spend your way into prosperity." Practicing what he preached, he doubled Pepsi's marketing budget, targeting 25 metropolitan areas for heavy spending. Steele also bought out Pepsi bottlers who were failing to push the product hard enough and installed his own men.

In 1955, Steele became the fourth husband of the iconic American actress Joan Crawford (it was his third marriage). Crawford, who ironically had been a Coke girl in the 1930s, was no mere adornment. She accompanied him on his travels, logging over

100,000 miles a year and opening new Pepsi plants in country after country. In 1957, they visited 20 foreign countries, where the actress, always holding a Pepsi bottle, was greeted by ecstatic fans. After Steele died suddenly of a heart attack in 1959, Joan Crawford took his place on the board. She continued as a brand ambassador for Pepsi and stayed on the board until 1973.

Steele's overhaul was effective. Pepsi's share of the US market increased from 21% to 35% in five years. Pepsi also started to expand rapidly outside of the United States, reducing Coke's worldwide market share lead from five to one to three to one. Coke's response to this brash upstart was underwhelming. The company was accused of slumbering, of being self-satisfied with all its past progress, although to be fair, Coke was financially healthy and international sales were growing at a strong clip. Still, to some critics the company was starting to look old and fat. The same could be said for some of the bottlers who were now managed by second or third generation owners who took profits for granted.

Pepsi continued to make headway against its rival in the 1960s and early 70s. In 1961, Donald Kendall was appointed president of Pepsi. Kendall, who was to lead Pepsi for the next 25 years, continued on the trajectory set by Steele. In 1963, he presided over the Pepsi Generation campaign, which targeted the "young and the young at heart." The 1960s was a time of social change led by the young. The campaign, which featured young, energetic, healthy, beautiful people doing exotic things, told consumers that Pepsi drinkers were on the side of change. If you were a Pepsi drinker, you were young (or young at heart), and the future was on your side. This was a stark contrast to the nostalgia messages of the Norman Rockwell-era Coke ads and represented a sharp break from the "twice as much for half the price" theme of prior Pepsi campaigns. In 1964, Pepsi introduced Diet Pepsi, a zero-calorie variant of its core brand that catered to the changing dietary habits of the young Baby Boom generation. Coke had introduced its own diet drink, Tab, the year before, but unlike Pepsi, Coke chose to not associate Tab with its core Coke brand.

From 1962 until 1980, Coke was led by Paul Austin, first as president and then as CEO. Austin had devoted much of his attention to growing Coke's international operations, where the company had done well. In the United States, Austin struggled to motivate Coke's bottlers to adopt a more aggressive posture towards Pepsi, and to bottle Coke's growing

portfolio of noncolas, which included Tab, Fanta, Fresca, and Sprite. Both companies also had to deal with the Federal Trade Commission (FTC), which in 1972 alleged that the exclusive territories awarded to Coke and Pepsi bottlers, by giving bottlers a territorial monopoly, violated the Sherman Antitrust Act. Coke and Pepsi fought back, lobbying Congress for specific legislation to exempt them from prosecution. These efforts were rewarded with the passage of the Soft Drink Interbrand Competition Act in 1980. This Act maintained that interbrand competition between Pepsi and Coke was so strong that this particular market could be exempt from the Sherman Act.

C5-5 THE PEPSI CHALLENGE AND ITS AFTERMATH⁸

While Pepsi continued to grind out market share gains from Coke in the United States, the larger company remained focused on overseas expansion. This seemed to make sense. Per capita consumption of carbonated beverages was much lower outside of the United States while the American market looked saturated. However, Pepsi was about to wake Coke out of its complacency by firing the opening shots in what would come to be known as the “Cola Wars”.

Ground zero for this new round of rivalry between the two soft drink companies was Dallas, where Pepsi’s market share was a miserable 4%. In an attempt to fix things, the local brand manager hired the Dallas-based Stanford Advertising Agency. Its proprietor, Bob Stanford, had discovered that Pepsi beat Coke in a blind taste test while promoting a 7-Eleven generic cola. He suggested that Pepsi try out a blind taste test. “The Pepsi Challenge” was first rolled out in Dallas in 1975. Backed by TV ads which showed longtime Coke drinkers astonished that they preferred Pepsi to Coke, the campaign had a dramatic impact. Pepsi’s market share in Dallas doubled. The local Coke bottler responded by cutting prices and launching an advertising blitz mocking the challenge. Pepsi matched the price cuts and continued to promote the Pepsi Challenge. Within two years Pepsi’s share in Dallas had increased to 14%.

Encouraged by what was occurring in Dallas, other Pepsi bottlers soon adopted the challenge. Coke’s response was to cut prices and to run ads that questioned the validity of The Pepsi Challenge. Pepsi matched Coke’s price cuts with cuts of its own, starting a price war that depressed returns for both concentrate companies and their bottlers. Meanwhile, in Atlanta Coke’s technical people ran their own version of the Pepsi challenge. To their consternation, they found that consumers preferred Pepsi to Coke by a 58-42 split. By the end of the decade, Pepsi had edged passed Coke in supermarket sales in the United States, although thanks to its strong position in fountain and vending machine sales, Coke remained the overall market leader. In 1980, Pepsi raised the stakes yet again when it rolled out the Pepsi challenge nationally. By this point, retail price discounting was becoming the norm, and consumers were coming to expect it.

The pressure of the “Cola Wars” pushed Coke to revise its archaic bottling contract, which had fixed the price for concentrate and did not allow for increased costs with the exception of sugar. After contentious negotiations, in 1979, Coke and its bottlers agreed that the cost of the concentrate could be raised to match increases in sugar prices and the cost of other ingredients as measured by the Consumer Price Index.

In 1980, Roberto Goizueta was appointed president of Coke, and in 1981 he became CEO and chairman. The replacement of Paul Austin was overdue. As early as 1975, some of his associates started to notice that Austin was developing memory problems. By 1978, it was clear to those around him that something was wrong. Initially people put his memory lapses and increasing irritability down to Austin’s penchant for alcohol, but he was in fact developing Alzheimer’s. Goizueta, a Cuban American, had risen through the ranks at Coke. The chain-smoking Goizueta had a reputation for being highly intelligent, dedicated to Coke, with a good grasp of the business and an eye for detail. Although he had an affable manner, he could also be ruthless, holding people to account, but he also rewarded good results and was open to points of view other than his own.

Goizueta moved fast to awaken Coke from its slumber. In 1980, he oversaw the replacement of cane sugar in the United States with high-fructose corn syrup (HFCS), a less expensive sweetener. The price of cane sugar in the United States was higher than elsewhere in the world due to sugar quotas that limited

foreign supply. In June 1980, he announced a plan to rebrand bottling operations in the United States. In the 1970s, Coke still had as many as 800 bottlers in the United States. Many smaller bottlers lacked the capital resources to invest in new lines, new packaging, and aggressive sales and promotion activities. Under Goizueta, the company would actively promote consolidation among its bottlers, sometimes buying an interim equity position while looking for new owners. This culminated in 1986, when Coke purchased a controlling interest in two large bottlers who had come on the market for \$2.4 billion. Together with bottlers Coke already owned, this gave the company control of over one-third of U.S. bottling operations.

The problem with buying bottlers was that they added multiple physical assets to Coke's balance sheet and took the company into the low-margin, capital-intensive bottling business. Coke's solution, first suggested by the CFO Douglas Ivester, was to spin off the acquired bottlers into a subsidiary in which it took a 49% stake, guaranteeing control over the operation, which pushed the capital intensity off Coke's balance sheet. The bottling subsidiary, known as Coca-Cola Enterprises (CCE), continued to acquire smaller bottlers after the spin-off, becoming the world's biggest bottler. Coke also continued to purchase smaller bottlers and sell them to CCE. Coke referred to CCE as an "anchor bottler." Ivester served as chairman of CCE's board, while continuing as CFO at Coke. CCE consolidated territories, introduced new automated bottling lines, and over time pushed new Coke products through its distribution system. By 2009, CCE was responsible for three-quarters of Coke's North American bottle and can volume. At the same time, because it retained effective control over CCE, Coke was able to sell concentrate to CCE at a relatively high price and influence CCE's strategy. This strategy was so successful for Coke that over the next two decades the company sought to replicate it outside of the United States, encouraging bottlers in a country or region to merge in order to achieve economies of scale, and then taking a minority equity position in many of them so that it could exercise a degree of control.

Goizueta also drove Coke to develop a better diet drink to respond to the success of Diet Pepsi and leverage off its flagship Coke brand. The result was Diet Coke. Introduced in 1982, the product surpassed all the company's expectations outselling Diet Pepsi and becoming the third best-selling carbonated drink

in the United States by decade's end. The introduction of Diet Coke paved the way for other drinks that used the Coke name, including Caffeine Free Coke (introduced in 1983) and Cherry Coke (introduced in 1985). Pepsi also introduced new carbonated beverages, and both companies introduced a range of different packaging and sizes.

While Coke seemed to be gaining vigor under Goizueta, one problem remained: Its flagship brand was still struggling in the United States against Pepsi. Goizueta had a solution for this too—New Coke, a reformulation of its classic brand. New Coke hit the market in 1985. Introducing the product at a press conference for 700 journalists in February, Goizueta explained that the new flavor had been discovered as a result of experimentation on Diet Coke. Coke President Donald Keough claimed that the new formulae beat old Coke 55–44 in 190,000 blind taste tests, and that its margin increased to 61–39 when both drinks were identified. The journalists weren't buying the story. One asked, "Did you change the formula in response to the Pepsi challenge?" "Oh gosh no," replied Goizueta, "the Pepsi challenge, when did that happen?" Meanwhile, Pepsi claimed that New Coke mimicked Pepsi's taste.

Despite the negative publicity, Goizueta and his lieutenants were confident that New Coke would win out. What they didn't anticipate was the backlash from longtime Coke consumers. The company was besieged by letters, 40,000 of them by June, complaining of the taste. As one letter writer put it, "Changing Coke is like breaking the American dream, like not selling hot dogs at a ballgame." Another noted "I do not drink alcoholic beverages, I do not smoke. I don't chase other women; my only vice has been Coke. Now you have taken that pleasure from me."

Three months after the introduction of New Coke, Goizueta relented and stated that Coke would reintroduce its old formula, selling it side by side with New Coke as "Coke Classic." Three months later, Coke announced that it would treat Coke Classic as its flagship brand, and New Coke started to disappear from store shelves. It had been a disaster—or had it? As Donald Keough stated later, the experience taught Coke's management a useful lesson: Its customers still valued the original product. Despite everything, the brand was alive and well in America. Indeed, while it cost Coke \$4 million to research and develop New Coke,

the original Coke formulation garnered far more than \$4 million in free publicity. The classic formulation surged back to regain its position as the premier American soft drink. Coke had snatched an unlikely victory from the jaws of defeat. The “fiasco” had cemented the importance of the Coke brand in the American psyche.

Meanwhile, Pepsi had been vertically integrating forward into the fountain business, an area where Coke had long held a lead. Pepsi acquired Pizza Hut, Taco Bell, and then, in 1985, Kentucky Fried Chicken. Coke turned this strategy against Pepsi, telling other fast-food chains that Pepsi was now their rival. Wendy's and Domino's Pizza were among those that switched to serving Coke. By 1995, Coke had over 60% of sales of high-margin concentrate to restaurants, convenience stores, and food-service companies, while Pepsi's share was under 25%. In 1997, Pepsi announced that it would spin off its restaurant business, a move it hoped would revitalize its flagging fountain sales.⁹

C5-6 THE END OF AN ERA AND THE NEW MILLENNIUM

By 1997, Goizueta has been CEO for 16 years. Under his leadership, Coke had transformed itself from a slumbering giant with an inefficient bottler network and poor focus that was losing market share to Pepsi into an efficient marketing machine. Coke increased its domestic market share of carbonated beverages from 35 to 44%. Worldwide Coke's market share had grown from 35 to 50%. By this point, 80% of Coke's business was outside of the United States. The company's market value had surged from \$4.3 billion to \$145 billion. If not vanquished, Pepsi had been beaten back down into second place. And then, at the peak of his success, Goizueta was diagnosed with lung cancer. Six weeks later he was dead.

His replacement was Douglas Ivester, the financial wiz who was the brains behind Coke's purchase and spin-off of the company's bottlers in 1986. Ironically, Ivester ascended to the CEO position just as investors and journalists were starting to question Coke's

strategy of purchasing and then spinning off bottlers. The critics pointed out that Coke had pushed its debt from bottler acquisitions onto CCE, and moreover had extracted high profits from CCE by raising concentrate prices, leaving the anchor bottler to survive on razor-thin margins. Without CCE, they argued, Coke's profits would have been much lower.

By this time Coke had other problems to worry about. The 1997 Asian economic crisis was followed by a slowdown in Coke's international business. This was compounded by a strong U.S. dollar, which compressed Coke's international profits when translated back into dollars. Moreover, there were growing concerns about the health impact carbonated sodas. Caffeine, high-fructose corn syrup, sugar, and artificial sweeteners all came under fire. Sodas were blamed for obesity and diabetes, both of which were increasing in the United States and elsewhere. Consumption of carbonated sodas finally seemed to have peaked. Demand for bottled water, fruit drinks, specialty beverages, and sports drinks were all growing, taking share away from Coke's traditional market.

Coke's response was to accelerate its diversification into noncarbonated beverages. In 1999, the company launched its own brand of bottled water, Dasani. Pepsi had been in the bottled water business since 1994 with its Aquafina brand. Coke also purchased established beverage brands that could take advantage of Coke's marketing savvy and distribution systems. Notable acquisitions included Odwalla Inc (maker of fresh fruit and vegetable juices), Planet Java (coffee drinks), Mad River Traders (New Age teas, juices, lemonades, and sodas), and Energy Brands (makers of VitaminWater). Pepsi too, made several acquisitions, including Quaker Oats (makers of the bestselling sports drink Gatorade) and SoBe (teas, fruit juices, and enhanced beverages).

By 2006, Coke was dealing with another problem—the company's relationship with its bottlers was coming under strain again. One trigger was a request from Wal-Mart that Coke deliver its Powerade sports drink directly to Wal-Mart distribution centers.¹⁰ Until that point, individual bottlers had always delivered to Wal-Mart stores and stocked the shelves themselves to make sure their products were well displayed. Worried that Wal-Mart would develop its own brand of sports drink if Coke did not agree, the company acquiesced, asking CCE to deliver directly to Wal-Mart distribution centers. Fifty-six

smaller Coke bottlers, fearing that the practice might spread to other drinks, sued Coke and CCE, claiming the agreement violated the distribution contract with bottlers that gave them the right to deliver directly to stores within their own exclusive territories. In response, Coke tried to buy back the distribution rights for Powerade from the bottlers, but the price was reportedly too high. Ultimately, the suit was settled out of court, with the bottlers agreeing to allow for the delivery of Powerade to Wal-Mart warehouses but also receiving some of the profits.

There were also disagreements between Coke and CCE, which at the time was still 36% owned by Coke. CCE was dissatisfied with sales of Coke's Golden Leaf bottled tea products and decided to carry non-Coke products instead. Coke thought that CCE's execution was very poor, and pressured CCE's board to remove the company's CEO, John Alm, which it did in 2005. But the new CEO of CCE, John Brock, continued to irritate Coke by raising prices for Coke products, which eroded Coke's market share. Coke responded by raising concentrate prices.

The tensions between Coke and its bottlers simmered for a few more years. Then, in early 2010, Coke announced that it would acquire the North American territories of CCE for \$12.4 billion.¹¹ The acquired territories accounted for about 80% of Coke's North American business. The deal came just months after Pepsi had announced a similar deal to purchase its two largest bottlers. In explaining its rationale, Coke executives noted that the goal was to close some bottling plants, modernize others, and create a national manufacturing footprint that would allow it to more rapidly introduce new products to satisfy consumers with rapidly changing tastes. Under the old structure, every time Coke wanted to introduce a new product, it had to negotiate with its bottlers. The new structure was also aimed at helping Coke negotiate directly with big retailers.¹²

Following the acquisition, Coke created a new, company-owned bottling business, Coca-Cola Refreshments (CCR). In 2013, CCR started "refranchising" its U.S. territories, parceling out distribution rights and selling its bottling plants to trusted partners under a new franchising agreement known as the Comprehensive Beverage Agreement. The agreement gives the bottlers exclusive territories, requires them to take major Coke products, and commits them to the production, marketing, and distribution of those products. As before,

Coke would make its money by selling concentrate to the bottlers. The agreements were typically structured to last 10 years, and were renewable for successive 10-year terms. They could be terminated by Coke if the bottler did not live up to core performance requirements under the contract. As with the old agreements, the company retained the right to manufacture and sell fountain syrups to authorized fountain wholesalers and some fountain retailers.¹³

The refranchising process, completed at the end of 2017, involved 60 transactions transferring 350 distribution centers, 51 production facilities, 55,000-plus employees, and over 1.3 billion physical cases of volume. At the end of this process in late 2017, Coke was left with 70 independent bottlers in the United States, 10 of which were very large, had territories that covered cover multiple states, and accounted for the bulk of Coke's U.S. volume. The smaller bottlers were for the most part older bottlers who had remained independent through Coke's two forays into the bottling business. Some of them still operated under their original franchising agreement, which granted rights in perpetuity for trademark Coke or other cola flavored beverages. The company claimed that the refranchising better served the changing customer and consumer landscape in the United States and created a more aligned, agile, and efficient network of bottlers.¹⁴

Outside of the United States, Coke has also pushed for bottler consolidation.¹⁵ For example, in 2013, three Coke bottlers in Europe agreed to merge across 13 countries as part of a push by the company to cut costs and speed up new product introduction against the background of slowing sales of legacy products. Bottlers outside of the United States have long operated under contracts of a stated duration that are subject to termination if the bottler doesn't perform, or if other specified events occur.

C5-7 LOOKING FORWARD

With the bottler refranchising complete, the pressure is on new CEO James Quincey to craft a strategy for profitably growing Coke's sales going forward. His emerging strategy seems to center on product

innovation.¹⁶ Most notably, he has directed Coke's global subsidiaries to launch more local flavors and reduce time to market. In the first year of this initiative, the company launched 500 new drinks—a record, and an increase of 25% over the prior year. The company's Indian subsidiary came up with a chunky mango juice, a spicy, cumin-flavored soda, and a gritty guava drink. In Japan, recent launches include a laxative Sprite and the company's first alcoholic drink, a carbonated lemonade beverage. The Russian subsidiary launched Sprite Cucumber;

a line of whey shakes was introduced into Brazil, a sesame-and walnut drink in China, and a salty lemon tonic in France. This surge of local innovation represented a break from established practice, which largely consisted of foreign subsidiaries rolling out drinks first developed for Americans. Quincey knew that some of these new offerings would fall flat, but he also believed that some would turn out to not only be successful locally but would also grow to become regional or global drinks. Would he turn out to be correct? Only time would tell.

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Toni Balaguer/holbox/Shutterstock.com

CASE 6

UBER IN 2018

This case was prepared by Charles W. L. Hill of the School of Business, University of Washington, Seattle.

“Uber is software eats taxis.” Marc Andreessen¹

“I have had some terrible experiences with the taxi service; twice this past year I ordered a taxi to my house to go to the airport and they just didn’t show up.” Kevin Kane²

“Cab driver robbed, stabbed overnight in Salt Lake City,” KUTV News headline.³

stopping in the middle of streets and shutting down major portions of several major European cities including London, Lyon, Madrid, and Milan. Uber responded by offering discounts to stranded commuters in major cities. The day after the protests, Uber reported that its ridership in London had soared by 850%.⁵ In the United States, regulators in numerous cities issued cease-and-desist orders against Uber, which the company has generally ignored and, in several high-profile instances, overturned.

C6-1 INTRODUCTION

In June 2014, a 5-year-old company, Uber Technologies, the developer of the car-hailing smartphone app, secured \$1.2 billion in funding from a consortium of investors led by mutual fund giant Fidelity Investments. On the basis of the funding, Uber was valued at \$18.2 billion, making it one of the world’s most valuable privately held companies. This placed Uber’s valuation above that of the rental car companies Hertz and Avis, as well as other well-known private technology companies such as Airbnb and Dropbox. In justifying the valuation, CEO Travis Kalanick noted that Uber was already using its app to offer ride-for-hire services in 130 cities in 36 countries and that revenues were “at least doubling every six months.”⁴

At the same time, Uber was facing challenges from incumbent taxi services around the globe who argued that Uber was circumventing existing regulations and competing against them unfairly. On June 12, 2014, European taxi drivers protested the rise of Uber,

C6-2 THE “RIDE-FOR-HIRE” MARKETPLACE IN THE UNITED STATES

Historically in the United States two different types of provider have operated in the ride-for-hire marketplace: taxicab services, and limousine services, each of which operates under a different set of rules. Both taxicabs and limousine services are regulated by the states and/or cities in which they operate. In most cases, taxicabs are regulated at the municipal level, whereas limousine services are regulated at the city or state level. The regulations that apply to taxicab and limousine type services are roughly similar from jurisdiction to jurisdiction, although they may differ in detail.⁶

Regulations typically address who can operate a taxicab or limousine, how service providers are

contacted, the fare structure, and the labeling and appearance of vehicles. The motive for regulation is to ensure that services are safe, reliable, and affordable, and that owners and drivers are adequately compensated.

Customers can contact ride providers in two ways: by hailing on the street or by prearrangement. In general, only licensed taxicabs can be hailed on the street; limousine services must be prearranged. Moreover, unlike taxicabs, in many cities limousine services cannot respond immediately to pickup requests—they typically have a minimum prearrangement time, often at least an hour. This requirement works to protect taxicabs from direct competition from limousine services.

Most large urban markets are served by a significant number of local taxicab companies that operate fleets of cars. For example, there are 31 cab companies in San Francisco and 10 taxi dispatch companies that schedule rides. No one firm is dominant. There are about 1,500 licensed taxicabs within the city. Some 57% of taxi drivers in San Francisco are immigrants, a pattern that is repeated in many other cities. The average mean wage of a San Francisco driver was reported to be \$22,440 in 2013.⁷

In New York, which has the largest ride-for-hire fleet in the United States, licenses have been issued for 13,437 taxicabs. There are an estimated 42,000 drivers in the city, with a licensed vehicle being used by two or three drivers a day. In 2014, only 6% of cab drivers in New York were born in the United States, and 36% came from Bangladesh and Pakistan. The New York taxi fleet picks up 600,000 passengers per day. An estimated 25,000 livery cars provide for-hire service by prearrangement and carry 500,000 passengers per day. 10,000 “black cars” provide services mostly for corporate clients.⁸

Regulators have long required that taxicabs available to be hailed on the street be licensed. The license is to ensure that the taxi service is safe and reliable, and that fares are fair. For-hire vehicles must be insured to cover drivers and passengers, meet safety standards, and (if taxicabs) have a sealed meter. Regulations also require that licensed cabs be quickly and easily identifiable. This is normally achieved by a distinctive color (e.g., yellow). Cabs must also display whether or not they are in service.

Taxicabs charge a regulated fare, set by a government agency, based on the time and distance of the

trip, as measured by a meter. Some trips to and from established destinations, such as an airport, may have a fixed price and will be displayed in the cab. Taxicabs are required to carry standardized meters that must be prominently displayed, are sealed and periodically checked to ensure that the proper fare is being charged. Limousine services are generally prohibited from charging fares based on time and distance, and they do not carry a meter. Typically, fees are based on time, often with a minimum billed time. The fee normally has to be agreed on in advance.

In many jurisdictions the licensing system limits the supply of taxicabs. One common variant of licensing is the medallion system that is used in cities such as New York, Boston, Chicago and San Francisco. Medallions are small metal plates attached to the hood of a taxi certifying it for passenger pickup throughout a defined area (normally metropolitan boundaries). When the medallion system was first introduced in New York in 1937, the idea was to make sure that taxi driver was not a criminal luring passengers into his vehicle. To get a medallion, the taxi service has to adhere to the regulatory requirements in that jurisdiction and be approved by the appropriate regulatory agency. Medallions may be given to individual taxi drivers who own their own cars, but more typically taxi companies that own fleets of cars acquire them. The taxi companies then lease cars and medallions to drivers on a daily or weekly basis. In some locations the driver may own the car, but lease or purchase the medallion from an agent who has acquired it. An example would be Medallion Financial, a publicly traded company that owns hundreds of medallions in New York, sells them to aspiring young cabbies, and arranges for loans to finance their purchase.

In cities that utilize a medallion system the supply of medallions has often been limited. The rationalizations for doing this include ensuring quality, guaranteeing a fair return to taxi companies, and helping to support demand for other forms of public transportation, such as buses, trains and the subway. It has also been argued that limiting the number of cabs helps to reduce congestion and pollution.⁹

In practice, the supply of medallions has often not kept pace with growing population. In New York, Chicago and Boston for example, the number of medallions issued has barely budged since the 1930s. In New York, there were 11,787 medallions issued after World War II, a number that remained constant

until 2004. By 2014 there were 13,437 medallions issued in New York.

Medallions can be traded. Thus, over time, a secondary market in medallions has developed. In this market, the price is not set by the agency issuing them, but by the laws of supply and demand. The effect of limited supply has been to drive up the price of medallions. In New York, taxi medallions were famously selling for over \$1 million in 2012. In Boston the price was \$625,000. In San Francisco the price was \$300,000 and the city took a \$100,000 commission on the sale of medallions.¹⁰ The average annual price of medallions surged during the 2000s. In New York, prices increased 260% between 2004 and 2012. The inflation adjusted annualized return for medallions over this time period in New York was 19.5%, compared to a 3.9% annual return for the S&P 500.¹¹

As noted above, drivers often do not own the medallions. There are three players in many taxi markets: the medallion holders (often taxi companies) who have acquired the right to operate a taxi from the regulatory agency, the taxi driver, and taxi dispatch companies. A taxi dispatch company is a middleman or broker, who typically matches available cabs with customers and takes a fee for its scheduling services. While an individual taxi driver may own a medallion, most often taxi companies own them. Taxi companies own a fleet of cabs, which they lease out to drivers (with a medallion). A minority of drivers may own their own cab. In New York, about 18% of cabs were owner operated in 2014, putting most medallions in the hands of taxi companies.

In New York, regulations allow medallion owners to lease them out to drivers for 12-hour shifts. The critical problem facing a driver is that they must get access to a medallion in order to make a living. Due to this, companies that own medallions can extract high fees from drivers. There are also reports that some taxi dispatch companies use their position as schedulers to extract payment in the form of bribes from drivers in return for good shifts.¹²

Drivers, who legally are viewed as “independent contractors”, can begin a 12-hour shift owing as much as \$130 to their medallion leasing company. They may not break even until half way through their shift. One consulting company report found that in 2006 a driver’s take home pay in New York for a 12-hour shift averaged \$158. In 2011, the New York transportation authority calculated that it was \$96.¹³ A study of taxi

drivers in Los Angeles found that drivers worked on average 72 hours a week for a median take home wage of \$8.39 an hour. The LA drivers were paying \$2000 in leasing fees per month to taxi companies. None of the drivers in the LA study had health insurance provided by their companies, and 61% were completely without health insurance.¹⁴ Given the compensation, it is perhaps not surprising that some drivers can be rude, impatient, and prone to drive fast and take poor care of their cabs.

The LA study noted that because city officials heavily regulate the taxi business, taxi companies are active politically, paying lobbyist to advocate their interests and contributing to the campaign funds of local politicians. The same is true in New York, where the medallion owners trade association, the Metropolitan Taxi Board of Trade, lobbies hard to influence public policy. In 2011, for example, medallion owners were initially able to block plans to create a fleet of green “Boro” cabs to serve New York’s outer boroughs. They argued that doing so would drive down the price of their medallions. In June 2013, however, the New York Supreme Court overruled lower court rulings and allowed the licensing of Boro cabs to go ahead. The intention now is to issue 18,000 new licenses to green cabs. These cabs, however, will not be able to pick up passengers in lower Manhattan, which remains the territory of yellow cabs.¹⁵

C6-3 THE RIDE-FOR-HIRE MARKET IN OTHER COUNTRIES

Many regulations seen in the U.S. ride-for-hire marketplace have analogs in other countries. In London, for example, there are 22,000 black cabs (taxis that can be hailed) and 49,000 vehicles licensed for private hire that cannot be hailed on the street. Although there is no regulatory limit on the number of taxis in London, before London taxi drivers can join the workforce they must navigate byzantine licensing procedures that include memorizing the city’s street maps, which is referred to as “the knowledge.” Acquiring “the knowledge” constitutes the most demanding taxi driver-training program in the world.

On average it takes 12 attempts at the final test and 34 months of preparation to pass the knowledge exam. The effect of “the knowledge” requirement is to limit the supply of taxis in London. Similar, though less demanding, knowledge tests are found in Austria, Brussels, Finland, Germany, and Hungary.¹⁶

In Paris, the number of taxi permits was capped at 14,000 in 1937. By 2014, a much bigger and vastly richer Paris was receiving 27 million tourist visits a year, yet the number of cabs had edged up just 14%, to 15,900. The result: Parisians must stand in long lines for cabs that never come. In 2007, the Government of Nicolas Sarkozy proposed to license 6,500 new cabs in Paris. The proposal triggered a strike among transportation workers that shut the city down for a day and frightened Sarkozy into surrender.¹⁷

Italy is another country with a restrictive licensing system for taxis. This has been a problem in Milan, for example. In 2002, the ratio of taxis to inhabitants was 1 for every 1,094 inhabitants, compared to 1 for every 387 in London, and 1 for every 414 in Paris. At the time, there were 4,571 taxis in Milan, a number that had been frozen for 20 years. The shortage of taxis resulted in long waiting periods at peak demand times. The price of taxi licenses on the secondary market had risen to between EUR 100,000 and EUR 130,000. In 2002, the city government moved to alleviate the cab shortage, announcing that it would issue 500 new cab licenses. Milan's taxi drivers mounted a vigorous campaign against this. The city responded by reducing the number of proposed new licenses to 300. The taxi drivers still objected and protested by forming “go-slow” convoys of taxis that paralyze the city's traffic for 2 days. The city effectively backed off.¹⁸

In contrast, Dublin offers a view of what can happen when regulations are relaxed. Due to the limited availability of licenses, between 1979 and 1998 the number of licenses in Dublin barely budged even though demand had soared as the population grew. Deregulation in 2000 reduced the cost of entry (car plus license) by 74%. The result was more than three times as many cabs on the road, shorter waiting times, better cab quality, and higher passenger satisfaction—all in 2 years.¹⁹

Interestingly, Tehran, the capital of Iran, has a highly deregulated ride-for-hire market. In addition to private taxis, a shared taxi system allows any private car to pick up passengers. Since travelers can hop

on and off as they please; a driver can carry passengers travelling to different destinations at the same time, which increases utilization of the vehicle. The system also means that the supply of taxis is very fluid, increasing during rush hour as commuters pick up passengers on their way home.²⁰

C6-4 UBER'S SERVICE

Uber was founded in San Francisco 2009 by Garrett Camp and Travis Kalanick to develop a smartphone app to facilitate the creation of a new ride-for-hire service. The company raised \$1.25 million in angel investments in 2010 to help fund the initial service rollout. From the outset, the goal was to overcome common frustrations that customers often experience when trying to find a taxi. Passengers can find taxicabs to be unpleasant, poorly maintained, dirty, and unsafely driven. Taxicabs can be difficult to find in certain areas—many avoid areas of a city where there are few passengers, or where they are unlikely to find a return fare. There can also be a shortage of cabs at peak commute times, or at special events such as New Year's Eve, which leads to long wait times. Sometimes taxicabs just don't turn up, leaving a traveler stranded. This author once missed a plane flight because a taxicab booked the day before simply didn't appear. On another occasion, a scheduled ride turned up very late because the taxi driver got lost.

C6-4a Business Model

Uber exploited the opportunity created by customer frustrations to develop a smartphone application that effectively enabled customers to hail a limousine immediately from the comfort of a couch or a barstool, rather than standing on a cold street and waiting for a cab to drive by. The app also shows customers the location of cars. In general, a car will arrive a few minutes after being hailed. The fare, including a tip, is charged directly to the customer's credit card. This means that no cash changes hands, which is a major plus for drivers who did not like to carry large quantities of cash (there is a long history of taxi drivers being robbed by their rides). The fee is based on time and distance, as determined by the Uber application using the GPS capability of

the driver's mobile device. Under the initial model, the fee was split between the driver, who kept 80%, and Uber, which got 20%. When Uber started its service in 2010, the company was charging 40 to 100% more than a similar trip using a taxicab. However, over time the price differential between Uber cars and regular taxicabs fares has declined substantially.

Uber does not own cars. Instead it relies upon a network of established, licensed, limousine drivers and companies that wish to be part of its system. In effect, the Uber app allows limousines to be transformed into a service that can be hailed from any location. Uber makes use of big-data analytics to determine the best locations for drivers to wait in order to speed up response time to customer requests for rides. The more data Uber gets, the better its predictive models, the more optimal its placement of vehicles, and its higher vehicle utilization.

Uber has also used data analytics to pioneer the use of what it calls "surge pricing."²¹ Instead of using fixed pricing like a conventional taxi service, Uber adjusts prices for a ride depending upon the state of demand. For example, prices have been known to surge on New Year's Eve. Similarly, if there is an unforeseen event such as a snowstorm that makes everyone want a car at the same time, prices will go up, often dramatically. There have been reports of Uber fares increasing to as much as seven times the normal level during periods of peak demand. In turn, the higher prices attract more Uber vehicles onto the road, and prices drop back down towards normal levels. Uber argues that a benefit of this system is that it encourages more supply at periods of peak demand, and vice-versa. However, there have been some reports of grumbling on the part of customers who find that they are paying unexpectedly high prices. Conversely, if Uber's network of drivers responds quickly to price signals, dramatic price surges should be a very transitory phenomenon.

An added benefit of the Uber app is a feature that allows riders to rate drivers, which translates into an implicit guarantee of driver reliability based on prior reputation. There is a corresponding feature on the drivers' app which enables them to rate customers and red flag and avoid troublesome clients.

Limousine and other private car owners have been attracted to the Uber model by a number of factors. First, the Uber app has enabled limo drivers to circumvent regulations that prohibit them

from being hailed on the street. As such, it has increased demand for their services. Second, the app increases vehicle utilization, which drives more revenues to the vehicle owner. Third, owners of the vehicle benefit from the surge pricing methodology that enables them to charge more than regulated fares at times of peak demand. Fourth, the fact that no cash changes hands, and that payment is guaranteed when a ride is booked, increases the safety of the driver, as does the client-rating feature on the driver's app. Fifth, the Uber system means that drivers can work flexible hours, driving when they want to rather than when a taxi company tells them they must take a shift.

There have been reports of Uber drivers earning multiples of what the driver of a regulated taxicab could earn. In early 2014, Uber suggested that while a typical taxicab driver could earn \$30,000 a year, an Uber driver working a 40-hour week could earn nearly \$91,000 a year in New York, and \$74,000 in San Francisco.²² Attracted by such financial inducements, in 2014 the company claimed that 20,000 drivers a month were signing up with Uber worldwide.

Some financial journalists have questioned Uber's claims about driver income. Uber's estimates were based on a sample of drivers who drove over 40 hours a week. The earnings figure also excluded the cost of gas, insurance, parking, maintenance, repairs, and tolls. One journalist concluded that in order to earn \$75,000 a year driving for Uber in San Francisco, one would have to work 58 hours a week.²³

C6-4b Expansion Strategy

Uber began offering its service in June 2010 in San Francisco under the name UberCab. New York was added in May 2011. By April 2012, the company was in seven U.S. cities, Paris, and Toronto. Two years later, Uber was operating in 130 cities in 36 countries around the world. Initially Uber limited its service to drivers with high-end limo type cars. In San Francisco, Uber explicitly targeted members of the tech community in its early marketing efforts, sponsoring local tech and venture capital events and providing free rides to attendees. Uber's bet was that its service would immediately resonate with this demographic, who would rapidly spread the news via

word of mouth and social networks. According to CEO Travis Kalanick:

Uber spends virtually zero dollars on marketing, spreading almost exclusively via word of mouth. I'm talking old school word of mouth, you know at the water cooler in the office, at a restaurant when you're paying the bill, at a party with friends—"Who's Uber-ing home?" 95% of all our riders have heard about Uber from other Uber riders. Our virality is almost unprecedented. For every 7 rides we do, our users' big mouths generate a new rider.²⁴

One of Uber's business development managers elaborated on this:

With Uber everything is very local-focused as transportation is a local topic. For that reason we have an operations team on the ground in all the cities where Uber exists, and that team is working with both local drivers, and local clients to grow the business there.

We've also found that our growth is driven substantially by word of mouth. When someone sees the ease of use, the fact that they press a button on their phone and in under 5 minutes a car appears, they inevitably become a brand advocate. We've also done our best to reach out to folks who are influencer's in our markets, who obviously have a stronger reach and bigger audience.²⁵

To drive rapid growth Uber picked cities that have what Kalanick refers to as "accelerants." These accelerants indicate a concentrated need for Uber's service. They include: (1) lots of restaurants and nightlife, (2) holidays and events, (3) weather, and (4) sports.²⁶ For example, in Chicago, a city with lots of nightlife, intense weather, and numerous sporting events, Uber's initial viral growth was double what they normally experienced. Special events and holidays also provided an opportunity to showcase Uber's model. Uber's ability to deliver rides on New Year's Eve in San Francisco, a city notorious for its lack of taxis, drove spikes in new ridership. Kalanick has also noted that Uber is getting better at local market entry over time:

Every city, every subsequent city that we go to we're getting better at rolling the city out and growing the city faster. And so a lot of the cities where there's constrained number of taxis, no liquid black car market, those are the cities where we launch and things explode from the start. We have other cities

where there's tons of taxis, in some cases way too many and in those situations often the quality of service being delivered is really poor, so we go in there and explode as well. But there's all kinds of different cities in terms of regulatory, and in terms of what the industry looks like, an industry which we're disrupting in a substantial way.

We think that cities deserve to have another transportation alternative. It sounds crazy to have to say that but you have to do that because you have incumbent interests which are often trying to curtail innovation and curtail sort of transportation alternatives that might compete with their existing business. And, because of that, it requires us to take a very local approach to how we go after a city. We have launchers that go into [cities] ... and turn nothing into something. I like to say they drop in with parachutes and machetes [and] get highly involved with the suppliers, people who own cars and run car services, and really just make sure that we can launch a service that is high quality from the start. Being local and speaking with local voice is important when you're doing transportation and means you know what's going on for the city.²⁷

To achieve rapid expansion, Uber needs to be able to quickly build a network of drivers in each city in which it enters. The company certainly touts the financial and safety advantages of working for Uber, but it is also taking other actions to make sure there are plenty of drivers available. In December 2013, Uber lined up \$2.5 billion in outside financing for low interest rate loans for Uber X drivers with Toyota and GM. This was designed to make it possible for up to 200,000 drivers to buy their own cars at very low interest rates, under the condition that they use those cars on the Uber network for the duration of the loan. In effect, drivers are lock in for the duration of the loan unless they want to see their interest rates balloon. Reportedly drivers have to agree to two financing rates, one that reflects the cost savings of them partnering with Uber, and one that doesn't.²⁸

C6-4c Regulatory Responses

Uber had not been operating in San Francisco long before there was rumbling among taxicab companies that Uber might not be legal. A taxi driver bought objections against Uber up at City's Taxi Advisory

Council Meeting. Among the concerns were the following:²⁹

- Uber operates much like a cab company but does not have a taxi license.
- Its cars don't have insurance equivalent to taxi insurance.
- Uber may threaten taxi dispatchers' way of making a living.
- Limos usually have to book an hour in advance, by law, while only licensed taxis can pick someone up right away, but Uber picks people up immediately, without a license to do so.

On October 20, the San Francisco Metro Transit Authority and the Public Utilities Commission of California issued a cease-and-desist order against the company. Uber continued its service under threat of penalties including fines of up to \$5,000 per instance of Uber's operation, and potentially 90 days in jail for each day the company remained in operation past the order to desist.

Undeterred, Uber stated that it would work with the agencies involved to figure out their exact concerns, and to make sure that the service complied. The following statement was posted on the company blog:

Uber is a first to market, cutting edge transportation technology and it must be recognized that the regulations from both city and state regulatory bodies have not been written with these innovations in mind. As such, we are happy to help educate the regulatory bodies on this new generation of technology and work closely with both agencies to ensure our compliance and keep our service available.

However, the company did quietly change the name of its service from UberCab to Uber.

The dispute between Uber and regulatory authorities in California simmered on for three years. During this time, Uber continued to operate, and indeed, dramatically expanded its service. At one point, CEO Kalanick joked that he probably had 20,000 years of jail time in front of him.³⁰ In 2013, influenced by evidence of strong public demand for Uber's service, the California Public Utilities Commission stuck a deal with Uber, lifted the (ignored) cease-and-desist order, and eliminated fines.

As Uber expanded its service, what happened in California was repeated in cities around the United States, and then the globe. In Washington, DC,

where existing taxi services were rated as poor by many residents, demand for Uber cars rapidly took off after the company started service in December 2011. The local regulatory authority, the DC Taxicab Commission, deemed the service illegal. Uber continued to operate. At one point, the Commission conducted sting operations against Uber, hailing Uber cars via the Uber app, then impounding cars and ticketing drivers. Responding to intense lobbying from DC's 150 taxicab companies, in mid-2012 the City Council drafted legislation to fix the price for Uber's service so that it would be five times the minimum cost of cabs. Uber CEO Kalanick responded with a social media campaign, urging DC customers to sign a petition and send emails to council members to protest the legislation. The council members were swamped with thousands of emails, and quickly withdrew the legislation. In a major victory for Kalanick, in short order a new bill was drafted and passed that exempted Uber from regulation by the Taxicab Commission.³¹

In Seattle, after initially ignoring Uber, the City Council responded to its increasing popularity by passing an ordinance that limited the number of Uber drivers to just 150. At the time, Uber already had 1,000 drivers in the city. The City Council said that it was concerned about the safety and insurance coverage of Uber cars. Council member Kshama Sawant, a self-proclaimed socialist, argued in favor of the cap as a means to protect traditional taxi drivers. However, in Seattle city ordinances can be suspended if enough citizens sign a petition requesting this. The day after the ordinance was passed, a group that received some \$400,000 in funding from Uber and similar services submitted more than 36,000 signatures to the City Clerk's office, more than double the required number to suspend an ordinance. In July 2014, the City Council voted 8-1 in favor of legislation that legalized Uber and similar services and removed any caps on driver numbers.³²

In New York, a city with a long tradition of limo services, Uber initially operated unimpeded. When Uber tried to expand its operations to include New York's traditional yellow cabs, the City's Taxi and Limousine Commission (TLC) stepped in, telling cab owners that it had "not authorized any electronic hailing of payment applications for use in New York City taxicabs," and further that "drivers and owners are reminded that violations of Commission rules can lead to fines, and in some cases, the suspension or revocation of their license."³³ Interestingly,

the TLC took this position despite strong interest among taxi drivers. Uber responded by withdrawing its yellow taxi service, but its limo service continued to operate.

In London, taxi drivers responded to the growing popularity of Uber with a day of protests, stopping in the middle of streets and causing significant congestion. The protests backfired. Uber reported a surge in app downloads and registration by London residents. In France, where similar protests by taxi drivers also took place, the Senate passed a law that requires online car service companies to return to their headquarters or a parking garage between each client, unless they have a prior reservation—a requirement that would substantially reduce Uber's ability to respond in a timely manner. In Brussels, Uber was banned after a court ruled it did not have the appropriate permits to operate in the city. In Berlin, the chairman of the Berlin Taxi Association won an injunction against Uber in April 2014, barring the company from operating there.³⁴

Commenting on legal attempts to stop Uber, Kalanick argues that they are classic examples of regulators trying to stifle innovation. He also asserts that Uber's strategy of marching into new cities without asking permission is necessary. "If you put yourself in the position to ask for something that is already legal, you'll never be able to roll it out ... the corruption of the taxi industries will make it so you will never get to market."³⁵

C6-4d Competition

No good idea goes long without imitation, and Uber soon found itself facing several rivals, including most notably Lyft, a privately held company based in San Francisco backed by venture capital. By mid-2014, it had raised over \$300 million in financing. Logan Green and John Zimmer launched Lyft in the summer of 2012. It was originally conceived as a local service of Zimride, a ridesharing service the two founded in 2007 that was focused on long-distance ridesharing, typically between cities. Lyft uses a smartphone app that facilitates peer-to-peer ride-sharing and electronic hailing by enabling passengers who need a ride to request one from the available community of drivers nearby.

Lyft differs from Uber in that the drivers are regular citizens using their own cars. Drivers and passengers can rate each other on a five-star scale

after each ride. The ratings establish the reputations of both drivers and passengers within the Lyft network. Ratings are displayed on the Lyft smartphone app, enabling drivers to avoid bad customers, and customers to avoid drivers with poor ratings. Lyft initially did not charge fixed prices, but instead relied upon voluntary donations to the driver. This changed in November 2013, when the company said that it would institute a fixed-price schedule, with a 25% surcharge for peak periods. As with Uber, payment is automatic, made through the Lyft app, and Lyft takes 20% of the fare.³⁶

By mid-2014, Lyft had established itself in 60 cities in the United States. Like Uber, Lyft has run into significant regulatory headwinds. Indeed, if anything, Lyft has faced more regulatory opposition because its drivers use their own private cars. To counter claims regarding safety, Lyft insures each driver with a \$1-million "excess" liability policy. Any driver with an average user rating of less than 4.5 out of 5 stars is also dropped from the service.

Lyft faced the same headwinds as Uber in California and stuck a similar deal with regulators in mid-2013. In New York the TLC, which declared Lyft an unauthorized service that had not demonstrated compliance with safety and licensing requirements, initially blocked Lyft from operating in the city. The restriction was lifted in July 2014, after Lyft agreed to use licensed commercial drivers within the city. To grow its network in New York, Lyft was reportedly offering a guaranteed \$10,000 a month to drivers with a license from the TLC who would agree to work 60 hours a week, and \$5,000 to those who would work 40 hours a week.³⁷

C6-4e Product Extensions and Price Cuts: Uber X

Uber started out using traditional black limo cars. In July 2012, it created a new service category, Uber X, which allowed Uber drivers to use vehicles beyond the traditional black limo, giving them a choice that included Toyota Prius Hybrids and SUVs like the Cadillac Escalade. By 2014, Uber X drivers were also using basic sedans like the Toyota Camry or Honda Accord. Initially the pricing for Uber X cars was a \$5 base fee, with a \$3.25 per mile charge thereafter, making Uber X 35% cheaper than Uber's "black

car” rates. The introduction of Uber X was seen as a competitive response to the emergence of Lyft as a low-cost competitor.³⁸

In June 2013, Uber reduced the price of its Uber X service in San Francisco by 25%. In October 2013, it announced similar fare reductions in Los Angeles, San Diego, and Washington, DC. At the time, Uber stated that its fare was 18 to 37% cheaper than hailing a traditional taxicab, depending upon location. Although Uber compares its prices to traditional taxicabs, its price reductions have often come in cities where Lyft has recently launched its service. For example, Uber launched its Uber X service in Indianapolis and St. Paul just a week after Lyft introduced its service to riders in those cities. Uber also offered a free month of service to riders in those cities.

Uber dropped its prices again in January 2014. To push back against resistance from drivers, it argued that the price cuts meant more rides, and thus greater revenue. Uber announced a further round of 25% price cuts in the summer of 2014 for its Uber X service in select cities, including San Francisco. These cuts were meant to be for a limited time only. However, Uber also stated that drivers would still pocket 80% of the original fare *before* the cut. This implied that, in some cases, Uber was now paying drivers more than they earn. For example, a 25% cut implied that a rider would pay \$11.25 for a ride that previously cost \$15. But the driver would still keep 80% of the original \$15 fee, which meant that Uber had to pay the driver \$0.75 to make up the \$12 salary for the driver. Under the new pricing scheme, UberX was now cheaper than taxicab service in many locations. For example, a fare from Union Square to the Mission District in San Francisco cost \$11 via taxicab and \$6 by Uber X.³⁹ On July 7, 2014, Uber dropped their New York fare by 20%, making Uber X cheaper than a taxi in the New York market.

C6-5 UBER HITS SOME BIG POTHOLE

The 2015–2018 period proved to be a challenging one for Uber’s expansion strategy. On the positive side, the service continued to grow, particularly in the Americas. An interesting data point comes from

Certify, which tracks business expense reimbursement in the United States. Certify found that Uber and Lyft are taking substantial share away from both traditional taxis and rental car companies. In the second quarter of 2018, Uber and Lyft combined had a 72.5% share of all ground transportation travel reimbursements in the United States, up from less than 10% in early 2014. The share of taxis fell from 38 to 5% over the same period, and rental cars fell from 55 to 22%.⁴⁰ This suggests that for business travel, an important segment, Uber and Lyft are decimating the incumbent taxi and rental car businesses.

On the other hand, Lyft has gained share from Uber. In 2017, Uber made a number of high-profile missteps (discussed below) which hurt the company’s image and opened the door for Lyft to take share. By May 2018, Lyft claimed that it had 35% of the U.S. ride-share market, up from 20% at the end of 2016. Uber claims that it had 70 to 72% of the U.S. ride share market in early 2018, which would leave Lyft with 28 to 30%.⁴¹ No matters whose figures are correct, it is clear that Lyft has been gaining ground.

Academic studies published by the National Bureau of Economic Research suggested why Uber (and Lyft) have been doing so well in the United States. One study compared Uber’s service to that of traditional taxicabs in five U.S. cities. The study concluded that Uber drivers were significantly more productive than traditional taxi drivers.⁴² For example, in Los Angeles taxi drivers had passengers in their car for 40.7% of the miles they drove, whereas UberX drivers had passengers in their car for 64.2% of their miles, resulting in a 58% higher capacity utilization rate for UberX drivers. In Seattle, the capacity utilization rate was 41% higher for UberX drivers.

A second study looked at the consumer surplus created by Uber.⁴³ The study used Uber’s data on demand changes in response to surge pricing to estimate the company’s demand curve. The study estimated that in 2015 the overall consumer surplus generated by UberX in the United States was around \$7 billion. In other words, consumers valued the service so highly that they would have been willing to pay \$7 billion more than they actually paid for their UberX rides.

The high value and productivity of Uber’s service has not been enough to ensure success in many international markets. Due to regulatory pressure in

2014 and 2015, Uber was forced to suspend its service in Germany, France, Italy, Spain, and Belgium on the grounds that it relied on unlicensed, nonprofessional drivers using their own vehicles. Uber continued to operate in European cities such as Berlin and Munich, but did so by working with existing licensed taxi companies and limousine services, a strategy that constrained its growth potential.

In September 2017, transportation authorities in London, one of Uber's most profitable markets, pulled the company's license. In doing so, the authorities stated that the company was not fit and proper to run a taxi service. Among the issues cited were Uber's failure to report assaults and other criminal offences to the police, a poor approach to vetting its drivers, and the use of a software tool known as "Greyball" to identify and deny service to certain riders. While Uber claimed that Greyball was used to identify riders who were suspected of violating its terms of service, authorities in London claimed that it was also used to deny rides to individuals who were flagged as regulatory or law enforcement agents. In June 2018, Uber won a probationary license to continue operating in London for 15 months on the understanding that it would reform its practices.⁴⁴

In China, which CEO Travis Kalanick had identified as a major growth opportunity for Uber, the company exited the market in mid-2016 after heavy initial investments. Uber had partnered with the dominant Chinese search engine and mapping company, Baidu, which many thought was a smart move. But Uber faced intense competition from Didi Chuxing, a homegrown ride-for-hire operator in the Uber mold. Didi and Uber were fighting an intense price war. Didi had very powerful backers of its own—Internet giants Alibaba and Tencent. China's influential sovereign wealth fund had also invested in Didi, a move that signaled Uber was facing an uphill battle. Seeing the writing on the wall, Uber traded its China operations for a 20% stake in Didi, which was worth about \$7 billion, and a \$1 billion investment from its Chinese rival. Although Uber had to pull out, the \$8 billion value applied to the exit deal were about the same as its investments in the country and gave Uber a stake in the upside from growth at Didi.⁴⁵

In 2017, Uber pulled out of Russia, combining its ridesharing business with that of the dominant local rival Yandex in a joint venture that was valued at close to \$4 billion. Uber has a 36.6% share in the

joint venture, but operational control was handed to Yandex. In 2018, Uber exited eight Southeast Asian nations when it sold its business there to Grab, a Singapore-based competitor. Uber will get a 27.5% stake in Grab, again giving it a share in the upside. The deal was another admission by Uber that it is finding it hard to gain traction in many nations against well-run and/or well-connected local rivals.

On the other hand, Uber registered solid growth in India and Latin America. Uber entered India in August 2013, and by July 2018 had registered 1 billion rides in the country. That being said, Uber faces intense competition in India from local rival Ola, which by at least one measure, number of cities served, is running ahead of Uber in the country.⁴⁶ In Brazil, one of the company's best markets, where it had 20 million customers and 500,000 drivers in early 2018, the government passed legislation eliminating requirements that would have made it more difficult for Uber to operate. Most significantly, the bill did not require drivers to acquire licenses from the authorities.

C6-6 MANAGEMENT MISSTEPS

In 2017, Uber was embroiled in several lawsuits and scandals that hurt its image. Things got off to a rocky start in 2017, when President Donald Trump issued an executive order banning immigration from seven countries. Most tech industry CEOs slammed Trump's ban, but Uber CEO Kalanick, who served on Trump's strategic forum for business leaders, issued a statement on Facebook that was only mildly critical. Then Uber halted surge pricing during a taxi strike that was aligned with immigration policy protests at New York's JFK. Uber's move was seen as both breaking the strike and profiting off the demonstrations. Within days a #DeleteUber campaign went viral on social media. Uber lost an estimated 200,000 accounts due to the hashtag. The main beneficiary was rival Lyft. Within days, the Lyft smartphone app had moved up from the number 39 spot to the number 4 spot on Apple's App Store list of popular downloads.⁴⁷

To compound matters, on January 19, 2017, the Federal Trade Commission (FTC) levelled a \$20 million

fine on Uber for recruiting drivers while exaggerating their earning potential. The FTC alleged that Uber claimed on its website that UberX drivers' annual median income was more than \$90,000 in New York and over \$74,000 in San Francisco. The FTC said, however, that drivers' annual median income was actually \$61,000 in New York and \$53,000 in San Francisco. In all, less than 10% of all drivers in those cities earned the yearly income Uber touted.⁴⁸

On February 19, 2017, former Uber engineer Susan Fowler posted a blog post that quickly went viral. The post detailed a prevailing atmosphere of sexual harassment and discrimination at the company. It opened the floodgates for more complaints and resulted in the company hiring former U.S. Attorney General Eric Holder to lead a task force looking into the company's workplace culture, which had been characterized as "toxic." To make matters worse, on February 27, Uber senior VP of engineering Amit Singhal exited the company after it was revealed that he had left Google a year earlier due to a "credible" sexual harassment complaint. Uber claimed that they had done extensive background checks of Singhal and not uncovered any evidence of sexual harassment. The Holder report was released on June 13, 2017. It made 47 recommendations for helping Uber to improve its workplace values and environment. Some 20 staff members at Uber were fired for unethical behavior as a result of the Holder investigation.

On February 23, Waymo, a subsidiary of Alphabet (Google's parent), filed a lawsuit against Uber claiming that former Waymo employee Anthony Levandowski stole secrets related to autonomous vehicle technology. Both Uber and Waymo have been working on autonomous vehicle technology and envisage a future in which driverless cars are common on the road. On May 30, Uber fired Levandowski, stating that he did not fully comply with the court overseeing the lawsuit, or with helping Uber prove its case.

On February 28, CEO Kalanick was forced to apologize after he was caught on film arguing with an Uber driver, Fawzi Kamel, about Uber's new plans to lower fares. "Some people don't like to take responsibility for their own s—. They blame everything in their life on somebody else. Good luck," Kalanick told his driver. Kalanick's troubles did not stop there. In early June 2018, a letter surfaced that Kalanick had written in 2013 to employees going to a company conference

in Miami. Filled with expletives, the letter painted a picture of a party atmosphere at the company, with references to fines for "puking," and laid out rules for sex between those attending in a manner that some believe helped to create an atmosphere of pervasive sexism and sexual harassment at the company.

This was too much for several powerful investors in the still-private company. They insisted that Kalanick step down, and he resigned on June 20, 2017. In August 2018, after a quick search, Kalanick was replaced by Dara Khosrowshahi, CEO of Expedia. Khosrowshahi is an Iranian-American whose family emigrated to the United States in 1978, just before the Iranian revolution. He had been CEO of Expedia for the prior 12 years, during which time revenues had quadrupled. His "fair" management style had earned him a 94% approval rating from Expedia employees on the job site Glassdoor. Uber reportedly paid him over \$200 million to take the CEO position, although he did give up \$180 million in future incentive compensation from Expedia to take the position.

C6-7 KHOSROWSHAHI TAKES OVER

In his first year, Khosrowshahi earned accolades both within and outside the company (his Glassdoor rating has climbed to 97%). "He's an exceptional leader—a rare combination of keen financial acumen, an eye for a great product and incredible people skills," according to Expedia CEO Mark Okerstrom, who served under Khosrowshahi at Expedia.⁴⁹

In his first two weeks, Khosrowshahi held a roundtable discussion with drivers to hear their complaints, and he shadowed Uber's customer support representatives to listen to what passengers were saying. He hired the company's first diversity officer and its first COO, Barney Harford, the former CEO of Orbitz. (Kalanick reportedly dragged his feet on hiring a COO because he didn't want to share duties in running the company.)

Khosrowshahi made nice with London lawmakers after the city revoked Uber's license to operate. He has held meetings that Kalanick never did during regulatory battles with cities around the world. In a letter to London regulators, he wrote that "While

Uber has revolutionized the way people move in cities around the world, it's equally true that we've got things wrong along the way ... On behalf of everyone at Uber globally, I apologize for the mistakes we've made."⁵⁰ Similarly, in a technology conference in Germany in early 2018, Khosrowshahi stated that Uber had shifted from "growth at all costs to responsible growth ... Germany as a market for Uber is a market with enormous promise that hasn't been realized. Our strategy in Germany is a total reset."⁵¹

Khosrowshahi was also central to settling the lawsuit between Uber and Waymo, which had been seeking \$1.8 billion in damages. Under an agreement reached in early 2018 that he helped broker, Waymo got 0.34% of Uber's equity, worth about \$245 million given Uber's estimated valuation of \$72 billion at the time. Uber also agreed not to incorporate Waymo's confidential information into hardware and software used in its self-driving cars.⁵²

Under Kalanick, Uber had a list of 14 cultural values that were displayed around its headquarters that new hires were asked to pledge to. They called for things such as meritocracy, toe-stepping, principled confrontation, and always "hustling." Khosrowshahi has rewritten these values as eight "cultural norms." He crystalized these norms from 1,200 ideas sent in from Uber employees. They include credos such as "We celebrate differences, we encourage different voices and opinions to be heard"; "We are customer obsessed, we work tirelessly to earn our customers' trust and business by solving their problems"; and "We value ideas over hierarchy." They also include one that seems to typify Khosrowshahi's leadership approach: "We do the right thing. Period."⁵³

Khosrowshahi also oversaw negotiations that led to a substantial investment by the Japanese firm Softbank in Uber that closed in early 2018. The deal was structured around a large purchase of shares by Softbank from existing Uber investors and shareholders, including ex-CEO Kalanick (who sold one-third of his 10% stake for about \$1.4 billion). Softbank also invested \$1.25 billion in cash. The deal left Softbank with approximately 15% of Uber's outstanding stock, making the Japanese company Uber's largest shareholder. Softbank also placed representatives on Uber's board. Softbank reportedly wants Uber to focus on growing in the United States, Europe, Latin America and Australia—but not Asia, where Uber has struggled against indigenous rivals. Softbank also has equity positions in India's Ola, Singapore's Grab, and China's Didi, making the company a major investor in the global ride-for-hire market.⁵⁴

Going forward, Khosrowshahi is positioning the company for an IPO, perhaps as early as 2019. To get there, he has to chart out a path to profitability for Uber, which despite rapid revenue growth has been losing money. Profitability may be on the horizon. In the first quarter of 2018, Uber booked gross revenues of \$11.3 billion, a 55% increase over the period one year earlier. The company also booked a net profit of \$2.5 billion, although that was entirely due to the sales of operations to Yandex in Russia, and Grab in Southeast Asia, which netted \$2.9 billion in cash. Once the one-time gain was stripped out, Uber lost \$420 million in the quarter, but that was only half of what it lost a year earlier.⁵⁵

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CASE 7

DELL INC (A)— GOING PRIVATE

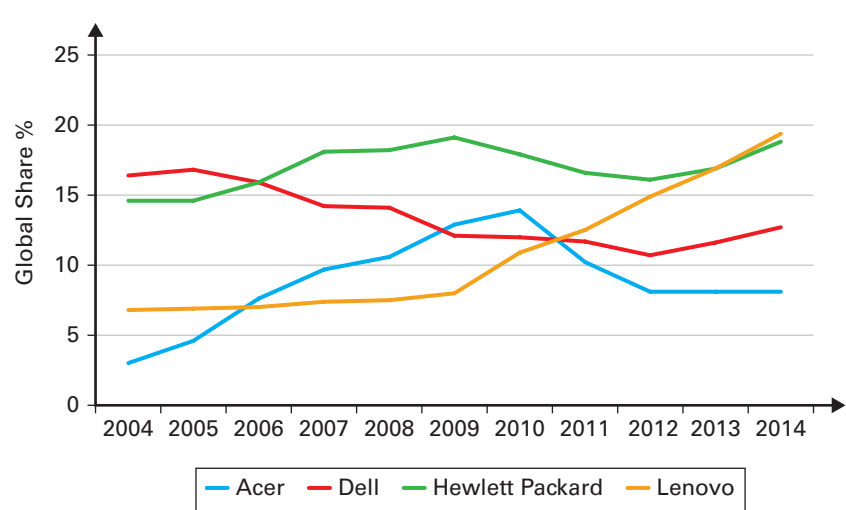
This case was prepared by Charles W. L. Hill of the School of Business, University of Washington, Seattle.

C7-1 INTRODUCTION

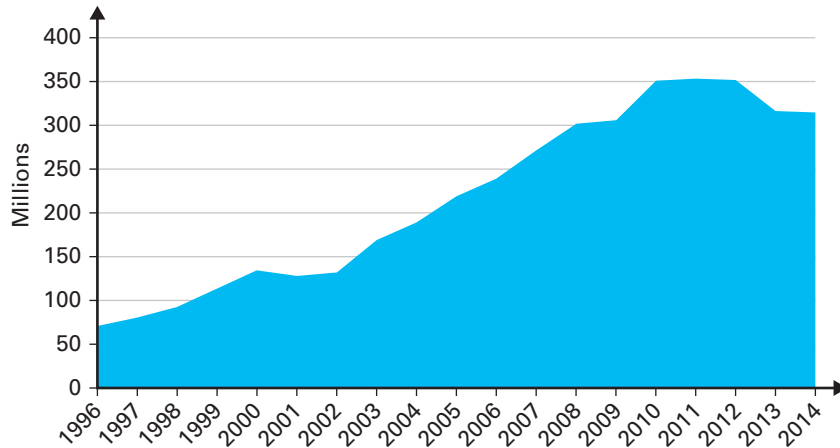
The rise of Dell Inc. is the stuff of business legend. Founded by Michael Dell in 1984 when he was still an undergraduate at the University of Texas, Dell grew to become the largest personal computer manufacturer in the world. At its peak in 2005, the company accounted for 16.8% of all PC shipments globally

(see Exhibit 1). The company was also phenomenally profitable. Between the mid-1990s and 2007, Dell's average return on invested capital (ROIC) was a staggering 48.3%, making it by far the best-performing enterprise in the industry. From 2007 onwards, however, Dell faced increasing headwinds. By 2013, its global market share had fallen to 11.6%, putting it behind Hewlett Packard and Lenovo. The company's financial situation had also deteriorated. In 2011, Dell

Exhibit 1 Global Market Share of PC Manufacturers, 2004–2014(%)



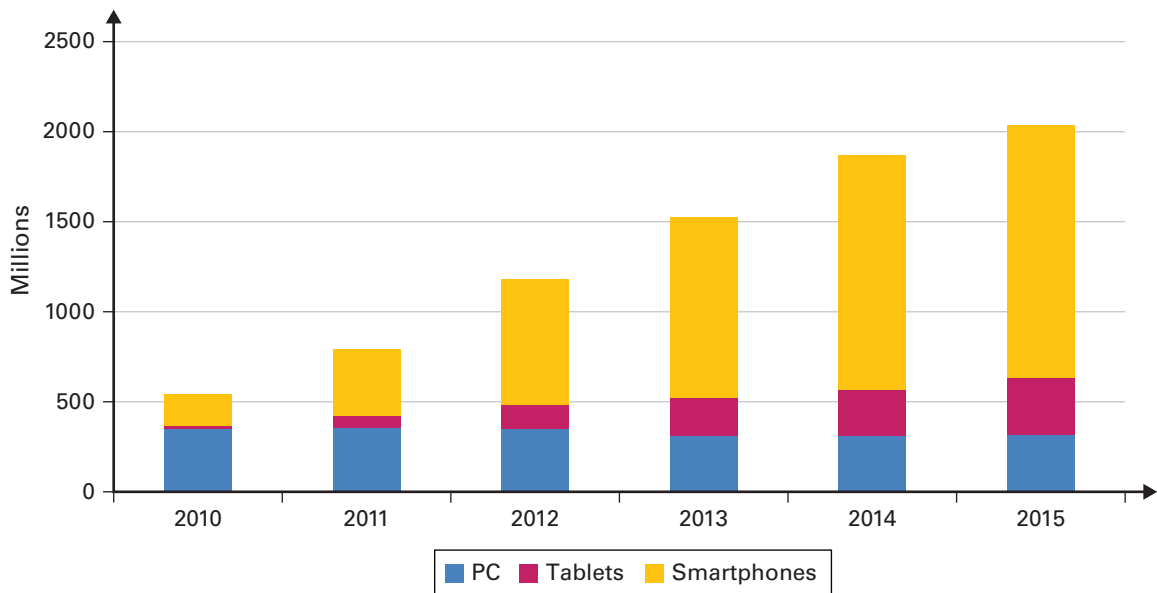
Source: Constructed by the author from multiple Gartner Press Reports.

Exhibit 2 PC Unit Shipments Globally, 1996–2014 (Millions)

Source: Constructed by the author from multiple Gartner Press Reports.

generated net income of \$3.5 billion on revenues of \$62 billion. In 2012, net income fell to \$2.4 billion, revenues declined to \$56.9 billion, and Dell's ROIC had contracted to 14.9%, less than half of where it was in the mid-2000s. The company's stock price closed out 2012 at \$10 a share, down from an all-time high of \$42 at the end of 2004.

Underlying the decline in Dell's performance was a seismic shift in the personal computer industry. After growing robustly for two decades, PC sales plateaued in 2010–2012, and then fell significantly in 2013 (see Exhibit 2). From 2010 onward, consumer spending migrated away from PCs and toward smartphones and tablets (see Exhibit 3). To compound matters,

Exhibit 3 Global Shipments of Digital Devices 2010–2015 (Millions)

Source: Constructed by the author from multiple Gartner and IDC Press Reports.

low-cost producers such as Lenovo of China and Acer of Taiwan, were taking business from Dell in the market for Windows PCs. At the high end of the market, a resurgent Apple was capturing an increasing share of desktop and laptop computers with its stylishly designed iMac offerings. By late 2014, Apple's share of global PC shipments had risen to over 6%, while its share of the US market stood at a record 13.4%.¹

Dell was also struggling in the corporate market, where companies like IBM and Hewlett Packard (HP) were gaining business by bundling together computer hardware with value-added information technology (IT) service offerings. IBM and HP offered hardware, including PCs and servers, at cost, and made money from multiyear service contracts that could encompass everything from basic maintenance to premium IT consulting services. In 2008, HP strengthened its position by acquiring for \$13.9 billion the IT consulting company Electronic Data Systems. Dell lacked a big consulting arm, which put the company at a clear disadvantage. To try and rectify this, after 22 years with no acquisitions, in 2007 Dell started to acquire small IT service companies.² In 2009, Dell made its largest acquisition ever, purchasing Perot Systems for \$3.9 billion.³ Perot Systems was a provider of information technology services with a strong position in the market for electronic health-care information. Michael Dell's strategy was clear: to move the company upstream into higher-value-added IT consulting services. This strategy, however, could take years to execute. Investors were not impressed, focusing instead on Dell's inability to offer attractive smartphones and tablets, and the increasing commoditization of the company's PC business. By 2012, Dell was feeling the heat from the slowdown in global PC sales. Revenues and profits were down, the stock price was slumping, and investors were grumbling about the company's inability to decouple itself from the commodity PC business. Michael Dell's response was to take the company private.

C7-2 ESTABLISHMENT OF DELL

In 1983, a young Michael Dell was conducting a lucrative business selling upgraded PCs out of his dormitory room at the University of Texas.⁴ This

wasn't Dell's first business. Like many entrepreneurs, he started early. When he was 12, he set up a business selling the stamps that he and his friends had collected. He quickly made \$2,000. At 16, he got a summer job selling newspaper subscriptions for the Houston Post. Not satisfied with calling people at random, he developed a methodology for identifying who was most likely to pay for a new subscription using publicly available data on mortgage applications. He targeted those people, creating personalized letters and offering subscriptions. His income that year was \$18,000—not bad for a high school student in 1981. When he got his driver's license, he bought himself a BMW.⁵

Computers, however, were Dell's passion. Dell's first was an Apple II. Much to the horror of his parents, as soon as he got his brand-new machine he took it apart to see how it was made. When the IBM PC was introduced in 1981, he bought one of those. He opened it up, added all of the enhancements he could, and sold it for a tidy profit. And so a business was born. Dell quickly noticed an interesting fact. While an IBM PC sold for about \$3,000, the components were made by other companies and could be purchased off the shelf for around \$700. So what accounted for the other \$2,300? Sales and marketing expenses, IBM's profit margin, and the markup taken by retailers. To Dell, this screamed profit opportunity. He realized that by selling direct, something that he was already doing, he could eliminate the retailer's markup, price lower, and still make a nice profit.

By early 1984, Dell was selling \$50,000 to \$80,000 a month worth of upgraded PCs and add-on components to people in the Austin area. In May of that year, he incorporated the rapidly growing business as Dell Computer Corporation. He soon dropped out of school to concentrate full time on building the business. As he described it later, the original facility was a 1,000-square-foot office space in Austin. Dell's manufacturing “consisted of three guys with screwdrivers sitting at six-foot tables upgrading machine.”

C7-3 THE GROWTH YEARS

Dell was riding a wave of demand for PCs. The market had transitioned from an embryonic one and was now experiencing hypergrowth. Penetration into the

business and consumer segments was proceeding rapidly. By selling direct, eliminating middlemen, and using the savings to price aggressively, Dell was able to ramp up sales. By late 1986, the company was doing \$60 million in annualized sales. In 1988, Dell went public. Michael Dell was just 23. The 1990s, however, were the beginning of a magic decade for the company. In 1990, Dell was ranked 25th in the world among computer companies. By 1999, it was the largest PC maker in the United States, and the second largest globally. Moreover, 17 out of the top 25 computer companies in 1990 no longer existed by 1999. Dell had ridden to the top of a highly dynamic and turbulent industry, while many more venerable enterprises had failed. IBM, the dominant computer enterprise of the 1970s and 1980s, had a near death experience in the early 1990s, recording larger losses than any other company in history, while Dell went from strength to strength.

One of Dell's greatest strengths was the fact that it built to order. It did not have to stuff a channel with inventory. It did not have to make educated guesses about demand. It did not have to worry that it might have built too few of a certain model and too many of another. It only built what it had already sold.

The rocket fuel that propelled Dell to the top of the industry was the Internet. The development of hypertext transfer protocol by Tim Berners-Lee gave birth to the World Wide Web. The subsequent introduction of web browsers democratized the Internet, transforming it from a haven for computer nerds into a mainstream communications network. This enabled Dell to start direct selling over the Internet.

Launched in June 1994, by 2010 more than 85% of Dell's computers were sold online. According to Michael Dell: "As I saw it, the Internet offered a logical extension of the direct (selling) model, creating even stronger relationships with our customers. The Internet would augment conventional telephone, fax, and face-to-face encounters, and give our customers the information they wanted faster, cheaper, and more efficiently." Customers could now build their own machine online, add the mix of components that best suited them, enter their credit card information, and then hit the purchase button. In effect, the Internet allowed Dell to almost perfectly segment the market, creating value for customers in the process.

Moreover, Dell could take the real-time order flow and transfer it at the speed of light via the Internet

to its suppliers. This information allowed the players in Dell's globally dispersed supply chain to optimize their production and shipping schedules so that parts arrived at one of Dell's assembly plants just in time. By the late 1990s, Dell was turning over its inventory in a matter of days, reducing its working capital requirements to a minimum.

Internet-based customer ordering and procurement systems allowed Dell to synchronize demand and supply to an extent that its rivals could not. For example, if Dell found out that it was running out of a particular component, say 17-inch monitors from Panasonic, it could manipulate demand by offering a 19-inch model at a lower price until Panasonic delivered more 17-inch monitors. By taking steps to fine-tune the balance between demand and supply, Dell could meet customers' expectations and maintain its differential advantage. Moreover, balancing supply and demand allowed the company to minimize excess and obsolete inventory. By the early 2000s, Dell was writing off between 0.05 to 0.1% of total material costs as excess or obsolete inventory. Its competitors were writing off between 2 to 3%, which gave Dell a significant cost advantage.

By the late 1990s, Dell was starting to work some financial magic. It could take an order over the Internet, build the machine, and ship it to customers in a matter of days. The customer was billed when the machine shipped. Its suppliers, however, were paid net 30 days. The implication; Dell could use money destined for its suppliers to finance its working capital requirements, including its inventory. This reduced the need for outside capital: You don't need to borrow capital from a bank, or from investors, when you can borrow at a zero interest rate from your own suppliers. This means that you can pair down the amount of working capital on your balance sheet, thus reducing the denominator for ROIC (defined as net profit over capital on the enterprise's balance sheet). This boosts the profitability of the enterprise.

By the late 1990s, Dell was earning an ROIC in the 40% range, a remarkable level of profitability by any measure. Moreover, the high ROIC was not a short-term phenomenon. Dell continued to earn these kind of returns on its invested capital until 2007. Equally impressive, Dell grew both sales and earnings per share at double-digit rates for most of this time as it surged to the top of the industry.

Dell was by no means the only company that pursued a direct-sales strategy—Gateway was another—but it was the first, and it was the best at doing it. Dell was operationally efficient. Michael Dell avoided *founder's disease*, a well-known phenomenon that occurs when entrepreneurs sink the businesses they created by failing to professionalize management and delegate responsibility. Dell hired skilled operators, and learned how to delegate to them. The company built core skills in managing the direct-sales model and coordinating a globally dispersed supply chain.

Dell's main rivals during the period of rapid market growth included Compaq, IBM, Hewlett Packard, Packard Bell, and Toshiba. Issues arising from channel conflict made it hard for these companies to imitate Dell's model. All of these companies had already committed to selling through a channel, and fully embracing a direct-sales model might well have led to a loss of sales through their existing channel.

C7-4 THE GLOBAL PC INDUSTRY

The global personal computer industry is very competitive.⁶ At the end of 2014, Lenovo was market leader with a global share of 19.4%, followed by Hewlett Packard with 18.8% and Dell Inc. with 12.7%. Apple had 6% of the market, although in the United States its share was 13.4% (among U.S. consumers, Apple's market share is thought to be much higher, coming in at over 30%).

There was consolidation in the industry during the 2000s. Hewlett Packard acquired the large PC vendor Compaq in 2002. Lenovo, the fast-growing Chinese firm, acquired IBM's ThinkPad consumer PC business in 2005. In 2014, Lenovo entered into a deal to buy part of IBM's server business. Meanwhile, in late 2014 HP announced plans to split into two companies, HP Inc. and HP Enterprise. HP Inc would sell PCs and printers, while HP Enterprise would focus on providing software and services to corporations.

A long tail of small companies accounts for some 35% of the global market. Some of these companies focus on local markets and make unbranded “white box”

computers. The long tail of small companies reflects relatively low startup costs for entering the business. The standard architecture of the personal computer means that key components—such as an Intel compatible microprocessor, a Windows operating system, memory chips, a hard drive, and other similar hardware—can be purchased on the open market. Assembly is easy, requiring little capital equipment and few technical skills, and economies of scale in production are moderate. Although small entrants lack the brand-name recognition and distribution reach of the market share leaders, they survive in the industry by pricing their machines a few hundred dollars below market leaders and capturing the demand of price-sensitive consumers. This puts pressure on brand-name companies and the prices they can charge.

Most buyers view the product offerings of different branded companies as very close substitutes for each other, so competition between them often defaults to price. Due to a combination of competition and technological improvements, the average selling price of a PC fell from around \$1,700 in 1999 to under \$750 by 2010. The downward pressure on prices makes it hard for personal computer companies to bring in big gross margins, and results in lower profitability. The exception is Apple, which has successfully differentiated its iMac offerings by design, operating system software, and brand.

Slowing demand growth in many developed nations, including the world's largest market the United States, where the market is now mature and demand is limited to replacement demand, has exacerbated the downward pressure on prices. There is also a pronounced cyclical aspect to demand from businesses. Demand growth was just 4% in 2009, for example, due to a global recession, but it jumped to 14% in 2010 as the economy recovered. The rise of powerful substitutes in the form of tablets and smartphones has depressed demand since 2010 (see Exhibits 2 and 3).

Personal computer companies have long had to deal with two very powerful suppliers—Microsoft, which supplies the industry standard operating system, Windows, and Intel, the supplier of the industry standard microprocessor. Microsoft and Intel have been able to charge relatively high prices for their products, which has raised input costs for personal computer manufacturers, and reduced their

profitability. In late 2012 Microsoft introduced a new version of its Windows operating system, Windows 8. Windows 8 featured a different user interface that the one consumers had grown used to. It was not well received by many consumers and businesses. Some industry observers believe that the poor reception for Windows 8 hurt demand for PCs, as many people decided not to upgrade, instead sticking with their Windows 7 machines.

From the early 1990s onwards, servers became an increasingly important part of the PC business. Servers are specialized PCs that sit at the heart of corporate networks, and can be used to store data and serve up applications such as email to a network of connected PCs. Client server architecture was the dominant computing paradigm in enterprises both large and small for most of the 1990s through to the present day. By 2014, servers were accounting for about \$50 billion in annual sales industry wide. The three largest server vendors were HP, IBM and Dell, which had 27%, 18.5% and 17.7% of this market respectively in the third quarter of 2014. Cisco was fourth in the market with a 6.2% share.⁷

C7-5 DELL'S GLOBAL OPERATIONS

The PC market is a global one. Dell has been expanding its presence outside of the United States since the early-1990s. By 2010, over 40% of Dell's revenue was generated outside of the United States. Dell does not alter its business model from country to country—it uses the same direct selling and supply chain model that worked so well in the United States.

Dell's basic approach to global expansion has been to serve foreign markets from a handful of regional manufacturing facilities, each established as a wholly owned subsidiary. To support its global business, it operates 3 final assembly facilities in the United States, 1 in Brazil (serving South America), Poland (serving Europe), Malaysia (serving Southeast Asia), China (serving China), and India. Each of these plants is large enough to attain significant economies of scale. When demand in a region gets large enough, Dell considers opening a second plant—thus it has 3 plants in the United States to serve North America and 3 in Asia.

Each plant uses exactly the same supply chain management processes that have made Dell famously efficient. Taking advantage of its supply chain management software, Dell schedules production of every line in every factory around the world every 2 hours. Every factory is run with no more than a few hours of inventory on hand, including work in progress. To serve Dell's global factories, many of Dell's largest suppliers have also located their facilities close to Dell's manufacturing plants so that they can better meet the company's demands for just-in-time inventory.

Dell has set up customer service centers in each region to handle phone and online orders and to provide technical assistance. In general, each center serves an entire region, which Dell has found to be more efficient than locating a customer service center in each country where the company does business. Dell has experimented with outsourcing some of its customer service functions for English language customers to call centers in India. Although the move helped the company to lower costs, it also led to dissatisfaction from customers, particularly in the United States, who could not always follow the directions given over the phone from someone with a thick regional accent. Subsequently, Dell moved its call centers for English language businesses back to the United States and the United Kingdom. Dell continues to invest in Indian call centers for its retail customers.

C7-6 GOING PRIVATE

Michael Dell had stepped down as CEO in March 2004 to devote more time to his family's charitable foundation and personal investments. He passed the reins to Kevin Rollins, who had been chief operating officer, and whom Michael Dell credited with transforming Dell into an efficient manufacturer. Dell remained on as chairman. In January 2007, Rollins resigned and Michael Dell came back as CEO.

The catalyst for Rollins resignation was Dell's declining market share in the PC industry (see Exhibit 1). After 10 years of strong performance, in 2006 Dell lost its leadership position to HP, and the company's growth rate fell below that of the industry. A compounding factor was that in 2006 the Securities and Exchange Commission (SEC) announced that it

was investigating Dell for possible accounting regularities. Rollins's resignation was seen by many as an attempt to deflect attention away from Michael Dell. According to the SEC, Dell received some \$6 billion in "exclusivity payments" from Intel to use only Intel microprocessors. The SEC asserted that these payments, which were not disclosed to investors, had a material impact on Dell's performance between 2001 and 2005, allowing the company to meet or exceed analysts' earnings expectations. When the payments from Intel were cut, this negatively impacted Dell's profitability, but again the company did not disclose the reason for falling profits to investors. In 2010, Dell Inc. agreed to pay a \$100-million penalty to settle the charges. Dell and Rollins both paid a \$4-million fine.⁸

As he stepped back into the CEO position, Michael Dell was confronted with a number of problems, which only intensified over the next 6 years. Dell's rivals had become more efficient, eroding the cost advantage that Dell once enjoyed. Moreover, the growth rate in the PC market was slowing. The market plateaued in 2010–2012, and in 2013 it shrank (Exhibit 2). This triggered intense price competition. To compound matters, the rise of smartphones and tablets left traditional PC companies like Dell out in the cold (see Exhibit 3).

Dell did enter both the smartphone and the tablet markets. A mobility group was established within Dell, and Ron Garriques, who joined Dell from Motorola, was appointed to lead the unit. The division released a number of products, but they were not well received.⁹ A "pocket tablet" running Android with a 5-inch screen, known as "The Streak," was released in August 2010. It was a year behind schedule and ran on an old version of Android. Streak it did not. It really had no chance against the runaway success of Apple's iPad, which had been released in January of that year. The mobile division also released a smartphone that used the Windows Phone 7 operating system. The phone had battery and Wi-Fi problems. It did not sell well. In November 2010, Garriques resigned from the company, and Dell shut its mobile division down, rolling its mobile products into the broader business. The company continued to make Android smartphones until 2012, when it pulled out of the business, citing low sales and large investment requirements.

Michael Dell also pushed the company into the information technology services business. The service business encompassed a number of different product

offerings, including installing and maintaining IT hardware, installing and customizing software applications such as ERP and database offerings, application development, business process outsourcing, and business process analysis. Steve Shuckebrook was hired from the IT consulting services company EDS to lead the initiative. His task was to establish Dell as a viable competitor to IBM and HP. Both of these companies were pursuing a razor and blade strategy, pricing commoditized hardware at close to cost, and then making money from multiyear service contracts. Dell aimed to do the same.

To build up its services business, Dell made some 20 acquisitions for a total of \$13 billion. These included the 2009 acquisition of Perot Systems for \$3.9 billion, the largest in the company's history. The price that Dell paid for Perot Systems represented a 68% premium over the company's prior market value. Commenting on the acquisition binge, Dell noted: "At the scale of Dell, the only way you are going to move the needle quicker was acquisitions."¹⁰

By the financial year ending February 1, 2013, "services" was a \$12-billion revenue business at Dell. In the same year, Dell made \$45 billion in revenues from hardware products (mostly PCs and servers). Dell's net income 2013 was \$2.37 billion, down from \$3.49 billion a year earlier. While services were growing the top line, this was not yet translating into bottom line growth. Investors were clearly not satisfied with the lack of progress at Dell. The company's stock price, which had been trading around \$25 when Michael Dell reassumed the CEO role in early 2007, was trading below \$10 a share in mid-2012. It was against this background that, in February 2013, Dell announced that he had partnered with private equity fund Silver Lake to take Dell private in a \$25-billion deal.

Michael Dell first contemplated taking Dell private in mid-2012, after a conversation with Southeastern Asset Management, the company's second biggest shareholder. Southern Asset Management was underwater on its investment in Dell and saw little upside. However, the investment company said that it would be willing to back an effort to take the company private if the price were right. This started a chain of events that culminated with Dell and partners from Silver Lake, and another investment firm, Kohlberg Kravis and Roberts (KKR), talking about a possible private buyout of Dell.

At this point, Dell informed the board of directors about his conversations. The board formed a special committee from which Dell was excluded to consider the idea along with other options. Reportedly these other options included (1) splitting Dell up into a PC business and a services business; (2) making more “transformative” acquisitions; (3) increasing the dividend payout and stock buybacks to boost the share price; and (4) selling Dell to a “strategic buyer”. The board then told Michael Dell that it was open to considering a transaction that would take Dell private.

By October 2012, KKR had submitted bids for Dell at around \$12 a share. Michael Dell had pledged that he would participate with whichever sponsor was willing to pay the highest price. At the time the stock price was around \$10 a share. Then the November earnings report came out. Earnings came in below management forecasts, and the stock price fell below \$9 a share. At this point KKR, citing structural weakness in the PC business, withdrew from the bidding process.

On December 6, 2012, the CFO provided updates on Dell’s business and gave the board of directors projections through until 2016. He told the board that fully implementing the plan to shift from PCs to a service business would take another 3 to 5 years. It would also require more capital investment. This was a big concern, given that cash flows from the PC business were declining. The board asked another private equity firm, Texas Pacific Group, if it was interested in bidding for Dell, but the company declined.

By early February 2013, the board had come to the conclusion that a private buyout of Dell was probably the best option. With rumors of a buyout starting to appear in the media, the board needed to make a statement. They had come to the conclusion that a buyout would inject needed capital into the company. It would also take the company out of the glare of the public markets, enabling management to make long-term investments that could in the short run depress earnings. Convinced that there would be no other bidders, the board gave Michael Dell and Silver Lake the go ahead to make a formal offer to take Dell Inc. private. Dell recused himself from all board discussions and board voting on any transaction.

On February 5, the board announced that it had reached an agreement with Silver Lake and Michael Dell to take the company private. Shareholders would

now have to vote on the deal. Under the terms of the agreement, Dell stockholders were to receive \$13.65 in cash for every share of Dell they held—a transaction that valued the company at \$24.4 billion.¹¹ The offer price represented a premium of 25% over the closing share price of \$10.88 on January 11, the last day before rumors of a possible private equity buyout started to appear in the media, and a premium of 37% over the average closing share price during the previous 90 calendar days ending on January 11, 2013. The buyers would acquire all of the outstanding shares of Dell not held by Michael Dell and certain other members of management. The buyout deal included a 45-day “go-shop” provision during which the special committee would actively solicit, receive, evaluate, and potentially enter in to negotiations with parties offering alternative proposals.

To finance the deal, Silver Lake put up \$1.4 billion in cash, and Michael Dell committed another \$750 million in cash, along with his existing 14% stake in the company. A consortium of banks, including Bank of America, Credit Suisse, and RBC provided loans totaling \$13.75 billion. Microsoft added another \$2 billion in loans. Dell was to remain CEO of the company after privatization. Without the need to pay out dividends and make stock buybacks, Michael Dell and Silver Lake felt that they could adequately cover the interest payments on the debt from cash flow. Moreover, privatization would give management the flexibility to pursue longer-term investments.

C7-6a Enter Carl Icahn

At this point, Carl Icahn entered the field. Icahn had first made his name during the 1980s as an activist investor. He had specialized in taking a substantial or controlling position in companies that he claimed were poorly managed, and pushing for changes in management and strategy. He would make money from selling out after the stock price had made substantial gains.

One of the high points of Icahn’s career was the takeover of the venerable airline, TWA. TWA was in financial trouble. Icahn raised debt capital from a group of investors to finance the takeover. To sway TWA’s board, management, and employees, he told them he wanted to make TWA profitable again. He ended up with a 20% stake in the company and the chairman’s position. After the takeover, he sold off

some of the company's assets in order to pay down the debt. In 1988, Icahn took TWA private in a leveraged buyout, which gave him a profit of \$469 million from selling his personal 20% stake. The buyout left TWA with \$540 million in debt. Icahn paid down the debt by selling off TWA's prized London routes to American Airlines for \$445 million in 1991.

Stripped of its most valuable routes, a year later the airline went into Chapter 11 bankruptcy proceedings. Icahn resigned as chairman but remained involved in TWA, this time as a creditor. TWA emerged from bankruptcy in 1993. As part of the restructuring, TWA owed Carl Icahn \$180 million. Desperate to get rid of Icahn, TWA's new management cut a deal that allowed him to buy any ticket that connected through TWA's St. Louis hub for 55 cents, and then resell it at a discounted price. The deal blocked Icahn from selling through travel agents, but it didn't mention a rapidly emerging new distribution channel, the Internet. Icahn set up Lowestfare.com to resell TWA tickets. Icahn put downward pressure on the amount TWA could sell tickets for, because the company was essentially competing with itself. Estimates suggest that the deal cost TWA \$100 million a year. In 1995, TWA went bankrupt.¹²

Icahn reportedly got interested in Dell after some large investors contacted him. In a March 5 letter to Dell's board, Icahn let it be known that he had quietly purchased \$1 billion in Dell shares, and that he thought the Dell-Silver Lake bid was too low. Privately, Icahn reportedly believed that Dell was worth \$20 a share. In June 2013, Icahn purchased another \$1 billion in shares from Southeastern Asset Management at \$13.52 a share, giving him a 9% stake in Dell Inc. Icahn did not pull any punches; he barraged investors with messages that the deal undervalued Dell, often using Twitter to communicate. He stated emphatically that Michael Dell's strategy was a failure, and that he should be fired and the board should be replaced. He painted a picture of Dell's board as being beholden to Michael Dell and lacking independence. Icahn urged shareholders to vote against the buyout. Icahn and Southeastern Asset Management proposed to replace Dell's board with their own slate of directors, who would then push the company into buying back 1.1 billion shares at \$14 each.¹³

Michael Dell and Silver Lake responded to Icahn by boosting their bid to \$13.75 a share, plus a 13-cent special dividend, up from the \$13.65 a share they had

originally offered in February. It was not a big concession. Dell's board backed the revised offer. Icahn pushed for shareholders to seek "appraisal rights," which is a process by which a judge determines the value of the shares. Appraisal rights are available to companies like Dell that are incorporated in Delaware, but it is a process that can take months. There are also risks involved because while judge might rule that Dell was worth more than \$13.65 a share, the judge could also rule that it was worth less.

Dell's board scheduled a vote to approve the buyout offer to be held on September 12, 2013. Within 15 minutes the meeting was over. With roughly 65% of the votes cast for the transaction, Icahn lacked sufficient support to derail the buyout. Initially Icahn continued to push for his own Dell shares to be appraised by a Delaware judge, but on October 4, he announced that he was withdrawing his request.¹⁴ Icahn was left with a small (for him) \$70-million profit on his Dell investments, but he wasn't beyond taking one last swipe at the company. Icahn stated that his attempt to block the buyout was "too difficult" given the lack of progress with the board, which he likened to a "dictatorship." Icahn complained that the board would just not listen to his arguments. He needed better corporate governance in U.S. companies, he stated.¹⁵

C7-7 AFTERMATH

The transaction to take Dell private closed on October 28, 2013. The final value of the transaction was \$24.8 billion. A year later, Michael Dell told attendees at an Inc. 5000 conference that his company was "quite a bit" more profitable than it had been a year ago, without offering any specifics, and 60% of its business came from PCs. Despite some media reports at the time of the Dell buyout speculating that the company might get into mobile, Dell didn't sound interested in that. Asked to respond to the criticism that Dell "missed the boat" on mobile, Dell shrugged. "Enormous sums are being lost" in that sector, he said. "Every three years, the leader of the mobile space has changed. I guess all those guys missed it, too."¹⁶

In an open letter published in the *Wall Street Journal* on November 25, 2014, Michael Dell again asserted that the buyout was the right move. He noted that: "Shareholders increasingly demanded

short-term results to drive returns; innovation and investment too often suffered as a result. Shareholder and customer interests decoupled ... As a private company, Dell now has the freedom to take a long-term view ... No more pulling R&D and growth investments to make in-quarter numbers.

No more having a small group of vocal investors hijack the public perception of our strategy while we're fully focused on building for the future. No more trade-offs between what's best for a short-term return and what's best for the long-term success of our customers."¹⁷

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CASE 8

DELL INC (B)— TRANSFORMING THE COMPANY

*This case was prepared by Charles W. L. Hill of the
School of Business, University of Washington, Seattle.*

When Michael Dell took Dell Inc. private in October 2013, he stated that the primary motivation was to allow the company to shift its strategy and bear the costs of doing so out of the glare of the public markets. Investors in public stock markets, according to Dell, were too focused on short-term results, which constrained his ability to make long-term investments that would take 5 to 10 years to bear fruit.

C8-1 DELL MOVES ON EMC

In late 2015, it became clear how bold Michael Dell's vision for restructuring his company was. Rumors emerged that Dell was in talks to merge the company with EMC, the world's largest maker of hardware for storing data. Much like Dell in its PC and server businesses, EMC was facing intense competition in its primary storage hardware business from commodity producers in Asia. The price competition in the server and storage hardware businesses was also being intensified by weaker demand for traditional server and data storage solutions as businesses and other institutions moved more of their computing requirements from on-premises data centers onto the "public cloud."

The "public cloud" refers to on demand computing services offered by third-party providers over the public Internet. Amazon, Microsoft, and Google have been major beneficiaries of the shift to cloud computing. These corporations all offer the ability for customers to store, process, and analyze data on massive server farms located "in the cloud" and accessed through high-speed Internet connections. Public clouds can save companies from the substantial costs of having to purchase, manage, and maintain on-premises hardware and application infrastructure. Public cloud services can also be deployed faster than on-premises infrastructure. A company relying on a public cloud can rapidly scale up (or down) its computing resources. This has proved to be crucial for high-growth organizations such as Netflix, which uses Amazon's public cloud. Similarly, the hit online game Fortnite has been able to grow its user base rapidly to 150 million because it relies upon public cloud providers. One big constraint on the growth of public clouds has been a concern over data security. For regulatory and safety reasons, many enterprises have continued to keep sensitive customer data on their on-premises data centers.

The hardware that public cloud providers use in their server farms is frequently custom designed. They either build it themselves or farm out assembly to low

cost operators in Asia. In short, due to the growth of the public cloud, enterprises are not buying as much hardware equipment from Dell and EMC. Of course, there is still demand for Dell and EMC equipment in “on-premises” data centers, but this is no longer viewed as a growth business.

In October 2015, Michael Dell formally announced that Dell and EMC would merge. The merger, valued at \$67 billion, was the largest in the history of the technology industry. The merger added EMC’s broad line of data storage hardware to Dell’s sever and client PC businesses. One core idea behind the merger was to sell computing, storage, and networking equipment as an easy-to-install bundle, which would be attractive to corporations and public institutions with on-premises data centers. The belief was that the broad product mix would enable Dell to gain share from key rivals in this space, including IBM and Hewlett Packard. The deal would involve taking EMC private and require some \$40 billion in debt financing to buy out EMC’s public shareholders.

C8-2 VMWARE, THE JEWEL IN EMC’S CROWN

Along with EMC, Dell would also gain control over VMware. VMware was 80% owned by EMC, with the remaining 20% being traded in the public markets. Many observers viewed VMware as the jewel in the crown at EMC. Estimates suggested that while VMware’s share of EMC’s revenues was around 35%, it accounted for 50% of EMC’s market value. VMware is the market leader in server virtualization software for on-premises enterprise data centers. In 2016, VMware had more than 60% of the market in virtualization data centers. On-premises data centers comprise large numbers of networked servers where enterprises store data and run applications. For example, banks store customer account data and process transactions on their data centers. In server virtualization, an enterprise uses software such as VMware to disaggregate the physical hardware from the operating system and share those hardware resources across multiple “tenant operating systems” such as Windows and Linux. The key benefit is

substantially increased utilization levels for servers, which means that an enterprise needs far fewer of them than would otherwise be the case, substantially reducing IT costs. Moreover, since its introduction in the early 2000s, virtualization has expanded from pure server virtualization to virtualization of storage and networking resources, virtual machine management, and load balancing. VMware software helps corporations to manage all of these tasks, again decreasing costs and increasing capacity utilization and the availability of computer resources. Once an enterprise is locked into a particular vendor for these tasks, such as VMware, high switching costs associated with implementing a new system make it difficult for rivals to gain business.

The server virtualization market has been growing rapidly since its inception. VMware has been the major beneficiary. However, with 80% of servers based on Intel processors virtualized in 2016, the market becoming saturated. VMware also has rivals, most notably Microsoft, which has its own virtualization software, Hyper-V. Hyper-V has been able to gain market share due to an attractive price point and the fact that it is embedded in Microsoft’s Windows Server operating system software. This has helped with adoption by small and medium-sized organizations where virtualization rates are lower. According to research by Gartner, virtualization rates among smaller companies with less than \$3 million annual IT budgets was only 55% in 2016.

Another potential threat to VMware’s business has been the rapid growth of public clouds. While VMware offers its own platform for managing both public and private (on-premises) clouds, the major public cloud providers such as Amazon, Microsoft, and Google have developed their own platforms that incorporate virtualization software to achieve efficient workload balancing and optimal capacity utilization. This reduces the hardware requirements for running a public cloud and lowers the costs of cloud computing services. Indeed, without virtualization software the economics of cloud computing would be nowhere near as compelling.

In addition to VMware, EMC also owned a number of other interesting software companies including the cybersecurity firm RSA Security and Pivotal Software. Pivotal specializes in making software that enables customers to seamlessly manage data and

applications which are stored both on their private data centers and on a public cloud infrastructure managed by the likes of Amazon and Microsoft. This is a potentially valuable business. Regulatory and security considerations mean that some customers do not want to put all of their sensitive data on a public cloud, and instead may be required to or prefer to keep some of it on private servers located on their own premises (that is, on a private cloud). For such customers, software that bridges the gap between private and public clouds, and allows for seamless interaction between the two, is very valuable. Pivotal sees its competition as legacy providers such as IBM and Oracle, both of which have cloud offerings and are trying to help customers bridge the same gaps.

C8-3 STRUCTURING AND CLOSING THE DEAL

When announced, the deal valued EMC at \$33.15 a share, a 28% premium over EMC's closing price before news of the deal broke. While both EMC and Michael Dell agreed to put up funds to help buy out EMC shareholders, Dell Inc. would have to absorb around \$40 billion in new debt financing to pay for the purchase. Several major investment banks, including JPMorgan Chase & Co and Credit Suisse AG, agreed to initially put up funds to buy out EMC shareholders, with an aim of being paid back closer to the time of the deal's closing with the proceeds from a mix of investment grade and junk bond sales. The plan called for Michael Dell and his associates to own about 70% of the combined company's equity. He would continue as chairman and CEO of the combined companies.

VMware was to remain a publicly traded company, trading under the symbol VMW, with the combined Dell/EMC entity owning 81% of the equity. As part of the deal, Dell decided to pay EMC shareholders partly in cash, and partly with a new tracking stock that at least on paper represented Dell's controlling interest in VMware. By creating the tracking stock, Dell was able to reduce the amount of debt it had to take on to purchase EMC.

The tracking stock, which has been trading under the symbol DVMT, has traded in close correlation with VMware's own stock.

The complex merger deal was completed in September 2016, nearly a year after the merger announcement. The combined company was renamed Dell Technologies. At that time, the demand for Dell and EMC's legacy products was continuing to shrink. According to the research firm IDC, PC shipments fell by 10.4% in 2015 and 7.3% in 2016 as consumers shifted towards mobile devices. The \$64-billion market for servers, storage, and network hardware has been falling since 2014, and was predicted to shrink by 1 to 2% per year through until 2020. While analysts expected the combined company to sell more of its traditional products, taking market share from rivals, it was clear that new growth drivers were needed.

C8-4 DELL'S EMERGING STRATEGY

In an interview with a Forbes contributor in late 2017, Michael Dell was clear that he was taking the long view: "In the short term, I really don't care to be honest. What I care about is the three, five, ten and twenty-year outcome."¹

Dell also made it clear that he saw VMware as crucial to the company's future:

Well, look, when you imagine forward in this world of multi-cloud, there is absolutely no question that the answer isn't public or private, it's both. Then the idea is to layer in manage services and software as a service. And in that world the capabilities that VMware has are absolutely incredibly valuable to connect to all of the public clouds. Then you can integrate the on-premise infrastructure, which we continue to see having a very important role. We're having double-digit growth in our server business. There's a lot of infrastructure being laid down in private data centers all over the world. And when you think about future scenarios out to 2020 and beyond, there is a boom in edge computing . . . VMware

and Dell EMC go together like peanut butter and chocolate . . . the more we do together, the more we drive innovation.²

Shortly after giving this interview, Michael Dell announced another initiative—Dell Technologies would invest \$1 billion over the next 3 years to create hardware and software that helps manage billions of everyday devices connected to the Web. Dell is betting that there will be a boom in computing hardware and software that sits close to these devices; that is, in *edge computing*. Dell maintains that it will be cheaper and more efficient to process information coming from sensors closer to where it originates (on the *edge*), rather than sending that data back to a public cloud (the *center*). An autonomous car or a robot surgeon, for example, needs to process information in real time and won't tolerate delays that occur when processing information in a remote cloud.

Dell is also strategizing that corporations will want to keep control of valuable data. An automaker, for example, will want the data from autonomous vehicles to be stored on their own equipment, not on the public cloud where it may not be secure. In Dell's vision, the implementation of high-speed, fifth-generation wireless networks scheduled for introduction in 2019 and beyond will make it much easier for the edge computing devices he envisages to communicate with each other, boosting demand for associated hardware, software and services. Is he correct? Only time will tell.

As for financial performance, the early results from the postmerger entity were encouraging, suggesting that the bundling strategy may be helping Dell drive sales growth. Net revenues for the 2017 financial year, which ended February 2, 2018, were \$78.7 billion, up from combined revenues of \$61.6 billion in the prior year (see Exhibit 1).

Exhibit 1 Dell Technologies Financial Performance

	Successor			
	Fiscal Year Ended			
	February 2, 2018	February 3, 2017 (a)	January 29, 2016	January 30, 2015
	(in millions, except per share data)			
Result of Operations and Cash Flow Data:				
Net revenue	\$ 78,660	\$ 61,642	\$ 50,911	\$ 54,142
Gross margin	\$ 20,054	\$ 12,959	\$ 8,387	\$ 8,896
Operating loss	\$ (3,333)	\$ (3,252)	\$ (514)	\$ (316)
Loss from continuing operations before income taxes	\$ (5,688)	\$ (5,356)	\$ (1,286)	\$ (1,215)
Loss from continuing operations	\$ (3,855)	\$ (3,737)	\$ (1,168)	\$ (1,108)
Earnings (loss) per share attributable to Dell Technologies Inc.:				
Continuing operations-Class V Common Stock-basic	\$ 1.41	\$ 1.44	\$ —	\$ —
Continuing operations-DHI Group-basic	\$ (7.08)	\$ (8.52)	\$ (2.88)	\$ (2.74)

(continued)

Exhibit 1 Dell Technologies Financial Performance (continued)

Continuing operations-Class V Common Stock-diluted	\$ 1.39	\$ 1.43	\$ —	\$ —
Continuing operations-DHI Group-diluted	\$ (7.08)	\$ (8.52)	\$ (2.88)	\$ (2.74)
Number of weighted-average shares outstanding:				
Class V Common Stock-basic	203	207	—	—
DHI Group-basic	567	470	405	404
Class V Common Stock- diluted	203	217	—	—
DHI Group-diluted	567	470	405	404
Net cash provided by operating activities	\$ 6,810	\$ 2,309	\$ 2,162	\$ 2,551

(a) The fiscal year ended February 3, 2017 included 53 weeks.

Source: Dell Technologies 2017 10K Report.

While the company was still losing money (operating losses were \$3.7 billion in 2016 and \$3.9 billion in 2017), Dell Technologies was cash-flow positive, generating \$6.8 billion in cash flow in 2017, up from \$2.3 billion in 2016. That being said, the company did still carry a substantial debt burden in 2017 that amounted to \$51.9 billion. It did have \$13.9 billion in cash and cash equivalents, up from \$9.5 billion in fiscal 2016.

Perhaps reflecting the improved financial position, on July 2, 2018, Dell announced that after spending 5 years as a private entity, the company was planning to go public once more. The return to the public markets would involve yet another complex transaction. Dell is proposing to buy out the owners of the VMware tracking stock, DVMT, with a combination of cash and a newly issued “C” class of stock in Dell itself. The new stock will trade on the New York Stock Exchange, making Dell a public company once more. For the time being, the roughly 19% of VMware that

Dell Technologies does not own will continue to trade on the public markets, although there is speculation that Dell Technologies will ultimately acquire all of VMware.

According to news reports, Dell decided to go public in order to simplify its capital structure and give its private holders a publicly traded currency. Going public in this manner does not require an initial public offering to raise capital. As a publicly traded company, Dell Technologies will still carry a large debt load from the EMC acquisition, although as Michael Dell notes, Dell has been using its positive cash flow to pay down that debt. Moody’s Investors Service currently rates Dell’s long-term debt as Ba1, or highly rated junk-grade debt. Moody’s expects Dell to remain committed to sizable debt reduction going forward. The extent to which interest payments on debt and debt reduction payouts will constrain Dell’s strategic options is unclear.

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¹J. Furrier, “One Year Birthday of \$67 Billion Mega Merger with Dell EMC,” *Forbes*, September 8, 2017.

²*Ibid.*



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CASE 9

APPLE AT FOURTY

This case was prepared by Charles W. L. Hill of the School of Business, University of Washington, Seattle.

C9-1 INTRODUCTION

In 1997, Apple Computer was in deep trouble. The company that had pioneered the personal computer market with its easy-to-use Apple II in 1978, and had introduced the first graphical user interface with the Macintosh in 1984, was bleeding red ink. Apple's worldwide market share in the personal computer business, which had been fluctuating between 7 and 9% since 1984, had sunk to 4%. Apple was on track to lose \$378 million on revenues of \$7 billion. In July 1997, the cofounder of the company, Steve Jobs, who had left Apple in 1985 after being stripped of any operating responsibility, returned as CEO. At an investor conference, Michael Dell, CEO of Dell Inc., then the world's largest and most successful PC manufacturer, was asked what Jobs should do as head of Apple. Dell quipped "I'd shut it down and give the money back to shareholders."¹

By 2017, the situation could not look more different. Apple was the world's most valuable company with a market capitalization of over \$940 billion. Revenues in the financial year ending September 2017 were \$229 billion and net income was \$48.4 billion. The company had generated \$50.8 billion of free cash flow in 2017 and was sitting on over \$268 billion in cash and securities on its balance sheet.

Driving the transformation had been a string of game-changing innovations that included the introduction of Apple's iPod music player in 2001, music

downloads from the iTunes store in 2003, the iPhone in 2007, and the iPad in 2010. Throughout this period, Apple had continued improve and refine its line of desktop and laptop computers, producing models that set the standard for the industry in design elegance and ease of use. Apple had also vertically integrated forward in to the retail business, opening its first Apple store in 2001. By 2018, the company had over 500 Apple stores worldwide. The stores were a phenomenon. The average store generated sales per square foot of \$5,546 in 2017, the highest in the world and almost twice that of second-place Tiffany and Co., which had sales per square foot of \$2,951.² To emphasize the broadening product portfolio of the company, Apple had dropped "computer" from its name.

Apple's successful iPhone and iPad lines had made the company a driving force behind an industrywide shift toward mobile computing and cloud services. By early 2018, the company's active, installed base of Macs, iPhones, and iPads reached \$1.3 billion. Its iCloud cloud storage and synchronization service, introduced in October 2011, had close to a billion users, and Apple Music, its streaming music service, had 45 million subscribers. Services such as Apple Music and premium iCloud were becoming an important source of Apple's revenues. Service revenues for 2017 were \$30 billion, and the company believed that it was on track to generate \$48 billion from services in 2020.³

However, the future was less clear. In 2011, the driving force of the company's transformation, founder

and CEO Steve Jobs, died of cancer. Observers wondered if the company could maintain its innovative momentum without the creative genius of Jobs at the helm. Competitors were also snapping at Apple's heels. Smartphones using Google's Android operating system were outselling Apple's iPhone by 4.5 to 1 worldwide in 2017 (although Apple reportedly captured 87% of all profits from smartphone sales in 2017, despite accounting for just 18% of units sold). In the tablet market, the iPad captured 28.8% of the global market in late 2017, down from 60% in 2012. Tablets running the Android operating accounted for much of the remainder.⁴ In April 2012, Google offered its cloud storage and synchronization service, Google Drive, in an attempt to create an ecosystem that rivaled Apple's, intensifying the format war in mobile devices and cloud services between the two rival mobile operating systems.

C9-2 APPLE 1976-1997

C9-2a The Early Years

Apple's genesis is the stuff of legend.⁵ On April Fool's Day, 1976, two young electronics enthusiasts, Steve Jobs and Steve Wozniak, started a company to sell a primitive personal computer that Wozniak had designed. Steve Jobs was 20. Wozniak, or Woz as he was commonly called, was five years older. Woz had designed the computer just for the fun of it. That's what people did in 1976. The idea that somebody would actually want to purchase his machine had not occurred to Woz, but it did to Jobs. Jobs persuaded a reluctant Woz to form a company and sell the machine. The location of the company was Jobs' garage. Jobs suggested they call the company Apple and their first machine the Apple I. They sold around 200 of them at \$666 each. The price point was set as something of a prank.

The Apple I had several limitations—no case, keyboard, or power supply being the obvious ones. It also required several hours of laborious assembly by hand. By late 1976, Woz was working on a replacement to the Apple I, the Apple II.⁶ In October 1976, with the Apple II under development, Jobs and Woz were introduced to Mike Markkula. Only 34, Markkula was already a retired millionaire, having made a small

fortune at Fairchild and Intel. Markkula had no plans to get back into business anytime soon, but a visit to Jobs' garage changed all that. He committed to investing \$92,000 for one-third of the company and promised that his ultimate investment would be \$250,000. Stunned, Jobs and Woz agreed to let him join as a partner. It was a fateful decision. The combination of Woz's technical skills, Jobs' entrepreneurial zeal and vision, and Markkula's business savvy and connections was a powerful one. Markkula told Jobs and Woz that neither of them had the experience to run a company. He persuaded them to hire a president, Michael Scott, who had worked for Markkula at Fairchild.

The Apple II was introduced in 1977 at a price of \$1,200. The first version, an integrated computer with a Motorola microprocessor, included a keyboard, power supply, monitor, and BASIC programming software. Jobs pushed Woz to design an integrated machine—he wanted something that was easy to use and not just a toy for geeks. Jobs also insisted that the Apple II look good. It had an attractive case and no visible screws or bolts. This differentiated it from most personal computers at the time, which looked as if they had been assembled by hobbyists at home (as many had).

In 1978, Apple started to sell a version of the Apple II that incorporated something new—a disk drive. The disk drive enabled third-party developers to write software for the Apple II that could be loaded via floppy disks. Soon programs started to appear, among them EasyWriter, a basic word-processing program, and VisiCalc, a spreadsheet. VisiCalc was an instant hit, and pulled in a new customer set, business types who could use VisiCalc for financial planning and accounting. Since VisiCalc was only available for the Apple II, it helped drive demand for the machine.

By 1980, Apple had sold over 100,000 Apple II's, making the company the leader in the embryonic personal computer industry. The company had successfully executed an IPO, was generating over \$200 million in sales, and was profitable. With the Apple II series selling well, particularly in the education market, Apple introduced its next product, the Apple III, in the fall of 1980. It was a failure. The computer was filled with bugs and crashed constantly. The Apple III had been rushed to market. Apple reintroduced a reengineered Apple III in 1981, but

it continued to be outsold by Apple II. Indeed, successive versions of the Apple II family, each an improvement on the preceding version, continued to be produced by the company until 1993. Over two million Apple II computers were sold. The series became a standard in American classrooms, where it was valued for its intuitive ease-of-use. The Apple II was the mainstay of the company until the late 1980s, when an improved version of the Macintosh started to garner sales.

C9-2b The IBM PC and Its Aftermath

Apple's success galvanized the world's largest computer company, IBM, to speed up development of its entry into the personal computer market. IBM had a huge, very profitable mainframe computer business, but it had failed to develop a personal computer despite two attempts. To get to market quickly with its third PC project, IBM broke with its established practice of using its proprietary technology to build the PC. Instead, it adopted an "open architecture," purchasing the components required to make the IBM PC from other manufacturers. These components included a 16-bit microprocessor from Intel, and an operating system, MS-DOS, licensed from a small Washington State company, Microsoft.

Microsoft had been in the industry from its inception, writing a version of the BASIC software programming language for the MITS Atari in 1977, the first PC ever produced. IBM's desire to license BASIC brought them to Redmond to talk with the company's CEO, Bill Gates. Gates, still in his early 20s, persuaded IBM to adopt a 16-bit processor (originally, IBM had been considering a less powerful 8-bit processor). He was also instrumental in pushing IBM to adopt an open architecture, arguing that IBM would benefit from the software and peripherals that other companies could then make.

Initially, IBM was intent on licensing the CP/M operating system, produced by Digital Research, for the IBM PC. However, the current version of CP/M was designed to work on an 8-bit processor. Gates had persuaded IBM that it needed a 16-bit processor. In a series of quick moves, Gates purchased a 16-bit operating system from a local company, Seattle Computer, for \$50,000. Gates then hired the lead developer of the operating system, Tim Paterson; renamed the system MS-DOS; and offered to license

it to IBM. In what turned out to be a masterstroke, Gates persuaded IBM to accept a nonexclusive license for MS-DOS (which IBM called PC-DOS).

To stoke sales, IBM offered a number of applications for the IBM PC that were sold separately, including versions of VisiCalc and EasyWriter, and a series of business programs from Peachtree Software.

Introduced in 1981, the IBM PC was an instant success. Over the next two years, IBM would sell more than 500,000 PCs, seizing market leadership from Apple. IBM had what Apple lacked—an ability to sell to corporate America. As sales of the IBM PC mounted, two things happened. First, independent software developers started to write programs to run on the IBM PC. These included two applications that drove adoptions of the IBM PC: word-processing programs (WordPerfect) and a spreadsheet (Lotus 1-2-3). Second, the success of IBM gave birth to clone manufacturers who made "IBM-compatible" PCs that also utilized an Intel microprocessor and Microsoft's MS-DOS operating system. The clone makers included Compaq, Tandy, Zenith, Leading Edge, and Dell.

C9-2c The Birth of the Macintosh

By 1980, two other important projects were underway at Apple: Lisa and the Macintosh. Lisa was originally conceived as a high-end business machine, and the Macintosh as a low-end, portable machine.

The development of both the Lisa, and ultimately the Macintosh, were influenced by two visits Jobs paid to Xerox's fabled Palo Alto Research Center (PARC) in November and December 1979. Funded out of Xerox's successful copier business, PARC had been set up to do advanced research on office technology. Engineers at PARC had developed a number of technologies that were later to become central to personal computers, including a graphical user interface (GUI), software programs that were made tangible through on screen icons, a computer mouse that let a user click on and drag on screen objects, and a laser printer. Jobs was astounded by what he saw at PARC. He decided on the spot that these innovations had to be incorporated into Apple's machines.

Jobs pushed the Lisa team to implement PARC's innovations, but he was reportedly driving people on the project nuts with his demands, so president Mike Scott pulled him off the project. Jobs reacted

by essentially hijacking the Macintosh project, and transforming it into a skunkworks that would put his vision into effect. By one account:

He hounded the people on the Macintosh project to do their best work. He sang their praises, bullied them unmercifully, and told them they weren't making a computer, they were making history. He promoted the Mac passionately, making people believe that he was talking about much more than a piece of office equipment.⁷

During this period, Bud Tribble, a software engineer on the Mac project, quipped that Jobs could create a “reality distortion field.” Jobs insisted that the Mac would ship by early 1982. Tribble knew that the schedule was unattainable, and when asked why he didn't point this out to Jobs, he replied:

Steve insists that we're shipping in early 1982 and won't accept answers to the contrary. The best way to describe the situation is a term from *Star Trek*. Steve has a reality distortion field . . . In his presence, reality is malleable. He can convince anyone of practically anything. It wears off when he's not around, but it makes it hard to have realistic schedules.⁸

Andy Hertzfeld, another engineer on the Macintosh project, thought Tribble was exaggerating:

. . .until I observed Steve in action over the next few weeks. The reality distortion field was a confounding mélange of a charismatic rhetorical style, an indomitable will, and an eagerness to bend any fact to fit the purpose at hand. If one line of argument failed to persuade, he would deftly switch to another. Sometimes, he would throw you off balance by suddenly adopting your position as his own, without acknowledging that he ever thought differently.⁹

Around this time Mike Scott left the company after clashes with other executives, including Markkula, who had become chairman. Jobs persuaded John Sculley to join Apple as CEO. Sculley was the former executive vice president of marketing at Pepsi, where he had become famous for launching the Pepsi Challenge. Jobs had reportedly asked Sculley, “Do you want to sell sugar water for the rest of your life, or do you want to change the world?” A Wharton MBA, Sculley had been hired for his marketing savvy, not his technical skills.

While the Lisa project suffered several delays, Jobs pushed the Macintosh team to finish the project and beat the Lisa team to market with a better product. Introduced in 1984, the Macintosh captured attention for its stylish design and utilization of a graphical user interface, icons, and a mouse, all of which made the machine easy to use and were not found on any other personal computer at the time. Jobs, ever the perfectionist, again insisted that not a single screw should be visible on the case. He fired a designer who presented a mockup that had a screw that could be seen by lifting a handle.

Early sales were strong; then they faltered. For all its appeal, the Macintosh lacked important features—it had no hard disk drive, only one floppy drive, and insufficient memory. There were few applications available to run on the machine. The Mac also proved to be a more difficult machine to develop applications for than the IBM PC and its clones. Jobs, however, seemed oblivious to the problems, and continued to talk about outsized sales projections, even when it was obvious to all around him that they were unattainable.

In early 1985, Apple posted its first loss. Aware that drastic action was necessary, but could not be taken while Jobs was running the Macintosh division, Sculley got backing from the board of directors to strip Jobs of his management role and oversight of the Macintosh division. In late 1985, an embittered Jobs resigned from Apple, sold all of his stock, and left to start another computer company, aptly named NeXT.

C9-2d Sculley's Apple

With Jobs gone, Sculley shut down the Lisa line, which had done poorly in the market due to a very high price point of \$10,000. He pushed developers to fix the problems with the Macintosh. In January 1986, a new version of the Macintosh, the Mac Plus, was introduced. This machine fixed the shortcomings of the original Mac, and sales started to grow again.

Apple's domination of the desktop publishing market helped. Several events came together to make this happen. Researchers from Xerox PARC formed a company, Adobe, to develop and commercialize the PostScript page description language. Postscript enabled the visual display and printing of high-quality page layouts loaded with graphics (e.g., color charts, line drawings, and photos). Apple licensed PostScript

and used it as the output for its Apple LaserWriter printer, which was introduced in 1985. Shortly afterwards, a Seattle company, Aldus, introduced a program called Page Maker for the Mac. Page Maker used Adobe's Post Script page description language for output. Although Aldus introduced a version of Page Maker for MS-DOS in 1986, Apple already had a lead, and with the Mac's GUI interface appealing to graphic artists, Apple tightened its hold on the desktop publishing segment. Apple's position in desktop publishing was further strengthened by the release of Adobe Illustrator in 1987 (a freehand drawing program), and Adobe Photoshop in 1990.

The period between 1986 and 1991 were good years for Apple. Because it made both hardware and software, Apple was able to control all aspects of its computers, offering a complete desktop solution that allowed customers to "plug and play." With the Apple II series still selling well in the education market, and the Mac dominating desktop publishing, Apple was able to charge a premium price for its products. Gross margins on the Mac line rose as high as 55%. In 1990, Apple sales reached \$5.6 billion. Its global market share, which had fallen rapidly as the IBM-compatible PC market had grown, stabilized at 8%. The company had a strong balance sheet and was the most profitable personal computer manufacturer in the world.

During this period executives at Apple debated the merits of licensing the Mac operating system to other computer manufacturers, allowing them to make Mac clones. Sculley was in favor of this move. So was Microsoft's Bill Gates, who wrote two memos to Sculley laying out the argument for licensing the Mac OS. Gates argued that the closed architecture of the Macintosh prevented independent investment in the standard by third parties and put Apple at a disadvantage versus the IBM PC standard. However, several senior executives at Apple were against the licensing strategy, arguing that once Apple licensed its intellectual property, it would be difficult to protect it. In one version of events, senior executives debated the decision at a meeting and took a vote on whether to license. Given the controversial nature of the decision, it was decided that the vote in favor had to be unanimous. It wasn't—a single executive voted against the licensing decision, and it was never pursued.¹⁰ In another version of events, Jean-Louis Gasse, head of R&D at Apple, vigorously opposed Sculley's plans to

clone, and Sculley backed down.¹¹ Gasse was deeply distrustful of Microsoft and Bill Gates, and believed that Gates' probably had an ulterior motive, given how his company benefited from the IBM standard.

Ironically, in 1985, Apple had licensed its "visual displays" to Microsoft. Reportedly Gates had strong-armed Sculley, threatening that Microsoft would stop developing crucial applications for the Mac unless Apple granted Microsoft the license. At the time, Microsoft had launched development of its own GUI. Called Windows, it mimicked the look and feel of the Mac operating system, and Microsoft didn't want to be stopped by a lawsuit from Apple. Several years later, when Apple did file a lawsuit against Microsoft, arguing that Windows 3.1 imitated the "look and feel" of the Mac, Microsoft was able to point to the 1985 license agreement to defend its right to develop Windows—a position with which the judge in the case agreed.

C9-2e Apple in Decline: 1990–1997

By the early 1990s, the prices of IBM compatible PCs were declining rapidly. So long as Apple was the only company to sell machines that utilized a GUI, its differential appeal gave it an advantage over MS-DOS-based PCs, with their clunky text-based interface, and the premium price could be justified. However, in 1990, Microsoft introduced Windows 3.1, its own GUI that sat on top of MS-DOS, and Apple's differential appeal began to erode. Moreover, the dramatic growth of the PC market had turned Apple into a niche player. Faced with the choice of writing software to work with an MS-DOS/Windows operating system and an Intel microprocessor, now the dominant standard found on 90% of all personal computers, or the Mac OS and a Motorola processor, developers logically opted for the dominant standard (desktop publishing remained an exception to this rule). Reflecting on this, Dan Eilers, then vice president of strategic planning at Apple, reportedly stated "The company was on a glide path to history."¹²

Sculley, too, thought that the company was in trouble. Apple seemed boxed in its niche. It had a high cost structure. It spent more on R&D as a percentage of sales than its rivals (in 1990, Apple spent 8% of sales on R&D, Compaq around 4%). Its microprocessor supplier, Motorola, lacked the scale of Intel, which translated into higher costs for Apple.

Moreover, Apple's small market share made it difficult to recoup the spiraling cost of developing a new operating system, which by 1990 amounted to at least \$500 million.

Sculley's game plan to deal with these problems involved a number of steps.¹³ First, he appointed himself chief technology officer in addition to CEO, a move that raised some eyebrows given his marketing background. Second, he committed the company to bring out a low-cost version of the Macintosh to compete with IBM clones. The result was the Mac Classic, introduced in October 1990 and priced at \$999. He also cut prices for the Mac's and Apple II's by 30%. The reward was a 60% increase in sales volume, but lower gross margins. Third, he cut costs. The workforce at Apple was reduced by 10%, the salaries of top managers (including Sculley's) were cut by as much as 15%, and Apple shifted much of its manufacturing to subcontractors (for example, the PowerBook was built in Japan, a first for Apple). Fourth, he called for the company to maintain its technological lead by bringing out hit products every 6 to 12 months. The results included the first Apple portable, the PowerBook notebook, which was shipped in late 1991 and garnered very favorable reviews, and the Apple Newton handheld computer, which bombed. Fifth, Apple entered into an alliance with IBM, which realized that it had lost its hold on the PC market to companies like Intel, Microsoft, and Dell.

The IBM alliance had several elements. One was the decision to adopt IBM's Power PC microprocessor architecture, which IBM would also use in its own offerings. A second was the establishment of two joint ventures: Taligent, which had the goal of creating a new operating system; and Kaleida, to develop multimedia applications. A third was a project to help IBM and Apple machines work better together.

While Sculley's game plan helped to boost the top line, the bottom line shrunk in 1993 due to a combination of low gross margins and continuing high costs. In 1994, Sculley left Apple. Michael Spindler, a German engineer who had gained prominence as head of Apple Europe, replaced him.

Spindler finally took the step that had been long debated in the company—he decided to license the Mac-OS to a handful of companies, allowing them to make Mac clones. The Mac-OS would be licensed for \$40 a copy. It was too little too late. The industry was now waiting for the introduction of Microsoft's

Windows 95. When it came, it was clear that Apple was in serious trouble. Windows 95 was a big improvement over Windows 3.1, and it closed the gap between Windows and the Mac. While many commentators criticized Apple for not licensing the Mac OS in the 1980s, when it still had a big lead over Microsoft, ironically Bill Gates disagreed. In a 1996 interview with *Fortune*, Gates noted that:

As Apple has declined, the basic criticism seems to be that Apple's strategy of doing a unique hardware/software combination was doomed to fail. I disagree. Like all strategies, this one fails if you execute poorly. But the strategy can work, if Apple picks its markets and renews the innovation in the Macintosh.¹⁴

Spindler responded to Windows 95 by committing Apple to develop a next-generation operating system for the Macintosh—something that raised questions about the Taligent alliance with IBM. At the end of 1995, IBM and Apple parted ways, ending Taligent, which after \$500 million in investments had produced little.

By then, Spindler had other issues on his mind. The latter half of 1995 proved to be a disaster for Apple. The company seemed unable to predict demand for its products. It overestimated demand for its low-end Macintosh Performa computers, and was left with excess inventory, while underestimating demand for its high-end machines. To compound matters, its new PowerBooks had to be recalled after batteries started to catch fire, and a price war in Japan cut margins in one of its best markets. As a consequence, gross margins slumped. Apple lost \$68 million in 1995. Spindler responded by announcing 1,300 layoffs. He suggested that up to 4,000 might ultimately go, some 23% of the workforce.¹⁵ That was his last significant act. Gilbert Amelio replaced him in February.

Amelio, joined Apple from National Semiconductor, where he had gained a reputation for his turnaround skills. He lasted just 17 months. He followed through on Spindler's plans to cut headcount and stated that Apple would return to its differentiation strategy. His hope was that the new Mac operating system would help, but work on that was in total disarray. He took the decision to scrap the project after an investment of over \$500 million. Instead, Apple purchased NeXT for \$425 million. NeXT was the computer company founded by none other than Steve Jobs after he left

Apple. NeXT machines had received strong reviews, but had gained no market traction due to a lack of supporting applications. Amelio felt that the NeXT OS, a UNIX-based operating system, could be adapted to run on the Mac. He also hired Jobs as a consultant, but Jobs was rarely seen at Apple. He was too busy running Pixar, his computer animation company, which was riding a wave of success after a huge hit with the animated movie *Toy Story*.¹⁶

Amelio's moves did nothing to stop the slide in Apple's fortunes. By mid-1997, market share had slumped to 3%, from 9% when Amelio took the helm. The company booked a loss of \$742 million in 1996 and was on track to lose another \$400 million in 1997. It was too much for the board. In July 1997, Amelio was fired. With market share falling, third-party developers and distributors were rethinking their commitments to Apple. Without them, the company would be dead.

C9-3 THE SECOND COMING OF STEVE JOBS

Following Amelio's departure, Steve Jobs was appointed interim CEO. In April 1998, he took the position on a permanent basis, while staying on at Pixar as CEO. Jobs moved quickly to fix the bleeding. His first act was to visit Bill Gates and strike a deal with Microsoft. Microsoft agreed to invest \$150 million in Apple and to continue producing Office for the Mac through until at least 2002. Jobs ended the licensing deals with the clone makers. He killed slow-selling products, most notably the Apple Newton handheld computer, and reduced the number of product lines from 60 to 4. He also pushed the company into online distribution, imitating Dell Computer's direct-sales model. While these fixes brought the company time, and a favorable reaction from the stock market, they were not enough to generate growth.

C9-3a New Computer Offerings

Almost immediately Jobs started to think about a new product that would embody the spirit of Apple. In May 1998, the iMac emerged. The differentiator for the iMac was not its software, or its power, or its

monitor—it was the design of the machine itself. A self-contained unit that combined the monitor and central processing unit in translucent teal and with curved lines, the iMac was a bold departure in a world dominated by putty-colored PC boxes.

To develop the iMac, Jobs elevated a team of designers headed by Jonathan Ive, giving them an unprecedented say in the development project. Ive's team worked closely with engineers, manufacturers, and marketers, and with Jobs. To understand how to make a plastic shell look exciting rather than cheap, the designers visited a candy factory to study the finer points of making jellybeans. They spent months working with Asian partners designing a sophisticated process capable of producing millions of iMacs a year. The designers also pushed for the internal electronics to be redesigned, to make sure that they looked good through the thick shell. Apple may have spent as much as \$65 a machine on the casing, compared with perhaps \$20 for the average PC.¹⁷

Priced at \$1,299, iMac sales were strong, with orders placed for 100,000 units even before the machine was available. Moreover, one-third of iMac purchases were first-time buyers according to Apple's own research.¹⁸ The iMac line was continually updated, with faster processors, more memory, and bigger hard drives being added. The product was also soon available in many different colors. In 1999, Apple followed up the iMac with introduction of the iBook portable. Aimed at consumers and students, the iBook had the same design theme as the iMac and was priced aggressively at \$1,599.

Sales of the iMac and iBook helped push Apple back into profitability. In 1999, the company earned \$420 million on sales of \$6.1 billion. In 2000, it made \$611 million on sales of almost \$8 billion.

To keep sales growing, Apple invested in development of a new operating system based on the technology acquired from NeXT. After three years work by nearly 1,000 software engineers, and a cost of around \$1 billion, the first version of Apple's new operating system was introduced in 2001. Known as OS X, it garnered rave reviews from analysts who saw the UNIX-based program as offering superior stability and faster speed than the old Mac OS. OS X also had an enhanced ability to run multiple programs at once, to support multiple users, connected smoothly to other devices, and was easier for developers to write applications for. In typical Apple fashion,

OS X also sported a well-designed, intuitively appealing interface.

To get the installed base of Mac users to upgrade to OS X, who at the time numbered 25 million, Apple had to offer applications. The deal with Microsoft ensured that its popular Office program would be available for the OS X. Jobs had assumed that the vote of confidence by Microsoft would encourage other third-party developers to write programs for OS X, but it didn't always happen. Most significantly, in 1998, Adobe refused to develop a Mac version of their consumer video-editing program, which was already available for Windows PCs.

Shocked, Jobs directed Apple to start working on its own applications. The first fruits of this effort were two video editing programs, Final Cut Pro for professionals, and iMovie for consumers. Next was iLife, a bundle of multimedia programs now preinstalled on every Mac, which includes iMovie, iPhoto, Garage Band, and the iTunes digital jukebox. Apple also developed its own Web Browser, Safari.

Meanwhile, Apple continued to update its computer lines with eye-catching offerings. In 2001, it introduced its Titanium Powerbook G4 notebooks. These ultralight, fast notebooks featured a clean, postindustrial look that marked a distinct shift from the whimsical look of the iMac and iBook. As with the iMac, Jonathan Ive's design team took the lead in the products development. A core team of designers set up a studio in a San Francisco warehouse, far away from Apple's main campus. They worked for six weeks on the basic design, then headed to Asia to negotiate for widescreen flat panel displays and to work with toolmakers.¹⁹

The Titanium notebooks were followed by a redesigned desktop line that appealed to the company's graphic design customers, including elegantly designed, very widescreen cinema displays. In 2004, Ive's design team came out with yet another elegant offering, the iMac G5 computer, which *PC Magazine* described as a "simple stunning all-in-one design."²⁰ This was followed in 2008 with the release of yet another strong design, the ultrathin MacBook Air, which weighed just 3 pounds and was only 0.76 of an inch thick at its widest point.

For all of Apple's undisputed design excellence, and the loyalty of its core user base, during the early 2000s Apple's global market share remained anemic, trailing far behind industry leaders Dell, Hewlett Packard, and IBM/Lenovo. Weak demand, combined

with low market share, translated into another loss for Apple in 2001, leading some to question the permanence of Job's turnaround. However, while Apple's share in its core U.S. market fell to under 3% in 2004, it started to pick up again in 2005, rising to 8.5% by 2008 and 17% by 2017. Apple also garnered around 9 to 10% of the global market for PCs. Driving growth was the surging popularity of Apple's iPod music player and later, the iPhone and the iPad. These products raised Apple's profile among younger consumers and had a spillover effect on Mac sales.²¹

C9-3b Intel Inside, Windows on the Desktop

Since its inception, Apple had not used Intel microprocessors, which had become the industry standard for microprocessors following the introduction of the IBM PC in 1981. In June 2005, Apple announced that it would do so. Driving the transition was growing frustration with the performance of the PowerPC chip line made by IBM that Apple had been using for over a decade. The PowerPC had failed to keep up with the Intel chips, which were both faster and had lower power consumption—something very important in the portable computer market, where Apple had a respectable market share.

The transition to an Intel architecture created significant risks for Apple. Old applications and OS X had to be rewritten to run on Intel processors. By Spring 2006, Apple had produced Intel-compatible versions of OS X and its own applications, but many other applications had not been rewritten for Intel chips. To ease the transition, Apple provided a free software program, Rosetta, that enabled users to run older applications on Intel-based Macs. Moreover, Apple went a step further by issuing a utility program, Boot Camp, which enabled Mac owners to run Windows XP on their machines.

Reviews of Apple's Intel based machines were favorable, with many reviewers noting the speed improvement over the older PowerPC Macs.²² In late 2006, Apple reported that its transition to Intel-based architecture was complete, some six months ahead of schedule. The move may have helped Apple to close the price differential that had long existed between Windows-based PCs and Apple's offerings. According to one analysis, by September 2006, Apple products

were selling at a *discount* to comparable product offerings from Dell and Hewlett Packard.²³

C9-3c Moving Into Retail

In 2001, Apple made another important strategic shift. The company opened its first retail store. In an industry that had long relied upon third-party retailers, or direct sales, as in the case of Dell, this shift seemed risky. One concern was that Apple might encounter a backlash from Apple's long-standing retail partners. Another was that Apple would never be able to generate the sales volume required to justify expensive retail space; the product line seemed too thin. However, Apple felt that it was hurt by a lack of retail presence. Many computer retailers didn't carry Apple machines, and some of those that did often buried Mac displays deep in the store.

From the start, Apple's stores exhibited the same stylish design that characterized its products, with clean lines, attractive displays, and a postindustrial feel. Steve Jobs was intimately involved in the design process. He noted that "We spent a lot of time designing the store, and it deserves to be built perfectly."²⁴

Customers and analysts were impressed by the product fluency that the employees in Apple stores exhibited. They also liked the highlight of many stores, a "genius bar" where technical experts helped customers fix problems with their Apple products. One hallmark of Apple stores is the personal attention paid to customers by smiling sales staff, an approach reminiscent of upscale retailers like Nordstrom. The wide-open interior space, however, did nothing to allay the fears of critics that Apple's product portfolio was too narrow to generate the traffic required to support premium space.

The critics couldn't have been more wrong. Spurred on by booming sales of the iPod, and then the iPhone and iPad, Apple's stores have done exceptionally well. By late 2012, Apple had some 500 stores in upscale locations. Sales per square foot are extraordinary, averaging \$5,546 per store in 2017, the highest of any retailer in the world.²⁵

C9-3d iPod and iTunes

In the late 1990s and early 2000s, the music industry was grappling with the implications of two new technologies; the development of inexpensive, portable

MP3 players that could store and play digital music, and the rise of peer-to-peer computer networks such as Napster, which enabled individuals to efficiently swap digital files over the Internet. By the early 2000s, millions of individuals were downloading music files over the Internet without the permission of copyright holders. For the music industry, this development was devastating. Global sales of music peaked in 1999 at \$38.5 billion, falling to \$32 billion in 2003. Despite the fall in sales, the International Federation of the Phonographic Industry (IFPI) claimed that demand for music was higher than ever, but that the decline in sales reflected the fact that "the commercial value of music is being widely devalued by mass copying and piracy."²⁶

The music industry had tried to counter piracy over the Internet by taking legal action to shut down the peer-to-peer networks such as Napster, and filing lawsuits against individuals who made large numbers of music files available over the Internet. Its success had been limited, in part because peer-to-peer networks offered tremendous utility to consumers. They were fast, immediate, and enabled consumers to unbundle albums, downloading only the tracks they wanted while ignoring others. And of course they were free. The music industry was desperate for a legal alternative to illegal downloading.

Then along came the iPod and iTunes. These products were born out of an oversight—in the late 1990s, when consumers were starting to burn their favorite CDs, Macs did not have a CD burner or software to manage digital music collections. Realizing the mistake, CEO Steven Jobs ordered Apple's software developers to create iTunes. The first iTunes program led to the concept of the iPod. If people were going to maintain the bulk of their music collection on a computer, they needed a portable MP3 player to take music with them. While there were such devices on the market already, they could only hold a few dozen songs each.

To run the iPod, Apple licensed software from PortalPlayer. Apple also learned that Toshiba was building a tiny, 1.8-inch hard drive that could hold over 1,000 songs. Apple cut a deal with Toshiba, giving it exclusive rights to the drive for 18 months. Meanwhile, Apple focused on designing the user interface, the exterior styling, and the synchronization software to make it work with the Mac. As with so many product offerings unveiled since Jobs returned,

the design team led by Jonathan Ive played a pivotal role. The team figured out how to put a layer of clear plastic over the white and black core of an iPod, giving it depth of texture. The finish was superior to other MP3 players, with no visible screws or obvious joins between parts. The serial number of the iPod was not on a sticker, as with most products; it was elegantly etched onto the back of the device. This attention to detail and design elegance, although not without cost implications, was to turn the iPod into a fashion accessory.²⁷

The iPod was unveiled in October 2001 to mixed reviews. The \$399 price was significantly above that of competing devices, and since the iPod only worked with Apple computers, it seemed destined to be a niche product. However, initial sales were strong. It turned out that consumers were willing to pay a premium price for the iPod's huge storage capacity. Moreover, Jobs made the call to develop a version of the iPod that would be compatible with Windows. After it was introduced in mid 2002, sales took off.

By this time, Jobs was dealing with a bigger strategic issue: how to persuade music companies to make their music available for legal downloads. Jobs met with executives from the major labels, persuading them that it was in their best interest to support a legal music download business as an alternative to widespread illegal downloading. People would pay to download music over the Internet, he argued. Although all of the labels were setting up their own online businesses, Jobs felt that since they were limited to selling music owned by the parent companies, demand would be limited, too. A reputable, independent online music retailer What was needed, and Apple fit the bill. If it was going to work, however, every label needed to get on board. Under Jobs' scheme, iTunes files would be downloaded for \$0.99 each. The only portable digital player that the files could only be stored and played on was an iPod. Job's argument was that this closed world made it easier to protect copyrighted material from unauthorized distribution.

Jobs also met with 20 of the world's top recording artists, including U2's Bono, Sheryl Crow, and Mick Jagger. His pitch to them—digital distribution is going to happen, and the best way to protect your interests is to support a legal online music distribution business. Wooed by Jobs, these powerful stakeholders encouraged the record companies to take Apple's proposal seriously.²⁸

By early 2003, Jobs had all of the major labels onboard. Apple launched the online iTunes store in April 2003. Within days it was clear that Apple had a major hit on its hands. A million songs were sold in the first week. By the end of 2004, customers were downloading over 4 million songs per week, which represented a run rate of more than 200 million a year. The reach of iTunes has expanded enormously since then. By 2013, the iTunes store had a song catalog of 20 million and Apple was seeing 15,000 downloads a minute. In February 2013, Apple announced that 25 billion songs had been downloaded from iTunes.²⁹ By 2017, the iTunes stores had expanded its offerings to include 2.2 million software applications for the iPhone, iPad and Mac, 25,000 TV shows, and 65,000 films. Early on Steve Jobs stated that Apple was not making much money from iTunes downloads, probably only \$0.10 a song, but it was making good margins of sales of the iPod—and sales of the iPod ballooned after the launch of the iTunes online store.

Success such as this attracts competitors. Real- Networks, Wal-Mart, Yahoo, Napster, Microsoft, Google and Amazon all set up legal downloading services to compete with iTunes. However, iTunes continued to outsell its rivals by a wide margin. In mid 2012, downloads from iTunes accounted for 64% of the entire U.S. digital music market and 29% of all music sold in the United States (including both digital and physical formats).³⁰ By late decade competition had grown to include music streaming services. Here too Apple led with almost 50 million paying subscribers in the United States as of March 2018, although it faced close competition from Spotify (48 million subscribers), Pandora (37 million subscribers), and Sound Cloud (34 million subscribers).³¹

C9-4 THE IPHONE AND APP STORE

In June 2007, Apple introduced the iPhone. The iPhone was a smart phone that was also able to browse the web, take pictures and function as an iPod digital music player. Designed by the team led by Jonny Ive, the iPhone was differentiated from established smart phone offerings by a revolutionary touch screen that replaced the traditional mechanical keypad and

allowed users to quickly and easily switch between functions. As was typical for Apple products, it was elegantly designed and made extensive use of expensive materials including a body of brushed aluminum and a screen made of tough “gorilla glass” from Corning. Up to this point, most phones had used plastic bodies, and all had plastic screens. Steve Jobs reportedly hated the ascetic of plastic and complained that plastic screens were too easily scratched. He insisted on a glass screen, which had previously been rejected because it broke or cracked too easily. Designers at Apple had heard about a very strong form of glass Corning had developed, but which was not in manufacture. Jobs reportedly flew out to Corning, visited with the CEO, and personally persuaded him to put the material into mass production.³²

The iPhone used a version of Apple’s OS X operating system and the company’s Safari web browser. Apple struck a deal with AT&T, under which it was to be the exclusive provider of wireless service for the iPhone. Under the deal, AT&T would share a percentage of its service fees from iPhone users with Apple (the percentage was rumored to be 30%, but neither company would confirm this).

Priced between \$599 and \$499 depending on the model, the iPhone was positioned at the high end of the smart phone market. Some were skeptical that the device would be able to gain share from established smart phones such as Research in Motion with its Blackberry, and offerings from Palm, Motorola, and Nokia, all of which had gained a following among business users.

Steve Jobs announced that the goal was to try and grab 1% of the total global market for wireless phones in the first full year that the iPhone was on the market. With a total market in excess of 1 billion units, most of which were not smart phones, this suggested a goal of selling 10 million iPhones in fiscal 2008 (which ended September 2008).

There was some disappointment that the iPhone would use AT&T’s slower data network, rather than the faster 3G network that was more suited to web browsing. There was also disappointment that the iPhone did not contain a GPS location finding function.

Despite the high price and perceived limitations, early demand for the iPhone was strong with long lines forming outside Apple stores on the day the device was released. Although some consumers experienced activation problems, most were happy

with their purchase. The device got rave reviews for its design elegance, ease of use, and compelling touch screen interface. Apple sold over 250,000 iPhones in the first two days the device was on the market and it soon became clear that the company had another hit on its hands.

In June 2008, Apple introduced a second version of its iPhone, the iPhone 3G. Designed to run on a faster 3G networks, the new phone also incorporated GPS functionality. AT&T was again the exclusive service provider in the United States. However, Apple shifted the business model. Instead of giving a share of service fees to Apple, AT&T agreed to pay a subsidy to Apple for each iPhone sold. The subsidy allowed Apple to drop the price for the iPhone to as low as \$199 for an entry level model. Yet again long lines formed outside Apple stores and in the first three days the iPhone 3G was on the market over 1 million units were sold. By the end of fiscal 2008, Apple had sold 11.63 million iPhones (see Exhibit 2).

One feature of the iPhone 3G that started to garner a lot of attention was the rapid growth in third party applications. In July 2008, Apple opened an

Exhibit 2 Worldwide iPhone Unit Sales

Year	Worldwide iPhone Unit Sales (millions)
2007	1.46
2008	11.63
2009	20.73
2010	39.93
2011	72.3
2012	125.04
2013	150.26
2014	169.22
2015	231.22
2016	211.88
2017	216.76

Source: Apple annual 10K Reports

online store for applications that were written to run on the iPhone. Known as the App Store, consumers could download applications through their iTunes account. Some of these apps are free, while others are sold, typically for a few dollars. In the first month the phone was on the market, more than 60 million applications were downloaded. Apple keeps 30% of the proceeds from application sales, letting program creators retain the other 70%. Among the top sellers were game applications.³³

By the end of 2012, Apple had over 700,00 applications available for download on the App Store. Apple generated \$4.9 billion in revenue from App Store downloads in 2012 and in total some 40 billion applications had been downloaded by early 2013. According to Apple, this has resulted in net payments of around \$7 billion to third party developers since the App Store went live in 2008. Of the ten top paid apps of all time, eight were games. The top ten free apps include Facebook, Pandora Radio, Skype, and Google Search.³⁴ As of 2017, the App Store was generating over \$11 billion in revenue for Apple.³⁵

The iPhone 3G was followed by successive new models, the most recent being the iPhone 8 and X, each of which included more powerful features and functionality. In 2011 Apple ended its exclusive relationship with AT&T when Verizon, the largest U.S. wireless service provider, started to offer the iPhone. Expanded service coverage in the United States, plus surging overseas sales (particularly in China), helped propel sales of the iPhone, which peaked at 231 million units in 2015. By 2017, Apple was generating around 62% of its revenue from iPhone sales (see Exhibit 3).

C9-5 COMPETITION IN THE SMART PHONE MARKET

When the iPhone was introduced in 2007, it redefined what a smart phone had to look like and do. Before the iPhone, smart phones had physical keyboards and small screens. The dominant high end smart phones players, such as Blackberry, sold their phones to business users. From the outset, Apple focused on the consumer and gave them a device that was a phone, computing tool, and fashion accessory rolled into one.

In 2007, 122 million smartphones were sold worldwide. The largest vendor at the time was Nokia with 63.5% of the market. The Nokia phones used the Symbian operating system. While Symbian had many of the features also found on the iPhone, including web browsing, a music player, and a camera, it lacked the design elegance of the iPhone, the connection with iTunes, and a rapidly expanding network of third-party application developers. The other major players in 2007 were Blackberry (with 9.6% of the market), and Microsoft Windows Mobile (which was used on phones from various manufactures and had 12% of the market).

By late 2008, phones powered by Google's Android operating systems started to reach the market. Like Apple's iOS smart phone operating system, Android was designed for touchscreen mobile devices. However, whereas Apple designed and sold a physical phone that ran on iOS, Google adopted a very different approach—it licensed Android for free to smart

Exhibit 3 Apple Net Sales by Product, 2017

	Revenues (\$ billions)	% of Revenues	Unit Sales (millions)
iPhone	141.4	61.7%	216.8
iPad	19.2	8.4%	43.8
Mac	25.9	11.3%	19.3
Services	30.0	13.1%	
Other Products	12.9	5.6%	

Source: Apple 2017 10K

phone manufacturers such as Samsung. Android is an *open source* operating system, which allows the code to be freely modified and distributed by device manufacturers and wireless carriers. This led to rapid adoption of Android by handset manufacturers who were caught flat-footed by the sudden success of the iPhone and needed a competitive offering of their own.

To further drive adoption of Android, Google established its own applications store in 2008. Known as Google Play, by 2012 the store had some 700,000 apps available for download to Android devices, about the same number as at the Apple app store. However, reports suggest that Google earned only about one quarter of Apple's revenues from app downloads in 2012, or some \$1.25 billion, indicating that Apple's customers were more valuable to third party application developers.

The Android operating system started to diffuse very rapidly. In 2010, Android overtook Apple iOS to become the most widely used smartphone platform in the world. In the fourth quarter of 2012, 69.2% of the 216 million smart phones sold worldwide ran on Android. Apple had a 22.1% share, followed by Blackberry with 3.5% and Microsoft with 2.4%. However, Apple continued to capture the bulk of the profits in the industry. In the last quarter of 2012 Apple earned 72% of all profits from smart phone sales worldwide. Samsung, which used Android on its phones, picked up the rest of the profits. No other device manufacturer made money on handset sales.³⁶

Driven by the widespread appeal of Android and the iPhone, smartphone sales grew rapidly from 122 million in 2007 to 712 million in 2012. Faced with devastating market share losses, in 2011 Nokia decided to drop the Symbian operating system in favor of a new smart phone operating system from Microsoft. For its part, Microsoft redesigned its smart phone operating system from the ground up. In 2012, it introduced its Windows 8 operating system. Sporting a radically designed interface based on "tiles", Windows 8 utilizes a touchscreen capability and can be used on any digital device from smart phone to tablet and personal computer. Microsoft has also established an App Store. By late 2012, Microsoft had 125,000 apps available at its store, less than 20% of those available from Apple and Google's app stores.

Microsoft Windows 8 phones began appearing at the end of 2012, but market share gains were minimal despite positive reviews. After several years of

bumping along with market share figures in the low single digits Microsoft conceded defeat and exited the smart phone business in 2017. At that point Microsoft held onto 0.1% of the global market.³⁷

By 2018, the global smart phone market used just two operating systems—Android and Apple's iOS. Apple held onto a 15.6% share, with Android phones capturing the rest. The largest Android phone maker was Samsung, which held onto 23.4% of the market, followed by Apple and then Huawei with 11.8% of the market.³⁸

C9-6 THE iPad

In 2010 Apple introduced its iPad, a revolutionary tablet computer with a touch screen keyboard, and Wi-Fi and 3G wireless service support. Named after a device used in the Star Trek TV series, the iPad was powered by the same iOS operating system found on the iPhone, had similar functionality, and could run the same applications. The iPad had the design elegance that was now the hallmark of all Apple's products and utilized the same expensive materials as the iPhone, including an aluminum case and Gorilla glass. The iPad was powerful enough to download and watch full-length movies on at high resolution, and light enough to slip into a bag.

In many ways, the iPad finally fulfilled Jobs' vision for what a computer should be. According to a speech given by Apple co-founder Steve Wozniak in 2011, the iPad was in Job's mind from the beginning. Back in 1983, Jobs stated:

What we want to do is have an incredibly great computer in a book that you can carry around with you and learn how to use in 20 minutes . . . we really want to do it with a radio link in it so you don't have to hook up to anything and you're in communication with all of these larger databases and other computers.³⁹

In 1983, this was not technically possible, but by the 2000s technology had advanced to the point where it was feasible. Some early table computers, including an offering from Microsoft in 2002, used a stylus as an input device. But Job's dismissed any tablet that used a stylus as "a failure." From the start, he wanted a tablet to be created from scratch using a glass touch

screen. Work on that idea reportedly happened before the idea of an Apple smartphone. In his words:

I had this idea about having a glass display, a multitouch display you could type on with your fingers. I asked our people about it. And six months later, they came back with this amazing display. And I gave it to one of our really brilliant UI guys. He got scrolling working and some other things, and I thought, ‘my God, we can build a phone with this!’ So we put the tablet aside, and we went to work on the iPhone.⁴⁰

Introduced in April 2010, the iPad was an immediate success. 300,000 iPads were sold on the first day of availability. Sales passed a million units in less than a month. Between April 2010 and December 2012 Apple sold a total of 98 million iPads. By early 2013, Apple was selling a 4th generation iPad that included a high-resolution retina display.

As with the iPhone, Apple’s success led to rapid imitation. Most rivals introduced tablets using a variant of Google’s Android operating system. The most successful of these was the Galaxy tablet introduced by Samsung five months after the launch of the iPad. In the fourth quarter of 2012, Samsung captured 15% of the global market, while Apple’s share dropped to 44%, down from 52% a year earlier. Another notable competitor Amazon.com, which captured 12% of shipments with its Kindle Fire tablet (the Fire also uses a variant of Android). By the fourth quarter of 2017, Apple’s share of the global tablet market had declined to 26.6%. Amazon held 15.6% of the market with its Fire tablet, and Samsung had 14%.⁴¹

C9-7 iCloud

In October 2011 Apple launched its iCloud cloud storage, computing, and synchronization service. The service allows customers to store data such as music, movies, books, documents and applications on remote servers. iCloud automatically synchronizes such data across all of a subscriber’s Apple devices. While iCloud was not a totally new offering (Apple has had some form of cloud-based service since 2000) it was the most comprehensive offering yet. iCloud had more than 20 million users within one week of launch. By the end of 2012, there were 250 million subscribers on the service, and by 2016 this number had swelled

to almost 800 million. Although basic iCloud services are free, Apple is charging an annual subscription for music storage and synchronization services.

C9-8 STRATEGIC ISSUES

Apple now found itself in an interesting position. In many ways the company was at the top of its game. For over a decade it had set the agenda in the device sector with a stream of market changing innovations including the iPod, iPhone, and iPad. It had established a thriving ecosystem that encapsulated all of its devices, cloud services, iTunes, and the growing number of applications available through the App Store. After a decade of spectacular revenue and earnings growth, Apple was the most valuable company in the world measured by market capitalization.

On the other hand, the company had lost its visionary, its driving force, and one of the world’s great entrepreneurial geniuses. Dead at 56, Steve Jobs had left a creative vacuum that would be hard to fill. Could the company continue to innovate in the post Jobs world? The new CEO, Tim Cook, had been COO under Jobs and was widely admired as a brilliant operations manager, but could he keep Apple’s creative juices flowing? Johnny Ive still ran Apple’s design operation, and his group still took the lead on product development efforts, but without Job to inspire and push them, and to give them a vision, could Ive’s team continue to maintain their high standards?

Moreover, rivals were not sitting back. Google had established an ecosystem similar to Apple’s. Its Android operating system was found on many of the world’s most successful smart phones and tablets. Its Google Drive cloud service did all that iCloud did, and arguably more. Google’s own app store offered just as many applications as Apple’s. And with the advent of the Chrome book in 2012, a cheap laptop running on Google’s Chrome operating system, Google was pushing into the desktop and laptop business as well. Samsung had emerged as the most successful of the device makers who used Android, and its well-designed phones and tablets were a real threat to Apple. Tim Cook had to figure out how to keep these rivals at bay? Moreover, he had to match investors’ expectations for continued growth at Apple—not an easy thing when you are already the world’s largest digital device company.

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CASE

10

WAL-MART STORES

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CI0-1 INTRODUCTION

In July 1962, Sam Walton opened his first Wal-Mart discount store in Rogers, a small Arkansas town with a population of 6,000. That same year, both Kmart and Target opened their first stores, although unlike Sam Walton, they focused on large metropolitan areas. By 2017, Wal-Mart had eclipsed its rivals to become the largest retailer in the world, with annual revenues of close to \$490 billion. The company had 2.3 million employees and more than 11,700 stores in 28 countries including 5,350 in the United States that were served by more than 150 distribution centers. In the United States, Wal-Mart was bigger than the next four retailers combined. The company accounted for over 7% of all U.S. retail sales. More than 96% of the U.S. population lived within 20 miles of a Wal-Mart store.

However, all was not well in Bentonville, Wal-Mart's Arkansas headquarters. While the company continued to perform well, the strong growth of an earlier era was no longer evident. Indeed, in 2015, annual revenues fell for the first time since the company went public in 1970. Not only was the core U.S. market saturated, Wal-Mart was also facing increasing competition from online retailers, particularly Amazon.com. As of 2017, Amazon was generating \$120 billion in online sales, far more than Wal-Mart's \$16 billion. Moreover, Amazon's 2017 acquisition of the Whole Foods chain signaled that it was going after the grocery business, a category that Wal-Mart

had dominated since first expanding into the area back in 1988. In the wake of its August 2017 take-over of Whole Foods, Amazon cut grocery prices by as much as 40% on some products. Store traffic surged by 25%.

CI0-2 EARLY HISTORY

The Wal-Mart store in Rogers was not Walton's first retailing venture. That was a Ben Franklin variety store in Newport, Arkansas that Walton, an Arkansas native, took over in 1945 when he was just 27. Variety stores offered a selection of inexpensive items for household and personal use—a concept that had been pioneered by F. W. Woolworth in the late nineteenth century. By 1962, Walton was a well-established Ben Franklin franchisee running 15 variety stores in small towns across Arkansas and Kansas. It was a business where Walton had honed his skills, competing against other small-town variety stores. From the outset, Walton focused relentlessly on reducing prices, cutting costs, and making a living on slim margins. His overarching philosophy was to sell items that people need every day just a little cheaper than everyone else, and to sell it at that low price all the time. He believed that if you offered *everyday low prices*, customers would flock to you. His experience in the variety store business had taught him the value of this approach. To make this strategy work, you had to control costs better than the next guy. By all accounts,

Walton made a religion out of frugality, tightly controlling expenses. Moreover, while still a Ben Franklin franchisee, he had pushed the boundaries of what was possible in the retailing business. Walton was one of the first retailers in the country, and the first in the South to adopt a self-service format.

Walton was fascinated by what other retailers were doing. He was known for visiting them and checking out their stores. He would walk into their headquarters, often unannounced, and ask to meet with senior managers. He would pepper them with questions, writing everything he saw and heard down on a yellow legal pad. When the discounting concept started to emerge in the mid-1950s in the Northeast he made a point of visiting those stores, befriending their management, and gathering as much information as he could. These visits convinced Walton that large-footprint, general merchandising discount stores would be the wave of the future. He believed that the wider range of products and better buying power of discount stores would ultimately put traditional small-town variety stores like his out of businesses. This led to the establishment of the first Wal-Mart store.

Initially, Walton had wanted Ben Franklin to back his idea of building large discount stores in small towns. As he put it, “I was used to franchising, and I liked the mindset, I generally liked my experience with Ben Franklin, and I didn’t want to get involved in building a company with all that support apparatus.”¹

Ben Franklin turned him down. They didn’t see the value in small towns. Walton’s experience as a Ben Franklin franchisee, however, had taught him that there was money to be made in small towns.

The Rodgers store took two years to hit its stride, but by 1964 it was generating \$1 million in annual revenues, three to five times what traditional variety stores made. This gave Walton the confidence to open two additional Wal-Marts in nearby towns, in Harrison and in Springdale. The Harrison Wal-Mart was a basic affair. It was just 12,000 square feet with an 8-foot ceiling, a concrete floor, and bare-boned, wooden plank fixtures. Walton called it ugly. David Glass, who would become CEO after Walton, said that it was the worst-looking retail store he had ever seen. But as Walton noted, “We were trying to find out if customers in a town of 6,000 people would come to our kind of barn and buy the same merchandise strictly because of price.”²

By keeping costs as low as possible, Walton found he could keep prices 20% below those of nearby variety and specialty stores. He quickly discovered that his promise of everyday low prices attracted many customers.

In Springdale, a town of close to 15,000, Walton was trying to learn something else—would a 35,000-square-foot store work in a larger town? Here too, the answer was yes. The key was that these stores would draw in people from the surrounding small communities, who would drive an hour to the Wal-Mart to gain price discounts. Although similar discounts might be available at large suburban stores, those might be three hours’ drive or more away. These early Wal-Mart stores had longer opening hours that rival merchants, plenty of parking space, and they utilized the self-service concept.

By the time Walton had three Wal-Mart’s up and running, he realized that the discounting formula was a success. The strategy that was emerging from these early experiences was to put a good-sized discount store into little, one-horse towns that everyone else was ignoring. While rivals like K-Mart wouldn’t go into a town smaller than 50,000, Walton believed that towns as small as 5,000 could support one of his stores when you considered the population of the surrounding area. As noted by Ferold Arend, Wal-Mart’s first vice president:

The truth is, we were working with a great idea. It was really easy to develop discounting in those small communities before things got competitive. There wasn’t a lot of competition for us in the early days because nobody was discounting in the small communities.³

One of the problems of focusing on small towns, however, was that getting good deals from distributors and wholesalers was difficult. They would charge Wal-Mart for the extra cost of delivering to a small-town store out in the sticks, something that irritated Walton, whose obsession with controlling expenses knew no bounds. To make matters worse, large, consumer-product companies such as Procter & Gamble, Gillett, and Kodak would dictate how much they would sell to Wal-Mart, and at what price. In the early days, ordering merchandise was also decentralized to individual store managers, so there was no opportunity to realize economies of scale from bulk purchasing.

Walton realized that this situation was untenable. The solution was to open the first Wal-Mart

distribution center, close to the company's headquarters in Bentonville, Arkansas. Buying was centralized in Bentonville to get discounts from bulk purchases. Suppliers would drop ship merchandise at the distribution centers. Then Wal-Mart would truck it out to the stores in the area to replenish inventory. A cross-docking system was developed in the distribution center to facilitate this process. It was at this point that Wal-Mart started to build its own trucking fleet to transport inventory.

For the distribution system to work efficiently, Wal-Mart needed information to know what merchandise to order and when to replenish each store. This requirement drove Wal-Mart to become an early adopter of computer-controlled inventory systems. Walton himself realized the need for better information systems early on, and enrolled in an IBM school for retailers in 1966. Nevertheless, he was reluctant to spend the money on information technology and only relented in the 1970s after pressure from some of his managers. In retrospect, Walton acknowledged that Wal-Mart was forced to be ahead of the times in distribution and information systems because the stores were situated in small towns.

During this period, Walton was also building a strong management team. In what would become a hallmark of Walton's approach, he would spot talented managers at other retailers and try to persuade them to work for him. Walton could be tenacious. He would keep pursuing talented managers until they agreed to join the company. For example, David Glass, who would eventually succeed Walton as CEO, was pursued by Walton for a decade before he agreed to join Wal-Mart in 1976. Early recruits included Ferold Arend, the company's first chief operating officer, Bob Thornton, who was bought on to open Wal-Mart's first distribution center, and Ron Mayer, who joined in 1968 as VP for finance and distribution. All three had experience at other retailers. Mayer pushed Walton to invest in computer systems to improve distribution, and hired the first data processing managers.

By the late 1960s, Walton had established the foundations for future growth. The Wal-Mart discounting concept had proved attractive; the strategy of focusing on small towns was already paying dividends; he had surrounded himself with a talented team of managers; and with the opening of its first distribution center; and the adoption of formal inventory control systems the company was well placed to replicate its

formula across America. At the same time the company was still small—Wal-Mart only had 18 stores in 1969 and sales of \$9 million, whereas K-Mart had 250 stores and sales of \$800 million (Kmart was owned by the well-established department store retailer Dayton Hudson). To grow, Walton needed capital.

Up to this point, Walton had financed Wal-Mart's growth from a mix of cash flow and debt. By 1969, the company was not generating enough cash to fund Walton's growth ambitions and pay down the company's debt. Walton believed that he needed to grow the company rapidly before rivals figured out his small-town strategy. Initially he tried to raise more debt, but was turned down by several institutions who didn't buy into his strategy, and was "fleeced" by those who were prepared to lend him more. Walton was getting tired of owing other people money. He decided to take the company public. On October 1, 1970, Wal-Mart had its initial public offering (IPO), selling 300,000 shares at \$16.50 a share. After the IPO, the Walton family still held onto 61% of the stock. The IPO raised close to \$5 million. This allowed Walton to pay down debt and fund the next stage of expansion.

CIO-3 BUILDING THE COLOSSUS

Wal-Mart's growth strategy was very deliberate. While other discounters were leapfrogging from large city to large city, for decades Wal-Mart focused on its small-town strategy. The company wanted stores to be within a day's drive of distribution centers (about 350 miles) so that they could be restocked regularly. Regular replenishment reduced the need to store inventory in a dedicated space at the back of the store, which meant that more square footage could be devoted to selling merchandise, increasing sales per square foot. While rivals typically devoted 25% of their square footage to storing inventory, Wal-Mart kept this figure down to 10%. As Wal-Mart expanded its own trucking fleet, it also started to pick up merchandise from suppliers in the area, rather than have them drop goods off at the distribution centers. Trucks would replenish a store, then pick up goods from a supplier on the way back to the distribution centers so they had loads on

the backhaul. When Wal-Mart took logistics costs off suppliers, it negotiated lower prices, and then passed on those cost savings on to its customers in the form of lower prices.

Initially, Walton wanted stores to be situated close enough to each other so that they were within reach of management at Bentonville. Walton, a licensed pilot, would frequently fly his small plane from Bentonville to surrounding stores, often dropping in unannounced. As the company grew, he appointed regional vice presidents to oversee stores clustered in certain territories. Wal-Mart started to invest in a fleet of small aircraft. The regional vice presidents were based in Bentonville. They would fly out on Monday morning to visit stores in their territory, returning Thursday. Walton insisted that they return with at least one good idea to pay for the trip. As always, expenses were tightly controlled. When traveling, managers were expected to stay in cheap hotels, share rooms, and eat at budget restaurants. On buying trips to suppliers, managers were instructed to keep expenses below 1% of total purchases.

As it expanded, Wal-Mart first saturated the area within a day's drive of Bentonville. Once an area was saturated Wal-Mart would build another distribution center in an adjacent area, go as far as possible from that center and put in a store, and then fill in the territory around the distribution center. As Walton described it:

We would fill in the map of that territory, state by state, country seat by county seat, until we had saturated that market area. We saturated north-west Arkansas. We saturated Oklahoma. We saturated Missouri ... and so on.⁴

Wal-Mart never planned to enter cities. Instead, the company would build stores in a ring around cities, some way out, and wait for the growth to come to the stores. The strategy seemed to work.

The saturation strategy had benefits beyond management control and distribution efficiencies. Walton never liked to spend much on advertising. The company found that when it went from small town to small town, filling in an area, word of mouth would get Wal-Mart's everyday low pricing message out to customers, allowing it to reduce advertising expenses. Clustering stores also made it difficult for rivals to get traction in an area. For example, in the Springfield, Missouri area, Wal-Mart had 40 stores within 100 miles. When

K-Mart finally entered the area with three stores, they had a hard time getting business.

Walton himself would spend a good deal of time flying around an area scouting out possible store locations. From the air, he could get a good idea of traffic flows, see which towns were growing, and evaluate the location of competitors, if there were any. He had a major hand in picking the first 150 store locations before being forced by the growing complexity of managing Wal-Mart to delegate that task.

C10-3a Developing Information Systems and Logistics

Over time, one key to Wal-Mart's expansion was the introduction of state-of-the-art information systems and logistics. Walton had been interested in the potential of computers as far back as the mid-1960s, but the real push came with the hiring of David Glass in 1976 as executive VP of finance. Glass convinced Walton to put mini computers in every store to track sales. These were linked to the distribution centers and to the headquarters at Bentonville. Glass was instrumental in persuading Walton to insist that suppliers place barcodes on every item so that they could be scanned at sale. Indeed, Wal-Mart was the first retailer to mandate that suppliers' barcode every item.

The company originally used phone lines to transmit data on sales, but as the volume of data grew the phone lines became congested. In the days before the development of the Internet and high-capacity, fiber-optic communications systems, this was a major bottleneck. To deal with this problem, Wal-Mart committed \$24 million to build a communication system under which data would be uploaded via microwave dishes at every store to a satellite, which would then transmit the data to Bentonville and the distribution centers. Launched in 1983, the system was the first of its kind. The satellite system allowed Wal-Mart to dive deep into its operations, tracking the history and real-time sales for every single item at every single store.

Glass also pushed for the development of highly automated distribution centers linked by computers and the satellite system to the stores and to suppliers. Wal-Mart's first distribution center outside of Bentonville was built at Glass' insistence. Goods are bought into distribution centers, scanned, placed on laser-guided conveyor belts, and then directed to the

appropriate truck to deliver them to stores. By the early 1990s, Wal-Mart had 20 distribution centers around the nation. Wal-Mart was now directly replenishing about 85% of its in-store inventory from its own distribution centers, compared to only 50 to 65% for its rivals (today, there are over 150 distribution centers in the United States). The internalization of logistics allowed Wal-Mart to reduce to two days the gap between when stores placed a request for replenishment and when they received that inventory. This compared to a five-day gap for many competitors. By the early 1990s, Wal-Mart estimated that its logistics costs were running at about 3% of sales, compared to 4.5-5% of sales at rivals.

As Wal-Mart added distribution centers, its trucking operation grew. Today, it operates the largest private trucking company in the United States. This consists of over 7,200 drivers, 6,000 trucks, 53,500 trailers, and 5,600 refrigerated trailers. As a vital link in the company's logistics network, the trucking operations of Wal-Mart have become progressively more efficient over time. For example, in 2005, Wal-Mart set itself the goal of doubling the efficiency of its fleet by 2015. By 2014, the company reported that its trucks had delivered 830 million more cases while driving 300 million fewer miles than in 2005, an improvement of 84.2% over 2005. This had been achieved through more efficient loading and unloading of merchandise, better routing, GPS tracking, new tractor technologies, and so on.

One important innovation for which Glass was responsible was Wal-Mart's Retail Link program. First introduced in 1985, this proprietary, trend-forecasting software delivers important sales information to suppliers at no direct cost. Retail Link benefitted suppliers, enabling them to adjust their own production schedules and product plans to meet consumer demand as reviled by Wal-Mart's sales data. At the same time, this software gave Wal-Mart deep insight into a supplier's sales and profit margins, information that Wal-Mart uses to bargain for lower prices from suppliers. As is the practice at Wal-Mart with all cost reductions, those cost savings were then passed onto consumers in the form of lower selling prices.

One consequence of Wal-Mart's investments in information systems and logistics has been better stock replenishment and faster inventory turnover.

By 2016, Wal-Mart was turning over its inventory 8.39 times per year, compared with 5.88 times per year at Target and 7.70 times at online rival Amazon.⁵ Among other things, faster inventory turns can boost sales per square foot. On this measure, Wal-Mart has long bested rivals such as Target. According to eMarketer, in 2016 Wal-Mart registered sales per square foot of \$425, compared with \$276 at Target.

Despite Wal-Mart's prowess in information systems, not all its initiatives have succeeded. In 2003, for example, it announced that its top 100 suppliers would have to tag pallets and cases of goods with radio frequency identification (RFID) tags. The goal was to improve the efficiency of Wal-Mart's logistics operation by passively tracking goods as they passed through the supply chain. In practice, technological problems resulted in spotty implementation and the initiative stumbled. But Wal-Mart learnt something from this—the company realized that RFID might have uses inside a store to maintain the right inventory mix. For instance, a shelf may look full of shirts, but what if they are only in sizes small and extra large? RFID can help scan a shelf without the cost of tedious hand sorting of merchandise or bar code scanning to identify stocking shortages.

CIO-3b Supplier Relations

As Wal-Mart grew, its relationship with suppliers shifted. In the early days, powerful suppliers of branded products such as Procter & Gamble had dictated terms to Wal-Mart. However, Wal-Mart consolidated its buying in Bentonville, and as the company grew its buying power began to increase. Today Wal-Mart is by far the largest distributor for many consumer products companies. For example, in 2015 Clorox earned 26% of its revenue from Wal-Mart sales, Kellogg 21%, Campbell Soup 20%, and Procter & Gamble 14%.⁶

Wal-Mart refers to its 60,000 plus suppliers as “partners,” but there is little doubt who is the senior partner in this relationship. Wal-Mart does work closely with its suppliers, providing them with detailed information through its Retail Link program that helps them to identify inefficiencies and improve their product planning and product offerings. Wal-Mart also provides suppliers with the opportunity to attain tremendous sales volume, which can enable

them to achieve economies of scale. Even if suppliers make very slim margins selling to Wal-Mart, the information and economies of scale they get may enable them to make more money elsewhere. To take advantage of this relationship, many of Wal-Mart's larger suppliers have established offices next to Wal-Mart's headquarters in Bentonville. One of the first to do so was Procter & Gamble, which open its Bentonville office in 1987 and now has a 250-person team dedicated to working with Wal-Mart.

In return for its provision of data and volume, Wal-Mart is relentless in demanding lower prices and better payment terms. Any cost savings achieved are then passed on to Wal-Mart's customers in the form of lower prices. As David Glass once said, "We want everybody to be selling the same stuff, and we want to compete on a price basis, and they will go broke 5% before we will."⁷

Wal-Mart's Bentonville buying center is legendary for its sparse fittings—conference rooms with no doors furnished with cheap tables and mismatched plastic chairs that Wal-Mart was not able to sell—so it used them to furnish their offices instead. Some supplier representatives have reported having to sit on boxes because there were no chairs available. Suppliers were also required to give Wal-Mart a toll-free number to call, or to take collect calls from Wal-Mart buyers. The idea was to convey an impression of austerity. Wal-Mart's buyers constantly push suppliers to lower their prices, often by 5% per year. After squeezing out all the efficiencies they can at home, many suppliers have only been able to achieve further cost reductions by moving production offshore to low cost locations such as Mexico or China, leading to claims that Wal-Mart has been a major reason for the hollowing out of U.S. manufacturing.

Wal-Mart has also used its power to extract better payment terms from its suppliers. Suppliers may be paid net 60 days after Wal-Mart takes ownership of a product, as opposed to the normal net 30 days. They may have to pay additional fees to cover the cost of their goods being transported through Wal-Mart's logistics system. Since the early 2000s, Wal-Mart has been pushing suppliers to agree to "pay on scan" contracts where Wal-Mart does not take ownership of a good until it is scanned for sale at the checkout, effectively enabling Wal-Mart to push off significant inventory costs onto suppliers.

Since the early 1990s, Wal-Mart has also developed its own store brand offerings. These include goods sold under the Sam's Choice and Great Value labels. Often priced 20–30% lower than national brands, the presence of private label offerings is another mechanism that can be used to pressure suppliers to reduce their prices. As a management consultant who worked with Wal-Mart suppliers noted:

Year after year, for any product that is the same as what you sold them last year, Wal-Mart is going to say, here's the price you gave me last year. Here's what I can get a competitor's product for; here's what I can get a private label version for. I want to see a better value that I can bring to my shopper this year. Or else I'm going to use that shelf space differently.⁸

C10-3c Managing the Business

Sam Walton believed in hard work, frugality, discipline, loyalty, and a restless effort at constant self-improvement. He described himself as a conservative, except when it came to business, where he was a champion of innovation and disruption. He believed in treating employees well, in giving them responsibility and a stake in the business through stock and profit sharing, but also in checking up on them. He was a numbers man, he wanted data on everything, and Wal-Mart's information systems gave him that. In turn, the data gave him and his managers the raw material required to control his ever-expanding empire, to manage its merchandise offering, inventory turns, stores and employees.

He looked for the same values in the people he hired. If he saw a successful manager at another retailer who shared his values, he would do his best to hire them. If they said no, he would persist until he got his way. He would interview other applicants for management positions multiple times before making a hiring decision, trying to get a sense for who this person was and what their values were.

To this day, the consequences are easy to see. Wal-Mart's headquarters' staff works relentlessly hard. Buyers and midlevel staffers get to work at 6:30 a.m., senior executives often arrive even earlier. Routine quitting time ranges from 5 p.m. to 7 p.m. depending on the job, the season, the workload. All white color workers work from 7 a.m. to 1 p.m. on Saturday, including attending the legendary Saturday morning

meeting. The meetings open with the Wal-Mart cheer, an idea that Walton got from a visit to a South Korean tennis ball factory in 1975. At the meetings, Walton and other managers would discuss the performance of the company, its stores, departments, and even individual items. There would also be entertainment—performances by well-known music stars and comedians, pep talks by NFL football players, competitions between top managers, light hearted hazing of managers who had lost a bet with Walton. Walton himself once danced the Hula in a grass skirt on Wall Street after losing a bet with David Glass about sales. After losing a bet with Walton, another manager rode a horse down the main street in Bentonville wearing a blond wig and pink tights.

The stores have their own version of the Saturday morning meeting. Associates meet before every shift to talk about the store's performance, describe their favorite in store items, and perform the Wal-Mart cheer.

Wal-Mart centralizes much of its operations in Bentonville, including buying, logistics and decisions about information systems. It even controls the temperature of its U.S. stores from Bentonville. However, it does give store managers discretion on merchandizing and some on pricing. Regarding merchandizing, Wal-Mart understands that different locations require a different merchandizing mix, which is why Walton always stressed that store managers should be good merchants with a close eye on what sells in their community. Wal-Mart's buyers are told to pay close attention to what the merchants in the store want. Through its information systems, Wal-Mart also supplies store managers with detailed information on what is selling in their store, along with their monthly profit and loss statements, allowing them to fine tune the merchandizing mix and compare their performance with other stores in Wal-Mart's system. On pricing, store managers have long had the authority to match prices being offered at competing stores in their neighborhood if those prices are lower than Wal-Mart's.

More generally, store managers are responsible for hiring and supervising employees, meeting financial goals, enforcing work place regulations, delegating work, tracking inventory, analyzing sales data, processing payroll and coordinating merchandising shipments. Store managers are supervised by Regional

Vice Presidents. Wal-Mart does not have regional headquarters, which saves money. Instead the Regional VPs are based in Bentonville, but typically travel 3–4 days a week, visiting stores in their territory. Store managers earn between \$50,000 and \$175,000 a year. In addition, they earn bonuses tied to store performance and participate in Wal-Mart's profit sharing plans.

Wal-Mart refers to its hourly paid employees as "associates." Sam Walton came up with the idea of calling employees "associates" after visiting a retail stores in the United Kingdom where employees were called associates. It got him thinking about the importance of building a partnership with employees. Walton freely admits that in the early days, he was so cheap that he didn't want to pay hourly employees much. Over time he came to the realization that if the company treated employees well, they would treat customers well, and happy customers would come back and buy more. Wal-Mart had a profit sharing plan in place for managers after it went public in 1970. The following year he expanded the plan to include any associate who had been with the company for at least a year and worked at least 1,000 hours. Using a formula based on profit growth, Wal-Mart contributed a percentage of every employee's eligible wage to a profit sharing plan. Much of the money in that plan was invested in Wal-Mart stock. When they leave the company, employees can take the accumulated amount either in Wal-Mart stock or cash. For many years, the annual contribution amounted to about 6% of an hourly employee's earnings. For those who got in early, the accumulated amount upon retirement could be hundreds of thousands of dollars in Wal-Mart stock. To boost this still further, Wal-Mart introduced an employee stock purchase plan, where employees can purchase Wal-Mart stock through a payroll deduction at a 15% discount to the market value. Wal-Mart changed the associate plan in 2010, replacing it with a 401 k plan under which Wal-Mart will match 100% of an employee's contribution up to 6% of their pay.

Walton also instituted an open book policy at Wal-Mart, sharing important information on a regular basis with associates including store purchases, profits, sales, and markdowns. In Walton's view, it was important for associates to get to know the business, so that they could become better employees.

The open book policy also fed into Wal-Mart's strategy of promoting from within. Around 75% of store managers at Wal-Mart today started as hourly paid associates. The company claims it now promotes around 160,000 associates each year. Associates can get promoted to supervisors, department managers, assistant managers, and finally store managers. Store managers move frequently, often every 18 to 24 months, a practice which Wal-Mart uses to deepen their experience. Talented store managers can continue to move up in the organization becoming, for example, regional vice presidents.

C10-3d Criticisms of Wal-Mart

While much has been written about Walton's ability to find, recruit and empower ordinary people to do extraordinary things, Wal-Mart has also been the target of sustained political and legal criticism over its treatment of employees, particularly since the turn on the century. One class action lawsuit on behalf of 1.5 million women who have worked at Wal-Mart alleged systematic sex discrimination in promotion and pay.⁹ Other lawsuits have alleged that store managers routinely force hourly employees to punch out at the time clock, then return to work, putting in hours of unpaid labor. Wal-Mart has also been cited for knowingly hiring illegal immigrant labor to clean its stores, and shockingly, locking them in the stores at night.¹⁰

Others have criticized Wal-Mart for paying its hourly employees so little that they must rely upon state assistance such as food stamps to make ends meet, leading to the allegation that Wal-Mart is indirectly subsidized by the state. Consistent with this, one academic study found that U.S. counties with more Wal-Mart stores in 1987, and counties with more additions of stores between 1987 and 1998, experienced greater increases (or smaller decreases) in family poverty rates during the 1990s-economic boom.¹¹

Another body of academic research suggests that the arrival of a Wal-Mart store frequently puts other local retailers out of business. A classic study by Kenneth Stone of Wal-Mart stores in Iowa found that while general merchandise sales grew 44% in the five years after Wal-Mart arrived, competing grocery stores lost 5% of their business,

specialty stores 14%, and clothing stores 18%.¹² Stone also found that between 1983 and 1993, small Iowa towns with populations of between 500 and 1000 lost 47% of retail sales as people simply drove to Wal-Mart to shop. Data like this has resulted in some small towns blocking Wal-Mart from locating in their area.

For its part, Wal-Mart has countered these criticisms by taking steps to improve its image. It has instituted a diversity program to try and equalize opportunity and pay across gender and ethnicity. In 2016, it increased its minimum wage for new hires to \$10 an hour. The company also points out that it does offer a health care plan for employees who work more than 30 hours a week. Regarding the negative impact on local communities, Wal-Mart cites academic research that shows that long run price declines of 7–13% occur when Wal-Mart enters an area, which increases the disposable income of residents. Research also shows that while competitors lose jobs, after accounting for both job losses at competing retailers, and job gains at Wal-Mart, the establishment of a Wal-Mart store in a county does lead to a small net gain in jobs.¹³

C10-4 SUPERCENTERS AND GROCERIES

By the early 1990s, Wal-Mart was starting to encounter limits to its growth. Its traditional market, small towns, was increasingly saturated. The company was relying for growth on suburban areas where competition was more intense. About this time, Wal-Mart decided to experiment with doubling the size of its stores to sell groceries alongside its general merchandise offerings in a format it called supercenters. At the time, the grocery business was dominated by long established supermarket chains including Albertsons, Safeway and Kroger.

In 1990, Wal-Mart had just nine supercenters. By 2000, it had 888, and by 2017, it had more than 3,500 supercenters in the United States alone. Along the way, Wal-Mart delivered a hammer blow to traditional grocery stores. By 2000, it was already the largest grocer in America. By 2016, Wal-Mart and its

Sam's Club subsidiary combined accounted for 26.2% of the food retail market in the United States; Kroger was second with at 10.2%, and Albertson's third with 5.4%.¹⁴ Wal-Mart now generates more than half of its annual revenues from grocery sales.

One reason for Wal-Mart's success in groceries is everyday low prices. Wal-Mart's goal is for grocery prices to be 15% lower than that of its competitors 80% of the time. For a family of four that spends \$500 a month of groceries, this can result in annual savings of \$900 a year. The consequence for established grocery chains has been devastating. During its first decade in the grocery business, Wal-Mart's dramatic rise in grocery sales pushed more than 30 supermarket chains into bankruptcy. Wal-Mart was cited as a catalyst in 24 of those cases. The price pressure continues today, with Wal-Mart driving down prices and pressuring margins at Kroger, Albertson's and Target. To match Wal-Mart, Kroger states that it spent more than \$3.7 billion to lower prices between 2006 and 2016. Despite Kroger's attempts to match Wal-Mart, in 2016 Kroger's food prices were still 4% above those of Wal-Mart according to price checks. On non-perishable and frozen items, Kroger was charging 5.6% more than Wal-Mart.¹⁵ Due to the ongoing price war for grocery sales, year to year food prices fell by 1.3% in 2016.¹⁶

Keeping grocery prices low requires Wal-Mart to do what it has always done, use its economies of scale in purchasing and its logistics knowhow to drive down the price it pays suppliers and maximize its supply chain efficiency. For example, Charles Fishman explained how Atlantic salmon that might have cost \$20 a pound in 1990 was selling for just \$4.84 a pound in 2006. The Atlantic salmon sold at Wal-Mart is sourced from farms in Chile. Wal-Mart's salmon use to come from Norway or Canada, but the constant quest for low prices drove Wal-Mart to look for lower cost supplies elsewhere. In turn, that helped to jump start the growth of fish farms in Chile, which is now the world's second largest salmon producer (the introduction of fish farms, and the "mechanization" of salmon production is one reason for the price drop). In Chile, fish is harvested early in the morning while it is still dark, taken to processing plants, processed, then put on a truck or plane to Santiago, and then on a plane

to Miami. Fish harvested in Chile can be on a dining room table in Iowa within 48 hours. Multiple the salmon story across Wal-Mart's product lines, and it becomes clear why grocery prices are so low at Wal-Mart.¹⁷

C10-5 SAM'S CLUB

Sam's Club is a deep discount warehouse type store selling a limited range of merchandise at wholesale prices to buyers who wish to make bulk purchases. To shop at Sam's Club, you must pay an annual membership fee (\$45 in 2016). Wholly owned by Wal-Mart, the first Sam's Club was established in 1983. Sam Walton got the idea from his friend and rival, Sol Price, who had pioneered the concept with his Price Club stores in California back in 1976. The original target market for Sam's Club was small business owners, but it has expanded to include general consumers who wished to make bulk purchases of household items. As of 2016 there were 650 Sam's Clubs in the United States and they generated \$57 billion in annual revenues.

Sam's Club faces very tough competition from Costco, the world's second largest retailer. Costco had 750 warehouse stores around the world, and generated \$129 million in annual revenues in 2017. Costco benefits from a focus on higher income households—Sam's Club estimates that medium household income of its customers is around \$80,000, compared to \$120,000 for Costco. Costco also has very loyal customers, with about 90% renewing their annual membership. In addition to competition from Costco, Sam's Club has reported some cannibalization of sales from Wal-Mart supercenters, and growing direct competition from Amazon.

To deal with competition from Costco, Sam's Club started to shift its strategy in 2016.¹⁸ First, the company aims to open 8 to 10 new clubs each year in more affluent areas. Second, it will shutter underperforming stores. Third, it aims to adjust its merchandising categories to appeal to more upscale customers. Finally, it will continue to expand its private label offerings. Whether this strategic shift will be enough to attract new customers remains to be seen.

C10-6 INTERNATIONAL EXPANSION

In 1991, Wal-Mart started to expand internationally with the opening of its first stores in Mexico. The Mexican operation was established as a joint venture with Cifera, the largest local retailer. Initially, Wal-Mart made several missteps. It had problems replicating its efficient distribution system in Mexico. Poor infrastructure, crowded roads, and a lack of leverage with local suppliers, many of which could not or would not deliver directly to Wal-Mart's stores or distribution centers, resulted in stocking problems and raised costs and prices. Initially, prices at Wal-Mart in Mexico were some 20% above prices for comparable products in the company's U.S. stores, which limited Wal-Mart's ability to gain market share. There were also problems with merchandise selection. Many of the stores in Mexico carried items that were popular in the United States. These included ice skates, riding lawn mowers, leaf blowers, and fishing tackle. Not surprisingly, these items did not sell well in Mexico, so managers would slash prices to move inventory, only to find that the company's automated information systems would immediately order more inventory to replenish the depleted stock.

By the mid-1990s, however, Wal-Mart had learned from its early mistakes and adapted its operations in Mexico to match the local environment. A partnership with a Mexican trucking company dramatically improved the distribution system, and more careful stocking practices meant that the Mexican stores sold merchandise that appealed more to local tastes and preferences. As Wal-Mart's presence grew, many of its suppliers built factories nearby its Mexican distribution centers so that they could better serve the company, which helped to further drive down inventory and logistics costs. In 1998, Wal-Mart acquired a controlling interest in Cifera. Today, Mexico is a leading light in Wal-Mart's international operations, where the company is more than twice the size of its nearest rival.

The Mexican experience proved to Wal-Mart that it could compete outside of the United States. It has subsequently expanded into 27 other countries. In Canada, Britain, Germany, and Japan, Wal-Mart entered

by acquiring existing retailers, and then transferring its information systems, logistics, and management expertise. In Puerto Rico, Brazil, Argentina, and China, Wal-Mart established its own stores (although it added to its Chinese operations with a major acquisition in 2007). Due to these moves, in 2017, the company had some 6,200 stores outside the United States, 800,000 foreign employees on the payroll, and generated international revenues of \$116 billion.

In addition to greater growth, expanding internationally has brought Wal-Mart two other major benefits. First, it has been able to reap significant economies of scale from its global buying power. Many of Wal-Mart's key suppliers have long been international companies; for example, GE (appliances), Unilever (food products), and P&G (personal care products) are all major Wal-Mart suppliers that have their own well established global operations. By building international reach, Wal-Mart used its enhanced size to demand deeper discounts from the local operations of its global suppliers, increasing the company's ability to lower prices to consumers, gain market share, and ultimately earn greater profits. Second, Wal-Mart has found that it is benefiting from the flow of ideas across the countries in which it now competes. For example, Wal-Mart's Argentina team worked with its Mexican management to replicate a Wal-Mart store format developed first in Mexico, and to adopt the best practices in human resources and real estate that had been developed in Mexico. Other ideas, such as wine departments in its stores in Argentina, have now been integrated into layouts worldwide.

Moreover, Wal-Mart realized that if it didn't expand internationally, other global retailers would beat it to the punch. In fact, Wal-Mart faces significant global competition from Carrefour of France, Ahold of Holland, and Tesco from the United Kingdom. Carrefour is perhaps the most global of the lot. The pioneer of the hypermarket concept now operates in 26 countries and generates more than 50% of its sales outside France. Compared to this, Wal-Mart is a laggard, with just 24% of its sales in 2017 generated from international operations. However, there is still room for significant global expansion—the global retailing market remains very fragmented.

For all its success, Wal-Mart has hit speed bumps in its drive for global expansion. The overall profit

rate of its international business is lower than its U.S. business. In 2006, the company pulled out of two markets, South Korea—where it failed to decode the shopping habits of local customers—and Germany, where it could not beat incumbent discount stores on price. It has also struggling in Japan, where the company does not seem to have grasped the market’s cultural nuances. One example is Wal-Mart’s decision to sell lower-priced gift fruits at Japanese holidays, which failed because customers felt spending less would insult the recipient! In 2016, Wal-Mart closed 115 underperforming stores in Brazil and several other Latin American countries in response to depressed local economic conditions.

The markets where Wal-Mart has struggled most were all developed markets that it entered through acquisitions, where it faced long-established and efficient local competitors, and where shopping habits were very different than in the United States (Germany and South Korea, for example). In contrast, many of those markets where it has done better have been developing nations that lacked strong local competitors, and where Wal-Mart has built operations from the ground up (e.g., Mexico, Brazil, and, increasingly, China). Wal-Mart has also done well in the United Kingdom, which it entered by purchasing ASDA, a retail chain that had imitated Wal-Mart’s U.S. strategy and was culturally similar to Wal-Mart.

CIO-7 LOOKING FORWARD: THE E-COMMERCE REVOLUTION

Wal-Mart’s biggest challenge going forward may be holding off competition from e-commerce retailers, particularly Amazon.com. Wal-Mart first established an online presence in 2000, when it created Walmart.com. This subsidiary is headquartered not in Bentonville, but near San Francisco, where the company has access to the world’s deepest pool of Internet executive and technical talent. For years, Walmart.com lagged the sales growth achieved by Amazon. By 2016, the company was generating only about one sixth the online revenue of Amazon.

In 2016, the company changed strategy. It purchased the fast-growing ecommerce retailer, Jet.com, for \$3.3 billion. Jet.com went online in mid-2015, and by 2016 was already on track for \$500 million in revenue. With the acquisition, Wal-Mart gained access to Marc Lore, the founder of Jet.com, who is considered by many to be one of the sharpest minds in e-commerce. Lore’s stated that under his direction, Wal-Mart would move “at the speed of a startup.” In January 2017, Lore announced that walmart.com would offer free two-day delivery on orders over \$35, putting Wal-Mart on a par with Amazon. Wal-Mart’s online inventory also grew rapidly from just 10 million items in 2016 to at least 67 million in late 2017. The expansion was helped by several other acquisitions of fashion and apparel ecommerce retailers, including Bonobos, ModCloth, ShoeBuy, and Moosejaw. These brands are sold on Jet.com, which continues to operate as a standalone site. Jet.com gives Wal-Mart the opportunity to sell upscale brands to online consumers who wouldn’t normally shop at Wal-Mart.¹⁹

Since 2016, Wal-Mart has also made concerted efforts to better leverage its brick and motor stores and distribution systems. By the Fall 2017, it had expanded its grocery pickup service to more than 1,000 stores and launched a service offering discounts on items ordered online that are picked up at the stores. The company is also installing pick-up towers in some stores to make in-store pickups easier.

The early results of this strategic shift have been dramatic, with online revenues surging by more than 60% in the first year after the Jet.com acquisition. However, Amazon.com is not standing still. In June 2017, Amazon acquired Whole Foods for \$13.7 billion, a deal that catapults Amazon into hundreds of physical stores and fulfills a long-held goal of selling more groceries. With the Whole Foods acquisition, Amazon gets a network of physical stores where it can implement decades worth of experience in how people pick, pay for, and get groceries delivered. Amazon was quick to signal its commitment to price discounting, cutting prices of select items at Whole Foods by 40% immediately after the acquisition closed in August 2017. In November 2017, it upped the ante by announcing a slew of price cuts for Amazon Prime members in advance of the annual Thanksgiving Holiday. Amazon, it would seem, is trying to beat Wal-Mart at its own game.

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CASE

11

COSTCO WHOLESALE CORPORATION IN 2018

*This case was prepared by Charles W. L. Hill of the
School of Business, University of Washington, Seattle.*

C11-1 INTRODUCTION

Costco Wholesale Corporation is the third largest retailer in the United States behind Wal-Mart and Amazon. Headquartered in Issaquah Washington State, just outside Seattle, in 2017 the company generated revenues of \$129 billion from more than 740 locations around the world. Costco operates membership warehouses based on the concept that offering its members low prices on a limited selection of nationally branded and private-label products in a wide range of merchandise categories will produce high sales volumes and rapid inventory turnover. This turnover, when combined with the operating efficiencies achieved by volume purchasing, efficient distribution and reduced handling of merchandise in no-frills, self-service warehouse facilities, enables Costco to operate profitably at significantly lower gross and operating margins than traditional wholesalers, mass merchandisers, supermarkets, and supercenters.² In 2017, Costco's gross margins were 11.3% and its operating margins were a razor thin 3.19%, yet that translated into a return on invested capital (ROIC) of 15.8%, more than twice the

company's estimated 7% cost of capital. For comparison, in 2017 Wal-Mart's had a gross margin of 24.7%, an operating margin of 4.08% and ROIC of 9.17%.³

Costco's typical warehouse averages approximately 143,000 square feet; newer units tend to be slightly larger. Floor plans are designed for economy and efficiency in the use of selling space, the handling of merchandise, and the control of inventory. Because shoppers are attracted principally by the quality of merchandise and the availability of low prices, Costco's warehouses do not have elaborate facilities. By strictly controlling the entrances and exits of its warehouses and using a membership format, Costco has limited inventory losses (shrinkage) to less than two-tenths of one% of net sales in the last several fiscal years—well below those of typical discount retail operations.

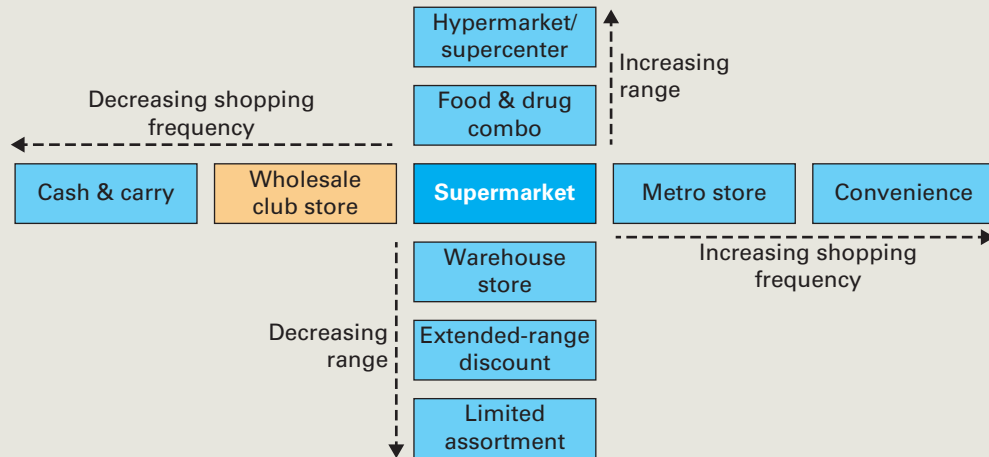
Costco's warehouses generally operate on a seven-day, 69-hour week, open weekdays between 10:00 a.m. and 8:30 p.m., with earlier weekend closing hours. Gasoline operations generally have extended hours. Because the hours of operation are shorter than those of traditional retailers, discount retailers and supermarkets, and due to other efficiencies inherent in a warehouse-type operation, labor costs are lower

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*Understanding Costco***Positioning**

The wholesale club store format is positioned as having a lower shopping frequency and less range than a conventional supermarket

Major supermarket-type retail store formats by positioning model



relative to the volume of sales. Merchandise is generally stored on racks above the sales floor and displayed on pallets containing large quantities, thereby reducing labor required for handling and stocking.

Costco's strategy is to provide its members with a broad range of high-quality merchandise at prices consistently lower than they can obtain elsewhere. Costco seeks to limit specific items in each product line to fast-selling models, sizes, and colors. Therefore, Costco carries an average of approximately 3,700 to 4,000 active stock keeping units (SKUs) per warehouse in its core warehouse business, as opposed to 45,000 to 140,000 SKUs or more at discount retailers, supermarkets, and supercenters. Many consumable products are offered for sale in case, carton, or multiple-pack quantities only.

In keeping with its policy of member satisfaction, Costco generally accepts returns of merchandise. On certain electronic items, they generally have a 90-day return policy and provide, free of charge, technical support services, and an extended warranty.⁴

Costco's strengths are evident in its ability to generate approximately \$1,200 in sales per square foot and inventory turns of 12 times a year, far superior to its discounting competitors that generate sales per square foot of \$600 or less and turn items around

8 to 9 times per year. This business model is underpinned by some 94 million loyal membership card holders who pay annual fees to access Costco's low-priced products. Although Costco raised its membership fees by 10% in 2012 and 2017, member retention rates held at about 90%, suggesting that card holders place significant value of Costco's offering. Costco has grown its membership base by about 5% per annum for decades.⁵

C11-2 COMPANY HISTORY

Costco was founded by Jim Sinegal and Jeff Brotman in 1983. Sinegal had worked for Sol Price, a gruff attorney who founded FedMart in 1954 in San Diego. FedMart was the original warehouse store. It sold in bulk, primarily to small businesses, at good value. Sinegal began working at FedMart as 18-year-old college student bagging groceries. Over time he worked his way up in the organization and became Price's protégé. He subscribed to the golden rule of business that Price drew after seeing people gouged during the Depression: Always do the right thing. Sol Price sold FedMart in the mid-1970s, then started

a second warehouse store, Price Club. He took Sinegal with him.⁶

In 1983, Seattle attorney Jeffrey Brotman launched what was meant to be a national casual men's clothing chain called Logan Drive, only to see it flop. After that failure, his farther told him that he should look into the warehouse store concept being pioneered by Sol Price. Reluctant at first, Jeff Brotman ultimately embraced the idea. In 1983, he approached Jim Sinegal and proposed that they start a warehouse club store based in Seattle. The result was Costco Wholesale Corp. They conceived of Costco as more than a company. It was a mission—as much a way of doing business as a business itself. “Do the right thing” was and still is the company mantra.

Brotman and Sinegal remained the driving forces of the company for the next 30 years. Sinegal became the merchandising and operational leader and the public face of the company as CEO until his retirement in 2011. Brotman served as chairman of the company from its establishment until his death at 74 in August 2017. Brotman's roles included selection of store sites and competitive strategy.

In October 1993, Costco merged with Price Club. As of December 2017, the company operated a chain of 746 warehouses in the United States (518 locations), Canada (98), Mexico (37 locations), the United Kingdom (28 locations), Japan (26 locations), Korea (13 locations), Taiwan (13 locations, through a 55%-owned subsidiary), Australia (9), and 4 elsewhere. The company also operates Costco Online, electronic commerce websites in the United States, Canada, and the United Kingdom.

C11-3 COSTCO'S STRATEGY

Costco's strategy is based on selling a limited selection of merchandise in a no-frills setting at deep discounts. Costco differentiates itself from rivals by focusing on a more upscale clientele than other warehouse stores. The household income of an average Costco shopper is around \$100,000, compared to about \$56,000 for Wal-Mart and \$65,000 for Target.⁷ This is reflected in its merchandising mix, which includes a rotating selection of luxury goods, such as Rolex watches and Louis Vuitton luggage, mixed in with jumbo jars of pickles, cases of soda, and large packs of paper

towels. The idea was to create a “treasure hunt” for surprise items that were available only for short periods of time at knockdown prices.

C11-3a Low Prices

To quote Sinegal, “We always look to see how much of a gulf we can create between ourselves and the competition, so that the competitors eventually say, ‘F*** ’em, these guys are crazy. We’ll compete somewhere else.’”⁸

To illustrate, Sinegal recounts a story about denim. “Some years ago we were selling a hot brand of jeans for \$29.99. They were \$50 in a department store. We got a great deal on them and could have sold them for a higher price, but we went down to \$29.99. Why? We knew it would create a riot.”⁹

But it is the customer, more than the competition, that Costco focuses on. As Sinegal once said, “We’re very good merchants, and we offer value. The traditional retailer will say: ‘I’m selling this for \$10. I wonder whether I can get \$10.50 or \$11.’ We say: ‘We’re selling it for \$9. How do we get it down to \$8?’ We understand that our members don’t come and shop with us because of the fancy window displays or the Santa Claus or the piano player. They come and shop with us because we offer great values.”¹⁰

Costco's approach to pricing goes back to Brotman and Sinegal, who long ago established a rule that no branded item could be marked up more than 14% and no Kirkland Signature item more than 15% over cost. As it has worked out, given the very low profit margins on items like gasoline and ground beef, the average markup at Costco is below 12%, which compares with markups of nearly 24% at Walmart, 30% at supermarkets, and 35% at Home Depot and Lowe's. Despite its low-price strategy, Costco strives to ensure that inexpensive doesn't mean cheap. According to Doug Schutt, Costco's chief operating officer of merchandise. “Our biggest challenge is making sure the quality is what we say it is.” Costco has a stringent quality-assurance program to test everything from the size of cashews to the amount of skin left on canned peaches. After the *E. coli* outbreak at Jack-in-the-Box in 1993, Costco was so concerned about its suppliers of ground beef that it built its own beef-processing plant, where the meat is tested every 15 minutes. Now it has started a pilot project in Nebraska with its own cattle herd.¹¹

Given its low pricing strategy, Costco has to be efficient. The company buys the majority of its merchandise directly from manufacturers and routes it to a cross-docking consolidation point (depot) or directly to its warehouses. Costco's depots receive container-based shipments from manufacturers and reallocate these goods for shipment to their individual warehouses, generally in less than 24 hours. This maximizes freight volume and handling efficiencies, eliminating many of the costs associated with traditional multiple-step distribution channels. Such traditional steps include purchasing from distributors as opposed to manufacturers, use of central receiving, storing and distributing warehouses, and storage of merchandise in locations off the sales floor. According to the company, efficiencies in its distribution system means that it fills 95% of its freight capacity, an unheard-of number.¹²

Because of its high sales volume and rapid inventory turnover, Costco generally sells inventory before it is required to pay many of its merchandise vendors and thus takes advantage of early payment discounts when available. Thanks to the rapid turnover, an increasingly greater percentage of inventory gets financed through payment terms provided by suppliers rather than by Costco's working capital.¹³

C11-3b Scarcity

A key tenet of Costco's approach is to limit the number of different items on its shelves. The company evaluates stock keeping units (SKUs) individually and selects both category leaders as well as the emerging brands to sell. Company product selection criteria include value, sales potential, how products expand their categories and price.

Costco's focused SKU selection helps to reduce operational costs by streamlining its supply chain and simplifying in-store management. Its SKU-constrained environment also limits the freedom available to consumer product goods (CPG) companies—many of which are accustomed to owning prominent real estate in store aisles.

To quote Sinegal: "We only carry about 4,000 items, compared with 40,000 in a typical supermarket and 150,000 in a Wal-Mart supercenter. Of that 4,000, about 3,000 can be found on the floor all the time. The other 1,000 are the treasure-hunt stuff that's always changing. It's the type of item a customer knows

they'd better buy because it will not be there next time, like Waterford crystal. We try to get that sense of urgency in our customers."

The limited-variety approach isn't for everyone, though. As Sinegal explained: "We carry a 360-count bottle of Advil for \$18.49. Lots of customers don't want to buy 360. If you had ten customers come in to buy Advil, how many are not going to buy any because you just have one size? Maybe one or two. We refer to that as the intelligent loss of sales: We are prepared to give up that one customer. But if we had four or five sizes of Advil, as grocery stores do, it would make our business more difficult to manage. Our business can only succeed if we are efficient. You can't go on selling at these margins if you are not."

The more efficient the product sourcing, the more latitude Sinegal can give his store managers in how they lay out those big bottles of Advil. "There are certain merchandise displays that all warehouses do," he says. "TVs are always in the front, for example."

C11-3c Private-Label Power

Kirkland Signature is Costco's store brand, otherwise known in the retail industry as an "own-brand," "house brand," or "private label." It is found at Costco's website, in Costco warehouses, and on Amazon.com.

When Costco introduced Kirkland Signature as its house brand in 1995, the idea was to face private-label competition at many major retailers including Walmart's Great Value, Target's Archer Farms and CVS's branded product line. Costco's strong private label offering, Kirkland Signature, competes with brands in an ever-expanding range of categories.

Many private-label brands provide consumers with economical options for their shopping lists, and Kirkland Signature is typically 10 to 20% lower than its branded counterparts. That said, Kirkland Signature also competes directly with many national CPG firms on quality. This focus on value has evolved to position Kirkland Signature products as slightly more expensive in many categories as comparable national brands—including canned tuna, salsa, and pet snacks.¹⁴

Positioning Kirkland Signature as a premium-priced brand—but not the most expensive option—gives Costco the opportunity to brand itself as a quality product with a slight value (price) advantage over its CPG competitors.

Around one-fifth of the space in a typical store is devoted to selling Kirkland Signature items, and about one-quarter of the company's sales come from Kirkland products. One bestseller is toilet paper. Costco sells more than \$400 million of it annually.

Kirkland Signature items play a crucial role in the quest for shelf space at Costco. Costco often introduces a new Kirkland product when its buyers or executives believe a brand isn't selling at the lowest possible price. Today, Costco's nut aisle is almost entirely made up of Kirkland Signature products, including single-serving packages sold in boxes of 30, bags of almonds, and nut clusters. Over a decade ago, what was formerly called Kraft Foods lost spots for its Back to Nature fruit-and-nut mix single-serving packages and several varieties of Planters nuts. Leading up to the Kirkland introductions, Kraft raised the price on several nut products without showing the direct justification Costco demands, like an increase in nut prices, and declined Costco's offer to make Kirkland products. Since then only a handful of Planters products have been sold at Costco.¹⁵

a value proposition is lucrative to customers who tend to buy large amounts of merchandise, and thus despite paying a membership fee save money due to discounts. Costco offers a variety of merchandise categories such as groceries, hardlines and softlines, and ancillary services such as gas station, pharmacy, food court, etc. Groceries account for more than half of Costco's revenues.¹⁷

Executive members, who account for about one-third of Costco's total members and two-thirds of its sales, are the most valuable customers for the retailer. These members pay around \$120 annually, as opposed to \$60 paid by the other members. For the higher fee, executive members are given 2% redeemable reward against their annual purchases (maximum limit of \$1,000). The percentage of executive member enrollment increased from 33% in fiscal 2009 to 38% at the end of fiscal 2017. An increase in executive members provides strong support to Costco's future growth. The fact that these members pay a higher membership fee implies that they tend to buy a lot more in order to take advantage of their 2% annual rewards.

C11-3d Marketing

Costco generally limits marketing and promotional activities to new warehouse openings, occasional direct mail to prospective new members, and regular direct marketing programs (such as *The Costco Connection*, a magazine that Costco publishes for our members, coupon mailers, weekly email blasts from costco.com, and handouts) to existing members promoting selected merchandise. It spends nothing on marketing itself to the general public. These practices result in lower marketing expenses as compared to typical retailers.¹⁶

C11-3e Membership Model

Since Costco offers steep discounts on its merchandise, it attempts to make up for it via a membership fee. The retailer charges an annual membership fee of \$60 for business and business add-on membership, and \$120 for executive membership.

A warehouse club's true value lies in its ability to attract bulk buyers. Thus, despite low margins, a warehouse club can generate significant amount of dollar profits due to rapid inventory turnover. Such

C11-4 CULTURE AND EMPLOYEE RELATIONS¹⁸

"When employees are happy, they are your very best ambassadors." – Jim Sinegal, former CEO, Costco.

Costco enjoys a reputation for having the best benefits in retail, a sector where labor costs are a significant portion of a company's total expenses. Costco Wholesale Corporation often is held up as a retailer that does it right, pays well and offers generous benefits. As a consequence, Costco often scores highly on employee surveys of the best places to work. For example, in 2018, a report from the employment related search engine Indeed.com found that employees at Costco are more satisfied with their compensation and benefits than those at any other company. The Indeed.com report analyzed its database of 18 million employee reviews that were uploaded to the site between January 2016 and January 2018. Costco outscored other companies known for their progressive employment policies including Apple and Starbucks.

Characteristic employee posts included one that stated, “Costco believes that employees are the most important asset in the company.” Another noted that “show up, do your job, and your pay goes up on its own.”¹⁹ In a similar exercise in 2017, *Forbes* and Statista asked 30,000 employees at U.S. organizations “How likely would you be to recommend your employer to a friend or family member on a scale of zero to ten?” They were also asked to evaluate their employers on other factors including atmosphere, remuneration and working conditions. Costco was named America’s best large employer with a score of 9.54 out of 10, ahead of Google and outdoor equipment retailer REI.²⁰

These accolades from employees are deeply rooted in the culture of the company and the founder’s belief in “doing the right thing.” As the former CFO once noted, “From day one, we’ve run the company with the philosophy that if we pay better than average, provide a salary people can live on, have a positive environment and good benefits, we’ll be able to hire better people, they’ll stay longer and be more efficient.”²¹

Not everyone accepts this viewpoint. A retailing analyst for Deutsche Bank once noted that “From the perspective of investors, Costco’s benefits are overly generous. Public companies need to care for shareholders first. Costco runs its business like it is a private company.” Costco management disagrees with this kind of assessment. As Jim Sinegal once noted, “The last thing I want people to believe is that I don’t care about the shareholder. But I happen to believe that in order to reward the shareholder in the long term, you have to please your customers and workers. In 2004, he also noted that “Wall Street grumbles that Costco cares more about its customers and employees than its shareholders; it pays workers an average of \$17 an hour and covers 90% of health-insurance costs for both full-timers and part-timers. Yet revenues have grown by 70% in the past 5 years, and its stock has doubled.”²²

On another occasion while talking about Costco’s employee-first philosophy, Sinegal said that, “Because it’s part of the DNA of our company. It’s the culture. It’s not altruistic. This is good business, hiring good people and paying them good wages and providing good jobs for them and opportunities for a career. If you accept the premise that we pay the highest wages in our industry and have the richest health care and benefit plan in our industry and the lowest price on merchandise and run the lowest-cost operation, then it must follow we’re getting better productivity.”²³

The company’s culture is cemented by a policy of promoting almost exclusively from within. Even the current CEO, Craig Jelinek, started his career collecting shopping carts at Costco. Its top executives have been working together for 30 years, which makes them family as much as colleagues. Executives frequently answer their own phone. Its offices are open door. CEO Jelinek has been known to get phone calls from employees on the warehouse floor. “I may get a call from a cashier,” he says, “who wants more hours.”²⁴ More generally, Costco encourages workers to make suggestions and to air grievances and gives managers autonomy to experiment with their departments or stores to boost sales or shave expenses as they see fit.

In an interview when asked for his opinion on the rising gas prices, former CEO Sinegal responded that “Even employees who work at Costco- who make the type of wages that we pay- are being hit at the gas pump. We’re working very hard to schedule people from the same part of town, so they can drive together. We’re encouraging van pools. We’re even testing 10-hour days, something we’ve never done in the past. If we can schedule some employees for four 10-hour days, that’s one day they don’t have to drive to work. They’ve got a 20% savings in their gas right there.”

This kind of approach promotes loyalty. A 2012 analysis suggested that employee turnover at Costco was 12% versus 37% at Wal-Mart.²⁵ In 2016, Costco’s retention rate for employees who had been at the company for a year was 94%. High turnover creates a significant added expense for retailers because new workers those have to be trained and are not as efficient.²⁶ And if employee loyalty is high, no one gets laid off either. When the great recession hit in 2008–2009 and most companies were laying off employees, Costco didn’t let anyone go. Instead, the company actually raised wages.

As noted, Costco compensates its employees well. In 2018 Costco paid starting employees at least \$14 an hour, compared to \$11 an hour at Wal-Mart. Costco employees can get up to \$24 an hour within 4 years. Costco also pays 92% of its employees’ health-insurance premiums, much higher than the 80% average at large U.S. companies. Wal-Mart pays two-thirds of health-benefit costs for its workers. Costco’s health plan offers a broader range of care than Wal-Mart’s does, and part-time Costco workers qualify for coverage in six months, compared with 2 years for Wal-Mart part-timers.

Many executives believe that you can't keep prices low if a company pays high wages and benefits. Costco is proof that this isn't always the case. Costco executives understand the impact and importance that good employees can have in an organization. Perks such as high wages, benefits, and opportunity for growth allow Costco to attract a large pool of high quality candidates who are committed to their jobs.

Costco has several advantages over Wal-Mart's rival offering, Sam's Club, that help it extend such unusually generous pay and benefits. Costco has a more-upscale reputation, helping it attract shoppers with higher incomes. The average Costco store rings up \$115 million in annual sales, almost double the Sam's Club average. And Costco doesn't spend money on advertising. Probably one of the biggest differences between Costco and other discounters is that the chain pays relatively high wages for retail. Luxury department stores can pay higher base wages or high commissions because they can maintain big markups, but Costco shoppers are more price sensitive. The big advantages for Costco here are shrinkage, turnover, and public relations, but these factors don't seem like enough to convince most discounters to pay higher wages.

Also, of note, front-line employees are the ones who interact with a company's customers each day and are ultimately the ones who communicate the values and culture of the brand to the public. When employees are passionate about their work or their brand, their attitudes have the ability to influence the customer's shopping experience.

Costco's employee centric approach may have helped boost another financial metric, net income per employee. A 2004 analysis by *The Wall Street Journal* found that Costco earned more than twice as much profit per employee as Wal-Mart.²⁷ Another analysis in 2012 by *Pacific Human Capital* noted that Costco's net profit per employee was \$986, compared with \$656 at Wal-Mart.²⁸

C11-5 COMPETITION

Warehouse clubs compete with each other on factors like price, merchandise quality and selection, location, and member service. Warehouse clubs also compete with a wide range of other types of retailers, including

retail discounters like Wal-Mart and Dollar General, supermarkets, general merchandise chains, specialty chains, gasoline stations, and most recently Internet retailers, particularly Amazon.com. For instance, Wal-Mart, the world's largest retailer, competes directly with Costco not just via its Sam's Club subsidiary but also through its Wal-Mart Supercenters, which sell many of the same SKU's at attractively low prices. Target and Kohl's have also emerged as significant retail competitors in certain merchandise categories. Low-cost - single category retailers—such as Lowe's, Home Depot, Office Depot, Staples, Best Buy, Circuit City, PetSmart, and Barnes & Noble—also compete with Costco and have a significant market shares in their respective product categories.

There have been three main direct competitors—Costco Wholesale, Sam's Club (597 membership warehouse clubs in the United States, with others in Brazil, China and Mexico), and BJ's Wholesale Club (215 locations in 16 states).

By 2017, there were some 1,400 warehouse locations across the United States and Canada; most major metropolitan areas had one, if not several, warehouse clubs. Costco had close to a 55% share of warehouse club sales across the United States and Canada, with Sam's Club (a division of Wal-Mart) having roughly a 36% share and BJ's Wholesale Club and several small warehouse club competitors about a 9% share. The wholesale club and warehouse segment of retailing is estimated to be a \$130-billion + business, and it is growing about 20% faster than retailing as a whole.

Below are the brief profiles of Costco's two primary competitors, Sam's Club and BJ's, in North America.

C11-5a Sam's Club

Wal-Mart opened the first Sam's Club in 1984. In the beginning, many Sam's Club locations were located adjacent to Wal-Mart Supercenters. The concept of the Sam's Club format was to sell merchandise at very low profit margins, resulting in low prices to members.

A typical Sam's Clubs ranges between 70,000 and 190,000 square feet, with the average being about 132,000 square feet. Similar to Costco, all Sam's Club warehouses have concrete floors, sparse décor, and goods displayed on pallets, simple wooden shelves, or racks in the case of apparel. Sam's Club stocks

branded merchandise, including hard goods, some soft goods, institutional-size grocery items, and selected private-label items sold under the Member's Mark, Bakers & Chefs, and Sam's Club brands.

Generally, each Sam's Club also carries software, electronics, jewelry, sporting goods, toys, tires and batteries, stationery and books. Most clubs have fresh-foods departments that include bakery, meat, produce, floral products, and a Sam's Café. Members can also shop online at www.samsclub.com. Like Costco, Sam's Club stocks about 4,000 items, the majority of them standard and a small fraction of them special, one-time offerings. The special, one-time items at Sam's Club tend to be of lesser quality and carry a lower price tag than those at Costco.

The annual fee for Sam's Club business members is \$45 for the primary membership card, with a spouse card available at no additional cost. Business members could add up to eight business associates for \$45 each.

A Sam's Club Plus premium membership costs \$100 and includes health care insurance, merchant credit card processing, website operation, personal and financial services, and an auto, boat, and recreational vehicle program. Regular hours of operation for Sam's club are Monday through Friday 10:00 a.m. to 8:30 p.m., Saturday 9:30 a.m. to 8:30 p.m., and Sunday 10:00 a.m. to 6:00 p.m.

Approximately two-thirds of the merchandise at Sam's Club is shipped from the division's own distribution facilities and, in the case of perishable items, from some of Wal-Mart's grocery distribution centers; the balance is shipped by suppliers direct to Sam's Club locations.

Like Costco, Sam's Club distribution centers employ cross-docking techniques whereby incoming shipments are transferred immediately to outgoing trailers destined for Sam's Club locations; shipments typically spend less than 24 hours at a cross-docking facility and in some instances were there only an hour. The Sam's Club distribution center network consisted of 7 company-owned-and-operated distribution facilities, 13 third-party-owned-and-operated facilities, and 2 third-party-owned-and-operated import distribution centers.

A combination of company-owned trucks and independent trucking companies are used to transport merchandise from distribution centers to club locations.²⁹

C11-5b BJ's Wholesale Club

BJ's Wholesale Club, Inc., commonly referred to simply as BJ's, is a membership-only warehouse club chain operating on the United States. Headquartered in Westborough, Massachusetts, BJ's Wholesale Club, Inc. is a leading operator of membership warehouse clubs in the Eastern United States. The Company currently operates over 215 Clubs in 16 states from Maine to Florida and has more than 25,000 employees. On September 30, 2011, BJ's Wholesale Club was acquired by Beacon Holding Inc., an affiliate of Leonard Green & Partners, L.P., and funds advised by CVC Capital Partners.³⁰

Merchandise in BJ's is generally displayed on pallets containing large quantities of each item, thereby reducing labor required for handling, stocking, and restocking. Backup merchandise is generally stored in steel racks above the sales floor. Like Costco and Sam's, BJ's Wholesale sells high-quality, branded merchandise at prices that are significantly lower than the prices found at supermarkets, discount retail chains, and specialty retail stores like Best Buy.³¹ Its merchandise lineup of about 7,500 items includes consumer electronics, prerecorded media, small appliances, tires, jewelry, health and beauty aids, household products, computer software, books, greeting cards, apparel, furniture, toys, seasonal items, frozen foods, fresh meat and dairy products, beverages, dry grocery items, fresh produce, flowers, canned goods, and household products.

Paid membership is an essential part of the warehouse club concept. BJ's currently has about 5 million members. In addition to providing a source of revenue, it helps offer low prices and reinforces customer loyalty. BJ's offers two types of memberships: Inner Circle® memberships and business memberships. Most Inner Circle members are likely to be homeowners whose incomes are above the average for the Company's trading areas.

Inner Circle® memberships usually cost \$50 per year for a primary member and include one free supplemental membership. Members in the same household may purchase additional supplemental memberships for \$25 each. A primary business membership also costs \$50 per year and includes one free supplemental membership. Additional supplemental business memberships cost \$25 each. These fees were increased on January 3, 2011. Prior to that date, primary Inner Circle and business memberships cost \$45 per year and supplemental memberships cost \$20 each.

Like Costco and Sam's, BJ's Rewards Membership® program, is geared to high-frequency, high-volume members, offering a 2% rebate, capped at \$500 per year, generally on most in-club purchases. The annual fee for a BJ's Rewards Membership is \$100. At the end of 2010, Rewards Members accounted for approximately 7.8% of BJ's primary members and approximately 17% of BJ's merchandise sales during the year.

BJ's top management believed that several factors set BJ's Wholesale operations apart from those of Costco and Sam's Club:

- Offering a wide range of choice—7,500 items versus 4,000 items at Costco and Sam's Club
- Focusing on the individual consumer via merchandising strategies that emphasized a customer-friendly shopping experience
- Clustering club locations to achieve the benefit of name recognition and maximizing efficiencies of management support, distribution, and marketing
- Supplementing the warehouse format with aisle markers, express checkout lanes, self-checkout lanes, and low-cost, video-based sales aids to make shopping more efficient for members.
- Offering longer working hours than competitors
- Offering smaller package sizes for many items
- Accepting manufacturers' coupons
- Accepting more credit card payment options³²

C11-6 CONCLUSION

Looking forward, the issue facing Costco is how to maintain its historically high performance. As the company has become larger, several markets

have neared saturation, and maintaining historic growth rates has become more challenging. Moreover, Costco faces a potentially strong challenge from online retailers, most notably Amazon.com, which offers a vast array of goods at low prices. In 2016, Amazon surged past Costco on the back of strong sales growth to become the second largest retailer in the United States. As Amazon builds out its distribution system, it will soon be able to offer next-day delivery to most locations within the United States. Will this be enough to draw customers away from Costco and end the company's impressive rise to dominance in deep discounting retailing? And what should be Costco's strategy to counter Amazon?

For now, Costco seems to be taking a measured approach to online sales. Online sales only account for about 4% of Costco's total revenues. Costco is making some moves. It has added more products to its website and now sells some 10,000 items online, as opposed to 4,000 in the stores. Costco has also increased its investment in distribution centers to speed up home deliveries. Still, the company's growth in online revenues lags that of Wal-Mart and Amazon. In explaining its strategy, the company notes that it still wants to get people into the stores, because they are going to buy more. Costco continues to attribute much of its success to the treasure-hunt atmosphere it creates in the stores, something hard to replicate online. Moreover, shipping is expensive, and for a company like Costco that operates with very low gross margins, making online sales pay would require higher prices, which is not what the company wants to do. Whether this approach will be sufficient going forward remains to be seen.³³

NOTES

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Tono Balaguer/holbox/Shutterstock.com

CASE 12

SPACEX: DISRUPTING THE SPACE INDUSTRY

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In April 2018, SpaceX was valued at \$27.5 billion, making it one of the most valuable privately-held companies in the world. In just 16 years since its founding, the company had developed revolutionary space vehicle technology, including the world's first reusable orbital class rocket (the Falcon 9) and the world's most powerful rocket (the Falcon Heavy). Perhaps even more remarkable, the company offered commercial space launches at a price dramatically lower than that offered by its leading competitors. It was estimated that by 2018 SpaceX had already seized over 60% of the global market share for commercial space launches.¹ The meteoric rise of SpaceX, a startup from an industry outsider, was completely rewriting the rules of competition in the space industry.

C12-1 MUSK'S MOONSHOT IDEA: COLONIZING MARS

In 2002, Elon Musk was 31 years old, had \$180 million, and was trying to decide what to do with the rest of his life.² He had already created and sold one of the first successful Internet portals, Zip2, a platform that enabled newspapers to create and host their own online “city guides.” The timing of the venture had

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been perfect; in the mid-1990s the penetration of the internet had growing exponentially, but most businesses did not yet fully understand how to harness it. As Musk noted, “When we tried to get funding in November 1995, more than half the venture capitalists we met with didn’t know what the Internet was and had not used it.”³ Soon Musk’s company was hosting the websites of nearly 200 media companies, including the *New York Times*’ local directory site, “New York Today,” and newspapers owned by Hearst, Times Mirror, and Pulitzer Publishing.⁴ In February 1999, Compaq bought Zip2 for \$307 million in hopes that it could use the platform to help one of its other products, AltaVista, become a top portal for search, media, and shopping.⁵

Musk then founded an online financial services and email payment company, X.com. This company later merged with Confinity, a company that had developed the person-to-person email system PayPal, and the merged companies worked together to make PayPal the most successful online payment system in the world. When eBay bought PayPal for \$1.5 billion in stock in 2002, Musk personally got \$165 million from the sale.

Musk now had a pretty serious nest egg and wondered what he should do next. Money no longer motivated him; instead he wondered what he could do that would be most important to the world. Worried about the human population’s overreliance on finite energy sources, he helped to found Tesla Motors and Solar City during this time, but another unusual possibility

had also begun to take shape in his mind. Musk had been very disturbed to discover that NASA had no intentions of going to Mars, and he began to ponder what it would take. The major problem was not one of technological feasibility, he concluded, but rather expense. Rockets could get into orbit, but they were expensive and typically not reusable. This, he reasoned, was like throwing away your Boeing 747 after every flight across the Atlantic, and it made space travel ludicrously impractical. Musk made the astonishing decision to pick up where NASA had left off.

Musk began to study rocket science texts such as *Rocket Propulsion Elements*, *Fundamentals of Astrodynamics*, and *Aerothermodynamics of Gas Turbine and Rocket Propulsion*. He traveled to Russia with friends Jim Cantrell, Adeo Ressi, and Mike Griffin to see if he could buy an affordable intercontinental ballistic missile to use as a launch vehicle. Though the team met with the Russians three times over a period of 4 months, in the end when Musk suggested he wanted two missiles for \$8 million, the Russians dismissed him, telling him his plan was impossible. As Cantrell recounted, “They looked at us like we were not credible people ... One of their chief designers spit on me and Elon because he thought we were full of shit.”⁶ On the flight home, as Griffin, Ressi, and Cantrell somberly toasted the end of the Russian expedition, Musk sat in the row in front of them, frenetically typing on his computer. Suddenly he wheeled around showing them a spreadsheet and saying, “Hey, guys, I think we can build this rocket ourselves.”⁷

The other men were skeptical, to say the least. However, Musk passed his computer over to Griffin and Cantrell, showing them a document that detailed the cost of materials needed to build, assemble, and launch a rocket. Musk’s calculations suggested that they could build a modest-sized rocket that would specialize in carrying smaller satellites and research payloads to space, and they could do so much cheaper than what the Russians were offering. The spreadsheet also laid out the performance characteristics of the rocket in impressive detail. Cantrell recalls, “I looked at it and said, I’ll be damned—that’s why he’s been borrowing all my books. He’d been borrowing all my college textbooks on rocketry and propulsion. You know, whenever anybody asks Elon how he learned to build rockets, he says, ‘I read books.’ Well, it’s true. He *devoured* those books. He knew everything. He’s the smartest guy I’ve ever met, and he’d been planning to build a rocket all along.”⁸

Investing \$100 million of his own funds, Musk founded a company in June 2002 in Hawthorne California called Space Exploration – or SpaceX – and began developing a method that would streamline the production of rockets that could be used more than once. If NASA was not going to bring humanity to Mars, Musk would do it himself.

Creating a rocket company is an expensive, risky venture, and most of the space industry found it highly improbable that an outsider with a small team and budget could be successful. As Tom Mueller, one of SpaceX’s first engineers notes, “At TRW I had an army of people and government funding. Now we were going to make a low-cost rocket with a small team. People just didn’t think it could be done.”⁹

Musk, however, felt that the space industry was overdue for modernization. Aerospace companies had little competition and made extremely expensive, high-performance rockets for every launch. Musk, on the other hand, intended to apply Silicon Valley’s techniques of running lean and capitalizing on massive advancements in computing and materials technology. Musk’s conversations with aerospace contractors convinced him that they all charged too much money and worked too slowly. He decided that SpaceX should try to make as much of the componentry as possible inhouse, including engines, guidance systems, and more. SpaceX would ultimately become an extremely vertically integrated rocket company. These decisions also made it easy to recruit the brightest of engineers – young aeronautics experts were keen to design rockets from the ground up and work for an exciting company without the bureaucracy of a government contractor.

On March 24, 2006, the first Falcon 1, a two-stage rocket,* was launched from the Kwajalein islands as a nervous Musk and others watched. Twenty-five seconds into the flight a fire broke out on the rocket, and it began to spin and fall back to the Earth. It took a year to build a new Falcon 1. On March 21, 2007, the second Falcon 1 was launched, and this one made it to the 5-minute mark, successfully separating the first stage of the rocket from the second stage, with the second stage continuing into orbit. The team was

*Multistage rockets are designed so that different parts of the rocket have their own engine and propellant. This enables stages to be separated from the rocket after they have used up their fuel, thereby reducing the mass of the rest of the craft.

elated and began to breathe easier. However, just after the 5-minute mark passed, the second stage of the rocket started to wobble and then break apart. It was a devastating blow to SpaceX employees; many had spent almost 2 years shuttling between California and Kwajalein working to prepare for this launch.

Musk assured everyone that he would persist until they were successful, but everyone knew there was a risk that the company would simply run out of money. Unlike traditional aerospace companies which had huge multi-year government contracts, most of SpaceX's funding had come from Musk's personal savings, and SpaceX and Musk's other major venture, Tesla Motors, had already burned through more than half of Musk's cash. Kevin Brogan, one of SpaceX's first employees remembered, "We were burning through a hundred thousand dollars per day . . . Sometimes he wouldn't let you buy a part for two thousand dollars because he expected you to find it cheaper or invent something cheaper. Other times, he wouldn't flinch at renting a plane for ninety thousand dollars to get something to Kwaj because it saved an entire workday, so it was worth it."¹⁰

The third Falcon 1 was launched on August 2, 2008. The launch initially appeared to go perfectly, but at the moment the stages were supposed to separate, unexpected thrust from the first stage caused it to bump the second stage and damage it. Both parts then fell to the Earth. As recounted by Dolly Singh, a recruiter at SpaceX, "It was like the worst [expletive] day ever. You don't usually see grown-ups weeping but there they were. We were tired and broken emotionally."¹¹ An exhausted and discouraged Musk tried to keep a positive front, telling the team "Look. We are going to do this. It's going to be okay. Don't freak out."¹² Musk knew, however, that a fourth flight would be the last – he had spent \$100 million on SpaceX and had no more money to inject into the company because the rest had all gone into Tesla Motors. There simply wouldn't be enough money for a fifth launch.

On September 28, 2008, the team prepared for the fourth Falcon 1 launch. The employees had worked nonstop shifts under intense pressure to reach this point, many of them separated from their families for long periods, living on a tiny island near the launch site under difficult conditions. Now many were queasy with anxiety about what would happen on this launch. This fourth launch, at last, went perfectly. Nine minutes into its journey, the Falcon 1 reached orbit, making it the first privately built space vehicle

ever to do so. The employees of SpaceX roared their cheers, and many (including Musk) fought back tears.

Antonio Gracias, chief executive officer of Valor Equity Partners, investor in both Tesla and SpaceX and Musk's friend, noted how deeply impressed he was by Musk's strength and resolve during this time: "He has this ability to work harder and endure more stress than anyone I've ever met. What he went through in 2008 would have broken anyone else. He didn't just survive. He kept working and stayed focused." He adds, "Most people who are under that sort of pressure fray. Their decisions go bad. Elon gets hyperrational. He's still able to make very clear, long-term decisions. The harder it gets, the better he gets. Anyone who saw what he went through firsthand came away with more respect for the guy. I've just never seen anything like his ability to take pain."¹³

The successful launch was a watershed moment that reinvigorated everyone's faith in the company, but SpaceX was still in a financially precarious position. It already had two other projects underway, the Falcon 9 (a much bigger rocket), and the Dragon capsule (a reusable cargo spacecraft that would be launched by the Falcon 9 and used to deliver supplies to the International Space Station), and Musk had to borrow money from his friends just to make the company's payroll. To make matters worse, Tesla Motors was also in dire financial straits – both companies were on the verge of bankruptcy. However, on December 23, SpaceX was notified that NASA would be awarding the company a \$1.6 billion contract to service the Space Station, effectively saving the company. Then on December 24th, just hours before Tesla would have entered bankruptcy, Musk negotiated an investment from Draper Fisher Jurvetson that saved the auto company. As the deals went through, Musk broke down in tears.

C12-1a Next Steps

Having demonstrated the company's ability to successfully launch the Falcon 1, SpaceX turned its attention to its other, even bigger projects. First, it developed the Falcon 9, a rocket with nine Merlin engines and the ability to carry just over 50,000 pounds into orbit. The Falcon 9 was designed to be human-rated, requiring extreme reliability. Its avionics and controls were made triple-redundant, and according to Musk its flight computers will "issue the right commands even if there is severe damage to the system."

The Falcon 9 can also keep flying if it suffers an engine shutdown; after about 90 seconds, it can even survive a second engine shutdown.¹⁴

By 2010, SpaceX proved that the Falcon 9 could carry the Dragon capsule into space and then recover the capsule safely after an ocean landing. In 2012, the SpaceX Dragon capsule became the first private company to dock with the International Space Station. In 2015, SpaceX demonstrated that its Falcon 9 could land vertically—the first time this had been achieved for an orbital class rocket, and then in 2017 it successfully reused a Falcon 9 in a second flight, achieving what most stalwarts of the space industry had said was impossible.

The Falcon 9 competed directly against the Delta IV and Atlas V launch systems made by United Launch Alliance (ULA), a joint venture of Boeing and Lockheed Martin. The Delta and Atlas launch families had been the standard space launch systems used by the U.S. government for more than 50 years, carrying payloads including weather, telecommunications, and national security satellites, as well as deep space and interplanetary exploration missions in support of scientific research. ULA had a virtual monopoly before SpaceX's jarring arrival,¹⁵ but after the introduction of the Falcon 9 it was clear that the space industry had changed. Traditionally in

the United States, rockets were designed by government agencies (e.g., NASA), and then companies like Lockheed Martin were commissioned to build them as external contractors. Now for the first time, the government could choose from rockets designed and built by a private U.S. company that were not only as powerful as those designed by NASA, but were also remarkably less expensive. Launch contracts awarded to SpaceX and ULA by the Air Force in 2018, for example, indicated that ULA's launch prices for the Atlas V were almost double those for the Falcon 9. The government decided to give both companies contracts because having two launch companies better assured the U.S. government's access to space, however it was clear that pressure would now be on ULA to bring their costs down as well. This was implicitly stated by Air Force Secretary Heather Wilson in her testimony to the U.S. House defense appropriations subcommittee, "The cost of launch is plummeting" and commercial space ventures now "have multiple choices." "We're coming to a point," she said, that low-cost launchers are "enabling business plans to close in space that never were possible before."¹⁶

In 2011, SpaceX had also begun developing the Falcon Heavy, by far the world's most powerful rocket (see Table 1) with 27 Merlin engines and the ability

Table 1 Comparison of Heavy Payload Launch Vehicles

Launch Vehicle	Manufacturer	Payload to Low Earth Orbit (lbs)
Falcon Heavy	SpaceX	140,660
Space Shuttle	United Space Alliance Thiokol/Alliant Techsystems (SRBs) Lockheed Martin/Martin Marietta (ET) Boeing/Rockwell (orbiter)	53,790
Proton M	Khrunichev	50,710
Delta IV Heavy	United Launch Alliance	49,740
Titan IV-B	Lockheed Martin	47,800
Ariane 5 ES	Arianespace	44,090
Atlas V551	United Launch Alliance	40,810
Japan H2B	JAXA and Mitsubishi Heavy Industries	36,380
China LM38	China Aerospace Science and Technology	24,690

Source: Payload data from SpaceX

to carry 140,660 pounds into orbit. It was also developing Dragon capsules rated for human transport. Both programs would be crucial for achieving Musk's ultimate goal: colonizing Mars. The Falcon Heavy can carry equipment and supplies to Mars, and both its stages can be recovered and used repeatedly. Crew would be transported to Mars in a Dragon capsule. As of 2018, SpaceX was also developing a rocket dubbed BFR ("Big Falcon Rocket") that would take an even heavier payload than the Falcon Heavy, and do so with a single core rather than the triple core used in the Heavy (in essence, the Falcon Heavy used three Falcon 9s as its core), thereby making it simpler and more reliable to launch.¹⁷

C12-1b Doing Things Differently at SpaceX

There were numerous ways in which SpaceX's strategies diverged from space industry norms, and almost all of them had direct implications for the cost of its launch systems. First, whereas most aerospace companies give their designs to myriad third-party contractors who create the hardware for them, SpaceX produced roughly 80% of its launch hardware in-house.¹⁸ SpaceX builds its own motherboards and circuits, vibration sensors, radios, and more. In most industries, vertical integration *increases* the costs of firms by not enabling them to benefit from competitive bidding between efficient suppliers. In the aerospace industry, however, the entrenchment of norms around using parts specialized for the space industry ("space grade"), and the bureaucratic rules defined by government contractors, had kept supply costs very high. SpaceX decided instead to build many of its own parts, or to buy parts not considered "space grade" and modify them to achieve "space grade." For example, rather than paying \$50,000 to \$100,000 for an industrial-grade radio, SpaceX was able to build its own for \$5,000, and shaved 20% of the weight off at the same time.

SpaceX's willingness to produce their own parts came as a shock to suppliers. For example, Tom Mueller recounts a time when he asked a vendor for an estimate on a particular engine valve: "They came back [requesting] like a year and a half in development and hundreds of thousands of dollars. Just way out of whack. And we're like, 'No, we need it by

this summer, for much, much less money.' They go, 'Good luck with that,' and kind of smirked and left." Mueller's team created the valve themselves, and by summer they had qualified it for use with cryogenic propellants. "That vendor, they iced us for a couple of months," Mueller said, "and then they called us back: 'Hey, we're willing to do that valve. You guys want to talk about it?' And we're like, 'No, we're done.' He goes, 'What do you mean you're done?' 'We qualified it. We're done.' And there was just silence at the end of the line. They were in shock."¹⁹

As noted, a big factor driving savings at SpaceX is that it often builds its components out of readily available consumer electronics rather than equipment already deemed "space grade" by the rest of the industry. Twenty years ago "space grade" equipment would have had far superior performance characteristics compared to consumer electronics, but today that is no longer the case – standard electronics can now compete with more expensive, specialized gear. For example, at one point SpaceX needed an actuator that would steer the second stage of the Falcon 1. The job fell to engineer Steve Davis to find the important part, and because he had never built a part like that before he sought out suppliers who could make it for them. Their quoted price for the device was \$120,000. As Davis recalls, "Elon laughed. He said, 'That part is no more complicated than a garage door opener. Your budget is five thousand dollars. Go make it work.'"²⁰ Davis ended up designing an actuator that cost \$3,900. Another example is provided by the computers that provide avionics for a rocket. Traditionally NASA's Jet Propulsion Laboratory bought expensive, specially toughened computers that cost over \$10 million each to operate its rockets. Musk told engineer Kevin Watson that he wanted the bulk of the computer systems for Falcon 1 and Dragon to cost no more than \$10,000. Watson was floored, noting, "In traditional aerospace, it would cost you more than ten thousand dollars just for the food at a meeting to discuss the cost of the avionics."²¹ Watson was inspired by the challenge, however, and ended up creating a fully redundant avionics platform that used a mix of off-the-shelf computer parts and in-house components for just over \$10,000. That same system was then also adapted for use in the Falcon 9.

SpaceX's willingness to experiment with new designs and technologies was a huge competitive advantage. For example, by using "friction stir welding,"

SpaceX was able to fuse large, thin sheets of metal together without rivets or other fasteners, reducing the weight of the rocket body by hundreds of pounds. This technology had previously not been considered feasible for such a large structure, but SpaceX proved it could work. The technology was then also transferred to Tesla, where it could help make lighter, stronger cars.

Vertical integration also gave SpaceX more control over when and how things are done, making it significantly more nimble than traditional aerospace companies, and having almost all of SpaceX's engineers under one roof greatly streamlines the process of designing, testing, and improving the launch systems. For example, if a fault was found in a launch sensor, NASA would have traditionally responded with paperwork, meetings with suppliers, and a 3-month delay to wait for a new launch window. SpaceX, on the other hand, is known for fixing faults fast and on the fly—often enabling the launch to continue as planned. As Tom Mueller describes, “We make our main combustion chambers, turbo pump, gas generators, injectors, and main valves ... We have complete control. We have our own test site, while most of the other guys use government test sites. The labor hours are cut in half and so is the work around the materials. Four years ago, we could make two rockets a year and now we can make twenty a year.”²²

SpaceX's rockets are also designed with commonality of parts and modularity in mind, which also reduces costs and development time. Consider, for example, the contrast between the Falcon 9 and ULA's Atlas V. Atlas V was the workhorse of the space industry, used for everything from probing distant planets to launching spy satellites. The Atlas V uses up to three kinds of rockets, each tailored for a specific phase of flight. In the first stage, RD-180 engines (built in Russia) burn a highly refined form of kerosene called RP1. Optional solid-fuel strap-on boosters provided additional thrust at liftoff, and a liquid hydrogen engine in the upper stage takes over in the final phase of flight. Using three kinds of rockets helped to optimize the performance of the Atlas V, but at a steep price. As Musk noted, “To a first-order approximation, you've just tripled your factory costs and all your operational costs.” All of the engines on SpaceX's Falcon 9 and Falcon Heavy rockets, by contrast, are its own SpaceX-designed Merlin engines powered by RP1 and liquid oxygen. Making all of the

engines the same reduced the amount of tooling and the number of processes required, resulting in what Musk calls “huge cost savings.”²³

SpaceX's vertical integration has also led to it creating advances in state-of-the-art of space technology. For the Dragon's heat shield, for example, the company intended to use a material called PICA (phenolic impregnated carbon ablator), first developed for NASA's Stardust comet-sample-return spacecraft. The prices they were offered by the manufacturer, however, were too high, so they decided instead to work with NASA's Ames Research Center to make the material themselves. What they came up with, PICA-X, turned out to be better than the original material and 10 times less expensive. In fact, Musk states that a single PICA-X heat shield can withstand hundreds of returns from low Earth orbit, and can even handle the much higher energy reentries from the moon or Mars.²⁴

The largest cost advantage SpaceX has, by far and away, is the fact that its rockets use reverse thrusters to lower themselves safely back to the ground so that they can be reused. Reusing the rockets means that much of the cost of producing the rocket will be amortized over multiple flights, dramatically lowering the cost of space travel relative to systems in which the rockets are considered expendable. In fact, SpaceX estimates indicated that with a larger volume of launches and improvements in launch technology, it could get the cost of a Falcon 9 launch down to about \$20 million. This cost difference between SpaceX and traditional space vehicle manufacturing was a gamechanger. SpaceX was not just undercutting U.S. manufacturers in price; it was also well under the price of its rivals in Europe, Japan, Russia, and China. As gleefully noted by venture capitalist and SpaceX board member Steve Jurvetson, “SpaceX lowered the cost of going into space by 10x. The ministers of China say, ‘We can't compete on price with that. In how many industries have you heard ministries of China say ever say that?’”²⁵

C12-1c Staying Private and Focused on Mars

Despite pressure from employees and would-be investors, Musk has resisted the urge to take SpaceX public. Shareholders tend to put intense focus on

quarterly earnings, which can create pressures that are at odds with a firm's long-term goals and investments. The board of directors of a publicly held firm would thus undoubtedly force SpaceX to make changes that would improve its profitability at the expense of its chances for reaching Mars. As Musk

wrote in a letter to his SpaceX employees, "Creating the technology needed to establish life on Mars is and always has been the fundamental goal of SpaceX. If being a public company diminishes that likelihood, then we should not do so until Mars is secure."²⁶

NOTES

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CASE 13

ALIBABA GROUP: THE RISE OF A PLATFORM GIANT

*This case was prepared by Melissa A. Schilling
of the School of Business, New York University.*

Alibaba, a company founded in 1999 to facilitate export transactions for small Chinese businesses, grew to become a platform ecosystem with astonishing reach. Many described Alibaba as being Amazon, Yelp, YouTube, and PayPal wrapped into one company. When the company went public in 2014 (its stock symbol is BABA), it raised US\$25 billion, making it the largest IPO in history. For the fiscal year ending in March 2018, Alibaba posted revenues of over CNY 250 billion, or \$US 36 billion, and in August 2018 it had a market cap of over \$470 billion,¹ making it the seventh highest valued company in the world. In terms of gross merchandise volume moved, Alibaba was larger than Amazon, Wal-Mart, and eBay combined.²

C13-1 THE HISTORY OF ALIBABA

Alibaba was founded in 1999 by 18 friends led by Jack Ma. Ma's story is an inspiring, rags-to-riches tale. He was born in Hangzhou, China, in 1964 to a poor family. He was slight in build, and often got into fights with classmates.³ Ma struggled both to get into

university and to find a job. As he told Charlie Rose in an interview in 2015:

There's an examination for young people to go to university. I failed it three times. I failed a lot. So I applied to 30 different jobs and got rejected. I went for a job with the police; they said, "You're no good." I even went to KFC when it came to my city. Twenty-four people went for the job. Twenty-three were accepted. I was the only guy [who wasn't].

Ma was also rejected by Harvard ten times. He ultimately accepted a job as an English teacher that paid \$12 month.

In 1995, Ma traveled to the United States for the first time, serving as an interpreter for a Chinese government trade delegation. There, on a lark, he did an online search for "beer" and "China," and was surprised to find that no Chinese beers came up. He decided at that moment to form a company called China Pages, which would help Chinese companies build websites. China Pages would eventually merge into an unsuccessful joint venture with China Telecom. Ma next headed up an Internet company backed by the Chinese Ministry of Foreign Trade and Economic Cooperation in Beijing. Ma worried, however, that

Tono Balaguer/holbox/Shutterstock.com



being connected to the government would keep him from capitalizing on the rapid change and opportunities created by the Internet. Ma thus persuaded his team at the ministry to return to Hangzhou with him. There they founded Alibaba.

The company began as a business-to-business wholesale platform that enabled companies around the world to easily buy products from China. The platform was particularly useful for small to medium-sized Chinese businesses that would normally not be able to easily tap the export market. Ma had the objective of democratizing business in China by helping small businesses overcome the advantages large businesses wielded. As he noted, “What we do is give small companies e-commerce ability by helping them source partners and information around the world.”

Unlike Amazon, Alibaba would not take ownership over inventory; instead it would provide access to all the resources that an online business would need to succeed. It would serve as a platform hub at the center of an ecosystem of interacting partners of all types: suppliers, buyers, advertisers, financiers, logistics providers, information technology providers, and more. As put by Ming Zeng, chairman of the Academic Council of Alibaba Group, “Alibaba does what Amazon, eBay, PayPal, Google, FedEx, wholesalers, and a good portion of manufacturers do in the United States, with a healthy helping of financial services for garnish.”⁴ Alibaba did not charge transaction fees or fees to list goods; instead, its business model relied on selling advertising. The free listing service attracted sellers in droves, and by 2001 it already had 450,000 users and had achieved profitability.

C13-1a Expanding Alibaba's Market Reach

In 2002, eBay entered the Chinese market by purchasing a large stake in EachNet, a Chinese consumer-to-consumer sales platform, and Ma sensed the threat eBay and EachNet posed. Much of Alibaba's business came from small firms that could just as easily use a consumer-oriented platform like EachNet, and if EachNet grew quickly, it might lure Alibaba users away. Furthermore, individual consumers were already placing orders on Alibaba when they wanted to buy goods in bulk, revealing the potential for a consumer market for Alibaba. Thus, in 2003,

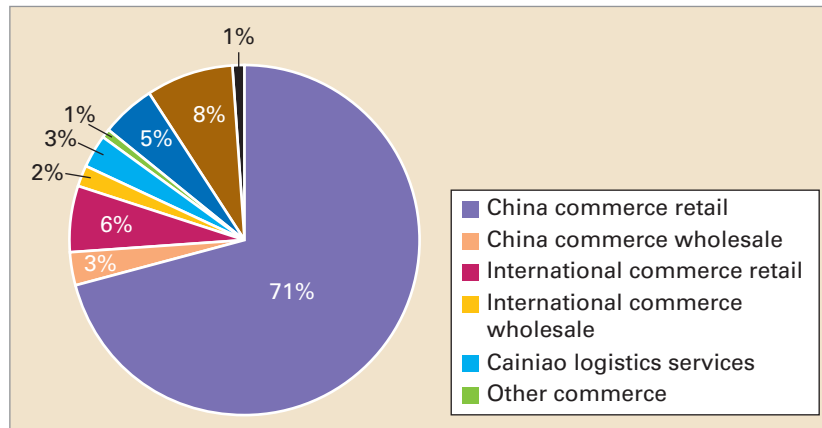
Alibaba created a subsidiary platform called Taobao (“treasure hunt”), focused on consumer-to-consumer sales. Unlike eBay, Taobao did not charge fees, and because Chinese users were more comfortable with face-to-face transactions, it created Taobao WangWang, an instant messaging service that simulated face-to-face negotiations between buyers and sellers.⁵ The strategy was successful—by 2004, Alibaba controlled most of the consumer-to-consumer e-commerce market in China, and eBay announced its exit from the company.

In 2004, Alibaba partnered with four of China's largest banks to create an e-payment system called Alipay. Though initially Alipay was designed just to work with Taobao and Tmall, soon the payment system evolved to be a complete mobile-payment service. Using a smartphone, Alipay users can make payments online and at bricks-and-mortar stores. They can also use it to make person-to-person money transfers, purchase bus and train tickets, hail taxis, and as digital identification for many public services.

The company grew rapidly. By 2008, Alibaba's annual revenues were 3.9 billion yuan (or \$US 562 million).⁶ Unfortunately, the free and open nature of Taobao was both a strength and a weakness. While sellers of any size could join easily, Taobao also began to have a reputation for having counterfeit products. To counter this, Alibaba launched a business-to-consumer retail platform, Taobao Mall, later referred to simply as Tmall. Unlike Taobao, Tmall screened sellers, and set standards for quality and reliability. It also collected annual fees and transaction fees from sellers. The combination of standards and fees effectively limited sellers to larger, more established players. This, in turn, gave consumers more confidence in the products and transaction process.

C13-1b Deepening the Platform Strategy

Transaction volume grew quickly, and the firm turned its focus from growing its user base to improving the efficiency of its logistics, finance, and data infrastructure, and providing additional services to members of its ecosystem (see Figure 1). In 2011, the company spent over US \$4 billion on logistics and an integrated network of warehouses across China, and in 2013, Alibaba and a consortium of logistics companies

Figure 1 Alibaba's Revenue Share by Segment, 2018

Data from Alibaba Group, 2018.

formed Cainiao, a logistics network that links warehouses, distribution centers and delivery companies. Mirroring Alibaba's strategy for e-commerce, Cainiao owns no warehouses and employs no delivery personnel; instead, it just coordinates them efficiently, enabling participants to confidentially exchange information, provide real-time status on deliveries, and more. By late 2017, Cainiao was coordinating over 57 million deliveries a day.

Alibaba also started two microfinance subsidiaries that would provide microloans to small sellers on Taobao and Alibaba.com. At banks in China, the minimum loan amount was typically about 6 million RMB (about \$1 million), which was well above the needs of a typical small business. Furthermore, most small businesses lacked the credit history and documentation of their business performance needed to apply for such loans. This meant that tens of millions of small businesses in China were struggling to gain access to the capital they needed to grow their businesses.⁷ Alibaba realized it already had real-time accurate data on the performance of millions of small businesses on its platform, and it could use that data to create a credit assessment program. Alibaba was able to not only provide microloans to businesses, but also performed all steps of its loan process online, making it fast and convenient.

In the seven years since launching its microloan programs, now merged under the name Ant Financial Services, Alibaba has loaned more than 87 billion

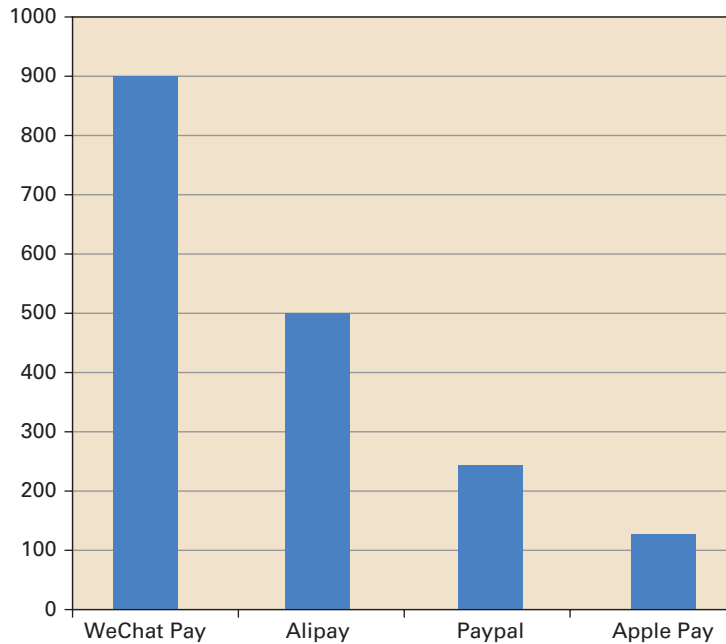
RMB (\$13.4 billion) to nearly three million small and medium-sized enterprises, with an average loan size of 8,000 RMB (about \$1,200).⁸ As described by Ming Zeng:

Ant can easily process loans as small as several hundred RMB (around \$50) in a few minutes. How is this possible? When faced with potential borrowers, lending institutions need answer only three basic questions: Should we lend to them, how much should we lend, and at what interest rate? Once sellers on our platforms gave us authorization to analyze their data, we were well positioned to answer those questions. Our algorithms can look at transaction data to assess how well a business is doing, how competitive its offerings are in the market, whether its partners have high credit ratings, and so on.⁹

Alipay was brought under the umbrella of the Ant Financial Services group, and by 2018, Alipay had grown to become the second-largest mobile payment system in the world, with roughly 500 million users in 2018, second to Chinese rival Tencent's WeChat Pay (see Figure 2).

In 2016, Alibaba introduced an AI-powered chatbot, Ali Xiaomi ("Ali Assistant"), that can handle both spoken and written customer queries on Taobao and Tmall. Ali Xiaomi can handle a wide range of customer requests, including product returns, making product suggestions, and answering questions about delivery status.¹⁰ The chatbot uses machine learning to continuously improve its ability to diagnose and

Figure 2 World's Largest Mobile Payment Systems by Active Users As of the End of First Quarter of 2018 (millions)



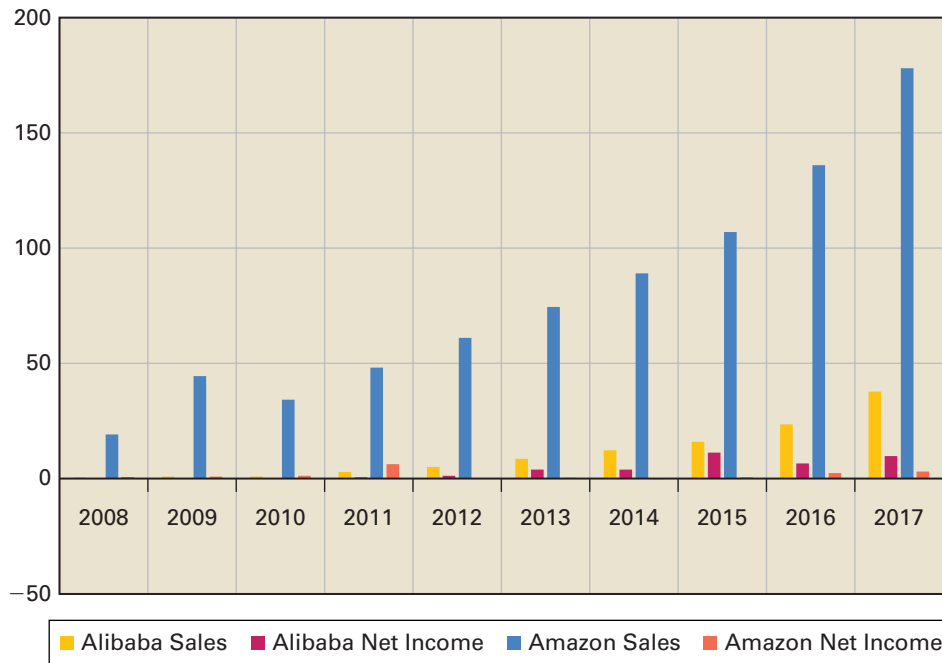
fix customer issues, enabling it to handle increasingly complex problems over time. Automating customer service improves the efficiency of both Alibaba and its merchants. As noted by Ming Zeng, “Previously, most large sellers on our platform would hire temp workers to handle consumer inquiries during big events. Not anymore. During Alibaba’s biggest sales day in 2017, the chatbot handled more than 95% of customer questions, responding to some 3.5 million consumers.”¹¹

Alibaba also created a spinoff company, Aliyun, that offered cloud-based services to Chinese e-commerce vendors, banks, game developers, and others. Aliyun developed its own cloud-based smartphone operating system, Aliyun OS, which enabled sellers to manage their online storefronts using a smartphone.

The cornerstone of Alibaba’s advantage was data. All transactions handled by Alibaba, Taobao, Tmall, Alipay, Cainiao, and Aliyun generate data, and that data, in turn, is fed into algorithmic engines

that yield increasingly precise predictions about things like consumer preferences, inventory needs, and investment returns.¹² In the same way that each Google search makes the Google search engine more accurate at gauging what a user is looking for, each transaction in Alibaba’s rapidly growing ecosystem makes its platform smarter. In systems based on data and networks, size matters; the volume of data input into the system can create a self-reinforcing advantage. This raised important questions about the future of companies like Alibaba, Amazon, Tencent, and Google. Would these markets tend to become natural monopolies? Would they hold dangerous amounts of power over consumers? And would they ultimately try to unseat each other? Though these companies have largely avoided direct competition by dominating different parts of the world, each is becoming increasingly global.

Analysts also noted that, although Alibaba’s sales were only about one-fifth of Amazon’s in 2017, Alibaba was far more profitable than Amazon, with Alibaba

Figure 3 Comparison of Financial Performance between Alibaba and Amazon, 2008–2017, \$US Billions

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Alibaba										
ROS	26%	26%	27%	21%	24%	44%	32%	71%	28%	26%
ROIC	20%	27%	24%	12%	23%	48%	14%	11%	12%	9%
Amazon										
ROS	3%	2%	4%	13%	0%	0%	0%	1%	2%	2%
ROIC	22%	21%	17%	8%	0%	0%	-1%	3%	8%	7%

*Alibaba's fiscal year ends in March so dates are adjusted to show the previous year to facilitate comparison to Amazon (e.g., Alibaba FY ending 03/18 shown as 2017).

earning \$9.7 billion in net income, over three times Amazon's \$US 3 billion (see Figure 3 and financial statements in Exhibits 1 and 2). The financial ratios told a powerful story about Alibaba's strategy of owning the platform but not the products: Alibaba was significantly more profitable, and it enjoyed much higher returns on invested capital.

C13-2 THE FUTURE

Alibaba's early growth had been primarily driven by the enormous underserved population of Chinese consumers and small businesses, but in 2017 Jack Ma made it clear that it was time for Alibaba to have

Exhibit 1 Alibaba Group's Consolidated Income Statement, \$US Thousands

Period Ending:	3/31/2018	3/31/2017	3/31/2016	3/31/2015
Total Revenue	\$ 39,777,000	\$ 22,965,000	\$ 15,638,000	\$ 12,292,000
Cost of Revenue	\$ 17,014,000	\$ 8,631,000	\$ 5,312,000	\$ 3,844,000
Gross Profit	\$ 22,764,000	\$ 14,334,000	\$ 10,327,000	\$ 8,447,000
Research and Development	\$ 3,617,000	\$ 2,475,000	\$ 2,132,000	\$ 1,719,000
Sales, General and Admin.	\$ 6,920,000	\$ 4,143,000	\$ 3,172,000	\$ 2,631,000
Non-Recurring Items	\$ 79,000	\$ 0	\$ 70,000	\$ 28,000
Other Operating Items	\$ 1,132,000	\$ 743,000	\$ 453,000	\$ 337,000
Operating Income	\$ 11,017,000	\$ 6,973,000	\$ 4,500,000	\$ 3,732,000
Add'l income/expense items	\$ 5,508,000	\$ 2,125,000	\$ 8,397,000	\$ 1,926,000
Earnings Before Interest and Tax	\$ 16,525,000	\$ 9,098,000	\$ 12,897,000	\$ 5,658,000
Interest Expense	\$ 567,000	\$ 388,000	\$ 301,000	\$ 444,000
Earnings Before Tax	\$ 15,958,000	\$ 8,710,000	\$ 12,596,000	\$ 5,214,000
Income Tax	\$ 2,893,000	\$ 1,999,000	\$ 1,306,000	\$ 1,035,000
Minority Interest	\$ 426,000	\$ 355,000	\$ 26,000	(\$ 10,000)
Equity Earnings/Loss Unconsolidated Subsidiary	(\$ 3,305,000)	(\$ 729,000)	(\$ 267,000)	(\$ 256,000)
Net Income-Cont. Operations	\$ 10,187,000	\$ 6,337,000	\$ 11,049,000	\$ 3,913,000
Net Income	\$ 10,187,000	\$ 6,337,000	\$ 11,049,000	\$ 3,913,000
Net Income Applicable to Common Shareholders	\$ 10,170,000	\$ 6,337,000	\$ 11,049,000	\$ 3,895,000

Data from Nasdaq.com.

a bigger presence in the United States and Europe. While many pressed Ma to use Taobao and Tmall to sell to U.S. consumers, Ma demonstrated his political savvy by turning the equation around and focusing on helping U.S. businesses reach the Chinese market. In a meeting with U.S. president Donald Trump in 2017, Ma promised to sign up one million U.S. small businesses to Taobao and Tmall to sell to Chinese consumers over the next five years and predicted that each small business would likely hire at least one new

employee as a result of increased sales, hence providing one million new jobs in the United States. Trump was delighted by the promise, and declared to a roomful of press, "Jack and I are going to do some great things."¹³

However, on September 10, 2018, Jack Ma's 54th birthday, he stunned the world by announcing that he would be retiring as Alibaba's chairman in exactly one year. Ma was now China's richest man, with a net worth of \$40 billion, and was determined to now focus his efforts on education and philanthropy.

Exhibit 2 Alibaba Group's Balance Sheet, \$US Thousands

Period Ending:	3/31/2018	3/31/2017	3/31/2016	3/31/2015
Cash and Cash Equivalents	\$ 32,221,000	\$ 21,241,000	\$ 16,724,000	\$ 17,822,000
Short-Term Investments	\$ 1,733,000	\$ 1,025,000	\$ 1,373,000	\$ 2,872,000
Net Receivables	\$ 0	\$ 0	\$ 0	\$ 0
Inventory	\$ 0	\$ 0	\$ 0	\$ 0
Other Current Assets	\$ 6,871,000	\$ 4,122,000	\$ 2,627,000	\$ 2,228,000
Total Current Assets	\$ 40,824,000	\$ 26,388,000	\$ 20,724,000	\$ 22,922,000
Long-Term Investments	\$ 28,274,000	\$ 22,029,000	\$ 18,686,000	\$ 7,821,000
Fixed Assets	\$ 10,568,000	\$ 2,932,000	\$ 2,107,000	\$ 1,474,000
Goodwill	\$ 25,772,000	\$ 18,198,000	\$ 12,624,000	\$ 6,764,000
Intangible Assets	\$ 5,856,000	\$ 2,728,000	\$ 1,275,000	\$ 1,561,000
Other Assets	\$ 2,686,000	\$ 1,263,000	\$ 902,000	\$ 659,000
Deferred Asset Charges	\$ 0	\$ 0	\$ 0	\$ 0
Total Assets	\$ 113,979,000	\$ 73,538,000	\$ 56,318,000	\$ 41,202,000
Accounts Payable	\$ 15,076,000	\$ 7,706,000	\$ 4,657,000	\$ 3,640,000
Short-Term Debt / Current Portion of Long-Term Debt	\$ 1,443,000	\$ 2,498,000	\$ 665,000	\$ 321,000
Other Current Liabilities	\$ 5,066,000	\$ 3,372,000	\$ 2,723,000	\$ 2,439,000
Total Current Liabilities	\$ 21,586,000	\$ 13,576,000	\$ 8,046,000	\$ 6,399,000
Long-Term Debt	\$ 18,997,000	\$ 11,149,000	\$ 8,235,000	\$ 8,162,000
Other Liabilities	\$ 325,000	\$ 187,000	\$ 335,000	\$ 347,000
Deferred Liability Charges	\$ 3,227,000	\$ 1,596,000	\$ 1,066,000	\$ 797,000
Misc. Stocks	\$ 477,000	\$ 434,000	\$ 54,000	\$ 106,000
Minority Interest	\$ 11,224,000	\$ 6,142,000	\$ 5,033,000	\$ 1,931,000
Total Liabilities	\$ 55,836,000	\$ 33,084,000	\$ 22,768,000	\$ 17,742,000
Common Stocks	\$ 0	\$ 0	\$ 0	\$ 0
Capital Surplus	\$ 29,684,000	\$ 23,881,000	\$ 20,441,000	\$ 18,895,000
Retained Earnings	\$ 27,394,000	\$ 15,752,000	\$ 12,176,000	\$ 4,007,000
Treasury Stock	(\$ 355,000)	(\$ 410,000)	\$ 0	\$ 0
Other Equity	\$ 1,421,000	\$ 1,230,000	\$ 932,000	\$ 557,000
Total Equity	\$ 58,144,000	\$ 40,454,000	\$ 33,550,000	\$ 23,459,000
Total Liabilities & Equity	\$ 113,980,000	\$ 73,538,000	\$ 56,318,000	\$ 41,201,000

Data from Nasdaq.com.

As he wrote in his letter to customers, employees and shareholders,

I still have lots of dreams to pursue. Those who know me know that I do not like to sit idle. I plan on continuing my role as the founding partner in the Alibaba Partnership and contribute to the work of the partnership. I also want to return to

education, which excites me with so much blessing because this is what I love to do. The world is big, and I am still young, so I want to try new things—because what if new dreams can be realized?!

The one thing I can promise everyone is this: Alibaba was never about Jack Ma, but Jack Ma will forever belong to Alibaba.

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CASE 14

ENDING HIV? SANGAMO AND GENE EDITING

*This case was prepared by Melissa A. Schilling
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Sangamo Biosciences was founded in 1995 by Edward Lanphier, a man with 25 years of experience in the pharmaceutical and biotechnology industries who had held senior management positions at Somatix Therapy Corporation, BioGrowth, Biotherapeutics, and Synergen. Sangamo's focus was the development of zinc-finger nucleases (ZFNs), a technology that could edit the genetic code of a living individual to correct genetically based diseases (e.g., hemophilia, sickle cell anemia, Huntington's disease, and many others), or to confer genetic resistance to nongenetically-based diseases.

ZFNs work by cutting DNA in a chosen spot. The cell then typically attempts to repair the cut either by polishing the two ends of DNA and sealing them back together, or by copying the corresponding section of DNA in the other half of the chromosome pair. Since many diseases occur because of a gene on a single half of the chromosome pair, this "homologous substitution" from the other chromosome corrects the faulty gene. Alternatively, scientists can provide a template gene sequence to substitute for the cleaved portion of the DNA (see Figure 1).

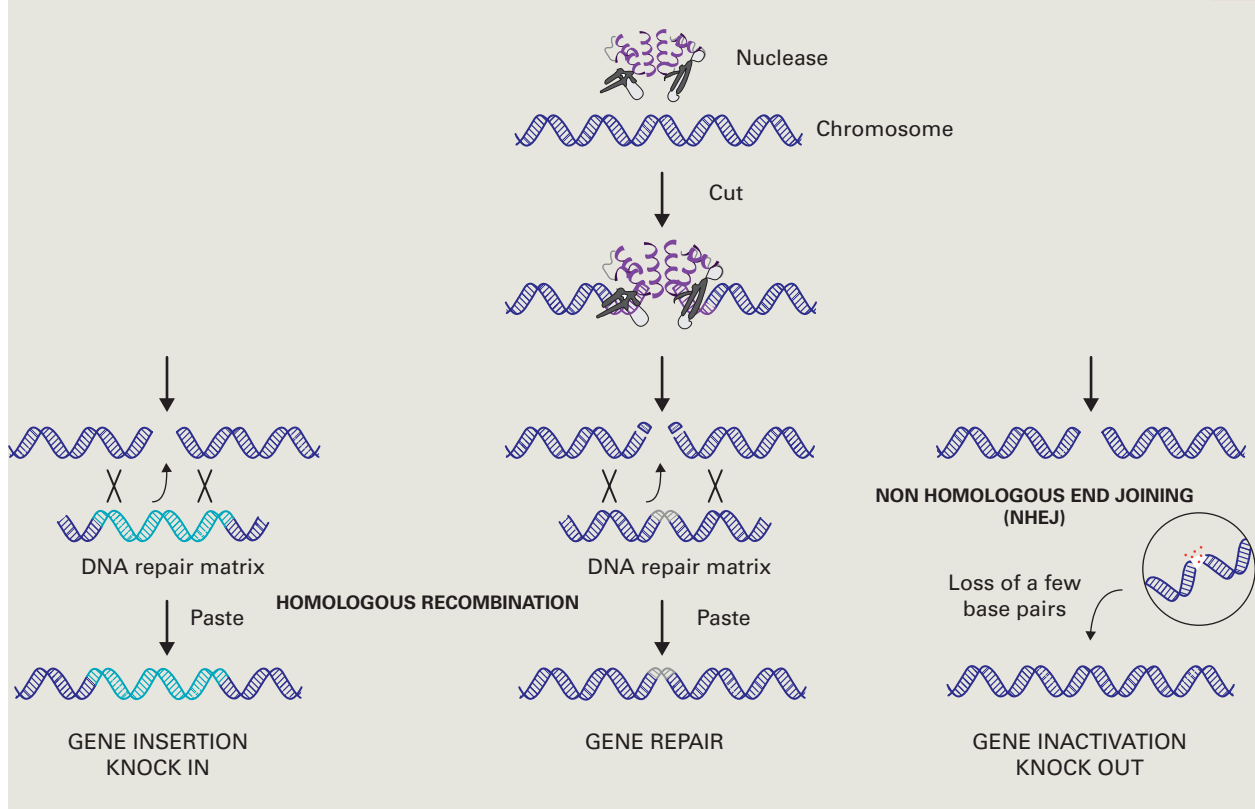
Gene editing offered a radical new way to cure or prevent diseases, but it required a significant amount

of R&D work both to develop ZFNs that were precise and reliable enough to safely edit human genes, and to develop a delivery mechanism that would ensure the ZFNs penetrated enough cells to make a difference. Clinical trials to establish the treatment's safety and efficacy to get Food and Drug Administration (FDA) approval would be a huge hurdle to overcome.

Because Sangamo had no commercially available products, the company was entirely reliant upon grants and funding from partners for its survival. Though the company's ZFN technology had been overshadowed in the press by CRISPR-Cas9 in the last few years, interest in ZFNs appeared to be heating up. In early 2018, Gilead Sciences signed a \$3-billion deal with Sangamo to develop a ZFN-based method of harnessing a patient's own immune system to battle cancer,¹ and Case Western University had received an \$11-million grant from the U.S. National Institute of Health to work with Sangamo on its HIV program.² The company was already almost a year into Phase 2 testing of one of its HIV programs—was Sangamo at the precipice of curing HIV? And if so, did it make more sense to try to commercialize the drug alone or to work with a partner?"

Tono Balaguer/holbox/Shutterstock.com



Figure 1 Gene Editing with Nucleases

C14-1 CORRECTING MONOGENIC DISEASES

Monogenic diseases are caused by a defect in a single gene. One example is hemophilia. People with hemophilia lack sufficient clotting factors in their blood, resulting in longer bleeding after an injury. Internal bleeding, in particular, can cause significant damage and be life threatening. Individuals with hemophilia need regular infusions to replace the clotting factor in their blood. Sangamo's ZFN treatment offered the hope of a cure, rather than lifelong treatment.³ Sangamo had already demonstrated that its ZFN method for treating hemophilia worked in mice, and was preparing to file an application to begin

clinical trials. Sangamo also had developed treatments for sickle cell anemia and beta-thalassemia, also monogenic diseases. Normally, patients with sickle cell anemia or beta-thalassemia require lifelong care or bone marrow transplants, at great expense and risk. Sangamo, however, had shown in the laboratory that its treatment could knock out the *BCL11A* gene causing these diseases.

Another example of a monogenic disease is Huntington's disease (HD). HD is a devastating neurologic disease in which people lose their motor coordination, cognition, and memory. The disease is progressive and usually fatal within 10 to 20 years of onset. It is caused by a mutation in a single gene, the Huntington gene, which results in a greater-than-usual number of repeats of the CAG DNA sequence. This in turn results in a mutant form of the Huntington protein accumulating in cells. Most individuals inherit only one copy of the faulty gene, and

it only takes one copy to produce the disease. Furthermore, 50% of the children of an HD sufferer inherit the disease. Though previous research had explored ways to decrease the Huntington protein in cells, it turned out that the normal form of the protein is essential, and mice lacking the normal Huntington protein died before birth. Sangamo, however, developed a ZFN method to identify and “turn off” only the faulty gene. This meant that an individual would have only one operational copy of the gene, which would continue to produce the normal form of the Huntington protein.

Whereas there were treatments available that could at least stop or slow the progression of hemophilia, sickle cell anemia, and beta-thalassemia, there were no such treatments for Huntington’s: Nothing had been found that could halt its progression. Thus, Sangamo’s presentation of promising results for its HD treatment was big news. Its success could mean the difference between life and death for sufferers of HD.

C14-2 DRUG DEVELOPMENT AND CLINICAL TRIALS

Drug development is hugely expensive and risky. Most studies indicate that it costs at least \$1.5 billion and a decade of research to bring a new FDA-approved

pharmaceutical product to market.⁴ The statistics on drug development costs are, in fact, an understatement because they do not fully account for the costs of the many failed drugs that are abandoned earlier in the development process. In the pharmaceutical industry, only one out of every 5,000 compounds tested makes it to the pharmacist’s shelf, and only one-third of those will be successful enough to recoup the investment in researching and developing the original 5,000 compounds (see Figure 2).⁵

Accounting for investment in failed drug efforts suggests that the cost of drug development is much higher than is typically reported. A study of R&D spending and new drug approvals published in *Forbes* in 2012, for example, found that firms spent over \$6 billion per approved drug (see Table 1).^{6,7}

Most studies suggested that the biggest cost in drug development was the cost of clinical trials—a cost borne by the sponsoring organization (usually the company that developed the drug). To be approved by the FDA in the United States, most drugs must go through several phases of trials. First, in preclinical studies, the company will usually assess the safety and efficacy of the drug using animals. In **Phase 0** trials, a single dose (smaller than what would be used to provide the therapeutic treatment) is given to a small number (10 to 15) of human subjects to evaluate what the drug does to the body. If successful, the drug may be entered into **Phase 1** clinical trials, wherein the drug is given to a somewhat larger group of people (20 to 80)

Figure 2 The New Product Development Funnel in Pharmaceuticals

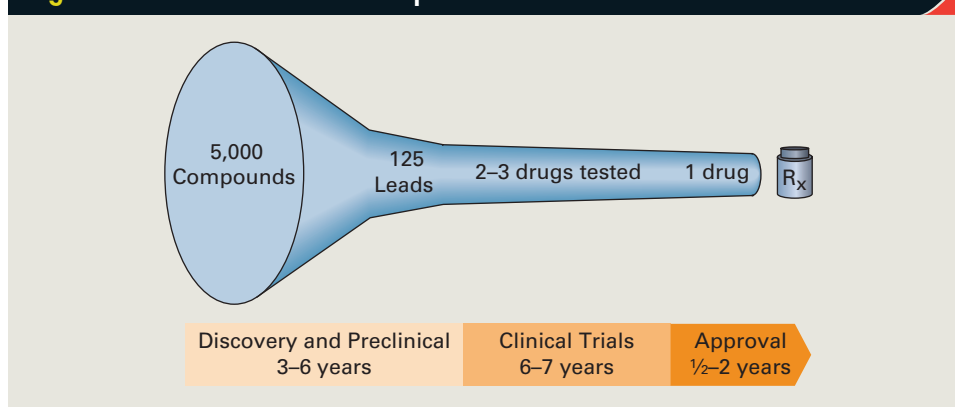


Table 1 Research Spending and New Drug Approvals⁸

Company	Number of Drugs Approved	R&D Spending per Drug (\$Mil)	Total R&D Spending 1997–2011 (\$Mil)
AstraZeneca	5	11,790.93	58,955
GlaxoSmithKline	10	8,170.81	81,708
Sanofi	8	7,909.26	63,274
Roche Holding	11	7,803.77	85,841
Pfizer	14	7,727.03	108,178
Johnson & Johnson	15	5,885.65	88,285
Eli Lilly & Co	11	4,577.04	50,347
Abbott Laboratories	8	4,496.21	35,970
Merck & Co Inc	16	4,209.99	67,360
Bristol-Myers Squibb Co	11	4,152.26	45,675
Novartis	21	3,983.13	83,646
Amgen Inc	9	3,692.14	33,229
Average:	11.58	6,199.85	66,872.33

Sources: InnoThink Center for Research in Biomedical Innovation; Thomson Reuters Fundamentals via FactSet Research Systems.

to evaluate its safety, determine dosage ranges, and identify side effects. Phase 1 trials primarily assess the safety of the drug. In **Phase 2** trials, the drug is given to larger groups of people (100 to 300) to evaluate its effectiveness and further evaluate its safety and side effects. Finally, in **Phase 3**, the drug is given to very large groups of subjects (1,000 to 3,000) to confirm its effectiveness compared to alternatives and gather still further information on its safety.

Finally, if the drug successfully makes it through Phase 3 clinical trials, the sponsoring organization can apply for a new drug approval from the FDA. The entire process typically takes at least 10 to 12 years, costs hundreds of millions of dollars, and, as shown in Figure 2, the vast majority of new

drug projects do not make it through the process successfully.

C14-3 COMPETING TECHNOLOGIES

As if drug development was not risky enough, Sangamo also faced the threat that its ZFN technology would be rendered obsolete by other gene-editing alternatives. In 2018, most people were focused on a different gene-editing technology: CRISPR-Cas9. CRISPR-Cas9 technology harnessed a natural defense system of bacteria that has evolved to recognize

and eliminate foreign DNA, giving bacteria “adaptive immunity.” CRISPR was far simpler and more efficient than ZFNs, fueling enormous excitement over its potential. However, because CRISPR used a very short RNA sequence to guide its activity, some people worried that its effects wouldn’t be precise enough; that is, it could result in “off-target” cleavages—a highly undesirable result. Many scientists were thus working on developing more precise and safe ways of using CRISPR, including a method of editing DNA without cutting it.⁹

CRISPR appeared to be the front-runner, but a lengthy patent battle over rights to the CRISPR technology, along with the ease at which anyone could work with CRISPR, had created uncertainty about who would benefit financially from the technology. By 2018, CRISPR was already widely used in universities and in citizen science laboratories (lab spaces where nonscientists learn lab techniques and conduct experiments). Sangamo’s ZFN technology, on the other hand, was patented and had higher technological barriers to entry. These two traits posed both benefits and costs to the development of ZFN technology.

C14-4 SANGAMO'S PARTNERSHIPS

Biotechnology firms can spend years accumulating losses while they develop treatments. Sangamo was no exception—it had yet to make any money from sale of its products. All of its revenues came from research grants and collaboration agreements (see financials in Figure 5), and it outspent those revenues in R&D, accumulating losses in each year. This highlights the challenging nature of drug development: Though the company had developed groundbreaking treatments that could radically improve the lives of several different patient populations, it was financially quite vulnerable.

As of 2018, Sangamo had only 182 full-time employees; it did not have the resources to do its own clinical testing, manufacturing, or marketing. For these stages of drug development, Sangamo would be

reliant on partnerships with much larger firms. In addition to partnerships with Gilead and Case Western University, Sangamo also had partnerships with Pfizer, Bioverativ, and Shire Pharmaceuticals.

C14-4a Pfizer

Pfizer, a New York City-based company with \$53 billion in sales and almost 100,000 employees, was one of the largest pharmaceutical companies in the world. In May 2017, Sangamo had entered into an R&D alliance and exclusive licensing agreement with Pfizer to develop a gene-editing treatment for hemophilia. The deal included upfront payments and royalty payments worth about \$545 million. Then, in early 2018, Sangamo and Pfizer announced that they had also signed a \$162-million deal to work together to develop a treatment for the genetic version of amyotrophic lateral sclerosis (Lou Gehrig’s disease).¹⁰ Pfizer had clinical testing, manufacturing, and sales capabilities all over the world.

C14-4b Bioverativ

Bioverativ, a spinoff of Biogen, was a Waltham, Massachusetts-based biotech firm with about 400 employees. Bioverativ was working with Sangamo on treatments for sickle cell anemia and beta-thalassemia. Under the terms of the deal, Bioverativ would give Sangamo \$20 million upfront, and Sangamo would be responsible for performing all R&D on the treatments until they could be proven to work on humans. Bioverativ then would take over with clinical trials, manufacturing, and marketing, and Sangamo would get milestone payments of up to \$300 million and double-digit royalties if the products earned sales. In early 2018, Bioverativ was acquired by the French pharmaceutical company Sanofi. With over 110,000 employees, Sanofi was slightly larger than Pfizer, and had clinical trials, manufacturing, and distribution capabilities all over the world.

C14-4c Shire AG

Shire was one of the United Kingdom’s largest specialty biopharmaceutical companies, with just over

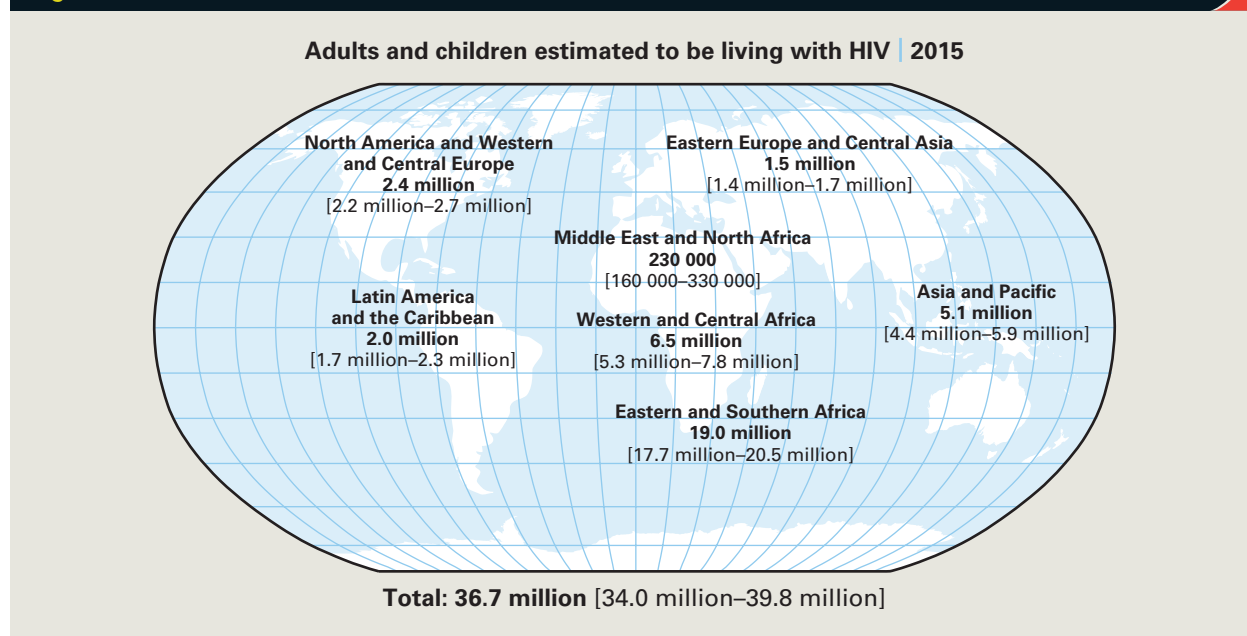
\$15 billion in revenues and about 22,000 employees in 2017. One of its main products was Lamivudine, an antiretroviral therapy used to treat HIV. The company had a large, well-established, global marketing and sales infrastructure. Though the company earned the majority (70%) of its sales in North America, it had direct operations in about 30 countries, and sold products to more than 50 countries. Shire was known for being a highly acquisitive company, having acquired NPS pharmaceuticals, ViroPharma, Janssen Pharmaceuticals, and Advanced BioHealing just in the last few years. Its two most well-known drugs were treatments for attention deficit disorder (ADD), Vyvanse and Adderall.

In January 2012, Sangamo entered into an agreement with Shire AG to further develop its ZNF treatments for hemophilia, Huntington's disease, and other diseases. Like the Bioerative deal, Shire had agreed to pay Sangamo an upfront fee, plus milestone fees of up to \$213.5 million, for each of seven targets. However, in 2015, the firms revised their agreements so that Sangamo would have exclusive worldwide rights to the hemophilia treatments, and Shire would have exclusive rights to the Huntington's disease treatments.¹¹

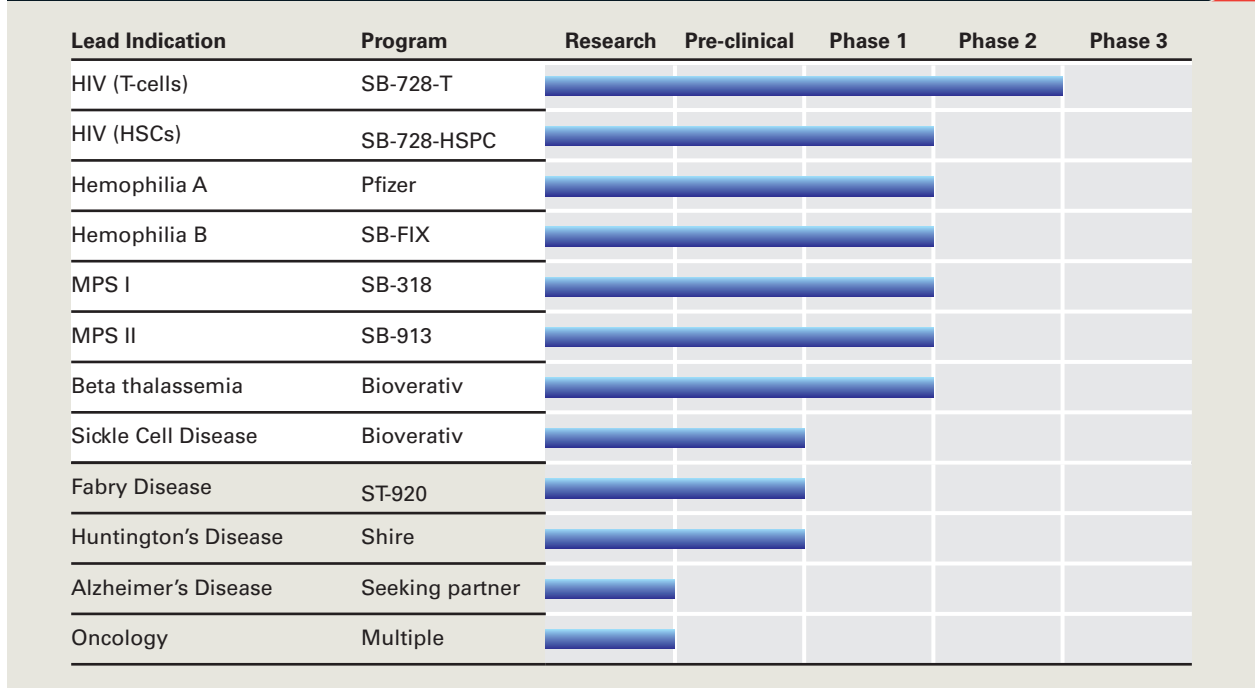
C14-5 A WORLD-CHANGING OPPORTUNITY: CREATING IMMUNITY TO HIV

One of the most exciting potential applications of ZFNs was creating a treatment that could cure HIV. In 2015, approximately 37 million people were living with HIV/AIDS worldwide (see Figure 3). However, a small percentage of people have a mutation in their CCR5 gene—a gene that makes a protein found on the surface of cells. The mutation makes it difficult for HIV to enter the cells. Individuals receive their genes in pairs—one on a specific chromosome from one parent, and another on the paired chromosome from the other parent. Individuals with one copy of the mutated gene have some protection against HIV infection, and experience a less severe form of the disease if infection occurs. Individuals with two copies of the mutated CCR5 gene are typically immune to HIV.

Figure 3 HIV/AIDS Worldwide, 2015



Source: UNAIDS, 2018.

Figure 4 Summary of Sangamo's Research Programs and Drug Pipeline

Source: www.sangamo.com.

These gene mutations appear in up to 20% of people of European descent (scientists hypothesize that the gene mutation conferred resistance to the bubonic plague or smallpox epidemics, leading this gene to be more prevalent in populations that survived such epidemics). People with the mutation appear to suffer no health problems from the mutation.

The potential for exploiting the CCR5 mutation gained widespread attention when a study published in 2011 revealed that an AIDS patient with leukemia had received a bone marrow stem-cell transplant from a donor with the CCR5 mutation, and subsequently appeared to be cured of AIDS. After the bone marrow transplant, the patient was able to discontinue all antiretroviral therapy, and the virus did not reappear in his blood.¹²

Finding a bone marrow match with a CCR5 mutation is extremely unlikely, and getting a bone marrow transplant is risky. Sangamo thus decided to use its ZFN technology to develop a simpler method by which individuals could be given the mutation. Early results released by Sangamo in 2014 were promising:

The treatment appeared to be well tolerated, and reduced the viral load of several patients who had been taken off of their antiretroviral therapy for 12 weeks during the study.¹³ However, the percent of cells showing the mutation declined over time, which meant further work needed to be done to find a way to modify enough of the patient's genes for the therapy to be a reliable, permanent treatment.

C14-6 THE FUTURE

Sangamo clearly had a lot on its plate. It had revolutionary treatments in clinical trials for several major diseases, including the potential to create a cure for HIV. In the short term, its business was focused on developing treatments through early-stage clinical trials that it would hand over to partners who had deeper pockets and were better positioned to conduct late-stage clinical trials, production, and marketing. However, in the long run, Sangamo wanted

Figure 5 Selected Financial Data

	Year Ended December 31,				
	2017	2016	2015	2014	2013
	(In thousands, except per share data)				
Statement of Operations Data:					
Total revenues	\$ 36,567	\$ 19,389	\$ 39,539	\$ 45,870	\$ 24,133
Operating expenses:					
Research and development	65,728	65,618	67,198	56,974	37,039
General and administrative	27,200	26,330	19,197	15,677	13,800
Total operating expenses	92,928	91,948	86,395	72,651	50,839
Loss from operations	(56,361)	(72,559)	(46,856)	(26,781)	(26,706)
Other income (expense)	1,793	887	431	364	82
Benefit from income taxes	—	14	5,722	—	—
Net loss	\$ (54,568)	\$ (71,658)	\$ (40,703)	\$ (26,417)	\$ (26,624)
Basic and diluted net loss per share	\$ (0.70)	\$ (1.02)	\$ (0.58)	\$ (0.39)	\$ (0.48)
Shares used in computing basic and diluted net loss per share	78,084	70,553	69,757	67,022	55,974
	As of December 31,				
	2017	2016	2015	2014	2013
	(In thousands)				
Balance Sheet Data:					
Cash, cash equivalents, marketable securities, and interest receivable	\$ 244,560	\$ 142,759	\$ 209,307	\$ 226,645	\$ 131,814
Working capital	203,538	136,289	192,485	169,997	87,143
Total assets	286,741	157,891	217,235	243,212	140,838
Accumulated deficit	(495,479)	(440,911)	(369,253)	(328,550)	(302,133)
Total stockholders' equity	187,900	136,195	192,439	206,633	121,710

to be able to do all of its own clinical testing, production, and marketing, to better capture the value of its innovative technologies. Currently, Sangamo had no revenues from actual products—only grants from research foundations and cash from upfront

fees paid by its licensing partners. It was also spending over \$65 million a year on R&D, and posting huge losses, year after year. Sangamo thus had to carefully weigh the pros and cons of developing its HIV treatment alone.

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CASE 15

TESLA, INC. IN 2018

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In 2018, Tesla was one of the most talked about companies in the world. What had started as an unlikely and risky venture to produce an all-electric luxury sports car had grown into a company with almost \$12 billion in annual revenues that produced multiple car models, owned Solar City (a solar panel leasing company), and produced energy storage systems (e.g., Powerwall) and solar roofs (see select items and segment data in Table 1, and full financials in Exhibits 1 and 2). Though it was not yet posting profits, it had a market capitalization of over \$47 billion. Most importantly, it looked like it might survive—perhaps even thrive. This was astonishing, because there had been no other successful auto manufacturing startup in the United States since the 1920s.

The road leading up to Tesla's position in 2018 had been anything but smooth, and many were still betting against the company. In fact, as of August 2018, the company had over \$13 billion worth of shares sold short (i.e., shares that investors borrow to sell, betting that the price will drop so that they can buy shares to replace those borrowed at a lower price).¹

In 2017, Tesla delivered 103,020 cars (see Table 2), a 35-percent rise over its 2016 figures. In the first quarter of 2018, Tesla delivered 29,980 cars, of which almost one-third were its newest model, the Model 3. The company also had a growing waiting list for all three cars, highlighting both a strength and a weakness of the company: People were enthusiastic about the cars, and demand was high, but Tesla was having trouble ramping up production to meet that demand.

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Table 1 Select Items from Tesla Income Statement, in \$US Thousands

Items from Income Statement	
Automotive Sales	8,534,752
Automotive Leasing	1,106,548
Total Automotive Revenues	9,641,300
Energy Generation and Storage	1,001,185
Services and other	1,116,266
Total Revenues	11,758,751
Cost of Revenue	9,536,24
Gross Profit	2,222,487
R&D Expense	1,278,073
Sales, General and Admin.	2,476,500
Operating Income	(1,632,086)

Source: Tesla 2018 10K.

Some of the production capacity for its earlier models, Model S and Model X, had been reallocated to production of the new Model 3, and getting the new model's production up and running had been rougher than expected. The company's CEO, Elon Musk, had forecasted producing 5,000 Model 3 cars

Table 2 Tesla deliveries in 2017 and 2018

	<i>Model S</i>	<i>Model X</i>	<i>Model 3</i>	<i>Total</i>
2017				
Q1	13,450	11,550		25,000
Q2	12,000	10,000		22,000
Q3	14,065	11,865	220	26,150
Q4	15,200	13,120	1,550	29,870
<i>Total</i>	54,715	46,535	1,770	103,020
2018				
Q1	11,730	10,070	8,180	29,980

a week by the end of the first quarter of 2018, but instead production was closer to 1,000 cars a week by the end of the first quarter, triggering an onslaught of criticism by analysts.

To make matters worse, the company's rapid expansion of production capacity meant that it would likely require additional capital within the year, causing stockholders to worry about dilution of their shares. Tesla had made bold moves and impressive progress, but there were lingering concerns over its viability. Would it be able to turn a sustainable profit on its automaking operations? In the niche market of luxury automobiles for the "eco-wealthy," it had a privileged position with customers who were relatively price-insensitive and were seeking a stylish, high-performance car that made an environmental statement. To compete for the mass market, the car would have to compete on value and efficiency with larger, more established rivals.

CI5-1 HISTORY OF TESLA

In 2003, an engineer named Martin Eberhard was looking for his next big project. A tall, slim man with a mop of gray hair, Eberhard was a serial entrepreneur who had launched a number of startups, including NuvoMedia, which he sold to Gemstar in a \$187-million deal. Eberhard was also looking for

a sports car that would be environmentally friendly—he had concerns about global warming and U.S. dependence on the Middle East for oil. When he didn't find the car of his dreams on the market, he began contemplating building one himself, even though he had zero experience in the auto industry. Eberhard noticed that many of the driveways that had a Toyota Prius hybrid electric vehicle (or "dorkmobile" as he called it) also had expensive sports cars in them, making him speculate that there could be a market for a high-performance, environmentally friendly car. As Eberhard explained: "It was clear that people weren't buying a Prius to save money on gas. Gas was selling close to inflation-adjusted all-time lows. They were buying them to make a statement about the environment."²

Eberhard began to consider a range of alternative fuel options for his car: hydrogen fuel cells, natural gas, diesel. However, he soon concluded that the highest efficiency and performance would come from an entirely electric vehicle. Luckily for Eberhard, Al Cocconi (founder of AC Propulsion and one of the original engineers for GM's ill-fated EV-1) had concluded the same thing and produced a car called the tzero. The tzero could go from zero to 60 miles per hour in 4.1 seconds, but it was powered with extremely heavy lead-acid batteries, limiting its range to about 60 miles between charges. Eberhard approached Cocconi with the idea of using lighter, lithium ion batteries, which offered six times more energy per pound. Cocconi was eager to try out the idea (he had, in fact, been experimenting with lithium ion batteries), and the resulting lithium ion powered tzero accelerated to 60 miles per hour in 3.6 seconds and could travel more than 300 miles. Eberhard licensed the electric-drive-train technology from AC Propulsion, and founded his company, Tesla Motors (named after Nikola Tesla, a late 19th- and early 20th-century inventor who developed, among other things, the AC electrical system used in the United States today).³

Meanwhile, another entrepreneur—one with much deeper pockets—was also interested in developing electric vehicles based on the tzero: Elon Musk. In 2002, Musk was a 31-year-old South African living in California, who had founded a company that ultimately became PayPal. After selling PayPal to eBay in 2002 for \$1.5 billion, he started a company called SpaceX with the ambitious goal of developing cheap, consumer space travel. (SpaceX's Dragon spacecraft

ultimately made history in May 2012 by becoming the first commercial vehicle to launch and dock at the International Space Station.⁴) Musk's assertive style and astonishing record of high-tech entrepreneurship made him one of the inspirations for the Tony Stark character in Jon Favreau's *Iron Man* movies.

Like Eberhard, Musk thought electric cars were the key to the United States achieving energy independence, and he approached Cocconi about buying the tzero. Tom Gage, who was then AC Propulsion's CEO, suggested that Musk collaborate with Eberhard. After a two-hour meeting in February 2004, Musk agreed to fund Eberhard's plan with \$6.3 million. He would be the company's chairman; Eberhard would serve as CEO.

CI5-1a The Roadster

The first Tesla prototype, the Roadster, was based on the \$45,000 Lotus Elise, a fast, light sports car that seemed perfect for the creation of Eberhard and Musk's grand idea (see Figure 1). The car would have 400 volts of electric potential, liquid-cooled, lithium ion batteries, and a series of silicon transistors that would give the car acceleration so powerful the driver would be pressed back against the seat.⁵ It would be nearly as fast as a Porsche 911 Turbo, would not create a single emission, and would get about 220 miles on a single charge from the kind of outlet you would use to power a washing machine.⁶ Furthermore, rather than creating new large-format batteries to

power the car, they connected nearly 7,000 small, cylindrical 18650 lithium-batteries together into a pack. 18650 batteries are the type used in many consumer devices, including laptops, and over a billion a year are manufactured. This meant that the Roadster was using a battery that had been thoroughly "debugged," that already had a good ratio of energy capacity to price, and for which there was already large production capacity.

While the men worked well together at first, personality clashes soon emerged. Both were technically savvy and vigorously addressed problems within the company. As described by Laurie Yoler, Eberhard was "just brilliant, and he has this tenacity that is unbelievable . . . He is the guy you want around in those early days when you have naysayers all around." However, Eberhard could also be abrasive and critical. Musk, in turn, was not content to just financially back the company. He began to get intimately involved in decisions about the car's design and the operation of the company. Soon Musk and Eberhard were at odds over decision making. Eberhard preferred to stick with the fiberglass body panels used in the original Elise; Musk wanted to use the lighter, stronger—and more expensive—carbon fiber. Eberhard had approved the hiring of PR professionals to build publicity for the car before its launch; Musk fired them, believing his own involvement and the car itself would generate enough publicity. Eberhard wanted to reap the cost savings of sticking with the Elise's original crash-tested, off-the-rack chassis; Musk wanted to lower the doorsills by two inches to make the car easier to enter and exit. Musk also wanted to redesign the headlights and door latches, and replace the Elise's seats with more comfortable—and again, more expensive—custom seats.⁷

In each case, Musk prevailed. He insisted that "you can't sell a \$100,000 car that looks like crap." Musk's views were hard to ignore given that, by 2007, he had put \$55 million of his own money into the company and had also raised money from wealthy friends, including eBay's second employee, Jeff Skoll, and Google founders Sergey Brin and Larry Page.

Musk's insistence on the best materials and parts, however, combined with Eberhard's inexperience as the manager of a major firm, resulted in delays and runaway costs. At a staff meeting in June 2007, Tom Colson, head of manufacturing, revealed a cost analysis suggesting that the average cost of the cars would

Figure 1 The Roadster



be over \$100,000 for the first 50, and would decline only slightly with increased volume. Eberhard could not answer the financial questions of the venture capitalists on Tesla's board, and their confidence in him was eroded even further by his defense: "In any other company it's the CFO that provides those numbers . . . I'm an engineer, not a finance guy." In August 2007, the board removed him as CEO and demoted him to president of technology. In October 2007, Musk arranged for Eberhard to be ousted from the company entirely. Furious, Eberhard started a blog detailing what he called the "Stealth Bloodbath" going on at Tesla, and he would later sue Musk for libel, slander, and breach of contract.⁸

Meanwhile, Eberhard's temporary replacement was Michael Marks, former CEO of Flextronics. Marks immediately created a priority list that identified items with potential to delay the car. He mothballed any plans for side projects and focused the entire business on streamlining costs and launching the Roadster. Despite his efforts, the Roadster missed its deadline for beginning production at the Lotus facility, triggering a \$4-million penalty built into the manufacturing contract Eberhard had signed with Lotus.

By the beginning of 2008, morale was at an all-time low. In March, however, production began on the Roadster, and by July 2008, most of the production problems had been forgotten as the first seven Roadsters (the "Founder's Series") hit the road. Enthusiasm for the cars was astonishing—an all-star list of celebrities made reservations to buy one, and everywhere a Roadster appeared, people stopped to stare.⁹

CI5-1b The Model S

Musk's ambitions did not stop at a niche, high-end car. He wanted to build a major U.S. auto company—a feat that had not been successfully accomplished since the 1920s. To do so, he knew he needed to introduce a less expensive car that could attract a higher volume of sales, if not quite the mass market. In June 2008, Tesla announced the Model S, a high-performance, all-electric sedan that would sell for a price ranging from \$57,400 to \$77,400 and compete against cars like the BMW 5-series (see Figure 2). The car would have an all-aluminum body and a range of up to 300 miles per charge.¹⁰ The Model S

Figure 2 The Model S



cost \$500 million to develop; however, offsetting that cost was a \$465-million loan Tesla received from the U.S. government to build the car, part of the U.S. government's initiative to promote the development of technologies that would help the United States achieve energy independence.

By May 2012, Tesla reported that it already had 10,000 reservations from customers hoping to buy the Model S, and Musk confidently claimed the company would soon be producing and selling 20,000 Model S cars per year. Musk also noted that after ramping up production, he expected to see "at least 10,000 units a year from demand in Europe and at least 5,000 in Asia."¹¹ The production of the Model S went more smoothly than that of the Roadster and, by June 2012, the first Model S cars rolled off the factory floor. The very first went to Jeff Skoll, eBay's first president and a major investor in Tesla. On the day of the launch, Skoll talked with Musk about whether it was harder to build a rocket or a car (referring to Musk's SpaceX company): "We decided it was a car. There isn't a lot of competition in space."¹²

To build the car, Tesla bought a recently closed automobile factory in Fremont, California, that had been used for the New United Motor Manufacturing Inc. (NUMMI) venture between Toyota and General Motors. The factory, which was capable of producing 1,000 cars a week, was far bigger than Tesla's immediate needs and would give the company room to grow. Furthermore, though the plant and the land it was on had been appraised at around \$1 billion before

NUMMI was shut down, Tesla was able to snap up the idled factory for \$42 million.¹³ Tesla also used the factory to produce battery packs for Toyota's RAV4, and a charger for a subcompact Daimler AG electric vehicle. These projects would supplement Tesla's income while also helping it to build scale and learning-curve efficiencies in its technologies.

In the first quarter of 2013, Tesla announced its first quarterly profit. The company had taken in \$562 million in revenues and reported an \$11.2-million profit. Then more good news came: The Model S had earned *Consumer Reports'* highest rating, and had outsold similarly priced BMW and Mercedes models in the first quarter.¹⁴ In May 2013, the company raised \$1 billion by issuing new shares, and then surprised investors by announcing that it had paid back its government loan. After repaying the loan, Tesla had some \$679 million in cash. Musk had announced confidently that he felt it was his obligation to pay back taxpayer money as soon as possible, and that the company had sufficient funds now to develop its next generation of automobiles without the loan and without issuing further shares.¹⁵

CI5-1c Model X

The Model X, unveiled in 2015, was designed as a high-end sport utility vehicle (SUV) that seats seven. Several distinctive features set it apart from the crowded luxury SUV market. In addition to being all-electric and able to go from zero to 60 miles per hour in just 3.2 seconds, it featured a panoramic windshield and distinctive, gull-wing doors (that open upward rather than swinging out) that open automatically in response to the driver's approach (see Figure 3). "It will triangulate my position," Musk said; "It will open the front door without touching. When you sit down, it will close the door."¹⁶ The Model X had a range of about 250 miles (like the Model S), but could tow 5,000 pounds. Its selling price would start at \$70,000, but could exceed \$100,000 depending on the options selected.

In the United States, the mid-size luxury SUV market was about five times the size of the high-end luxury sedan market, and the Model X rapidly attracted a long waiting list of people who placed deposits for the car. Musk projected a fast production ramp up, with goals of producing 85,000 to 90,000 Model X and S vehicles in 2017. Analysts at the time doubted

Figure 3 The Model X



that production could be ramped up so quickly, but despite several supplier parts shortages, Tesla's estimates ended up being very close to the mark: The company produced a total of 83,922 cars in 2017.¹⁷

Reviews of the car were mixed. *Consumer Reports* found the car disappointing, citing rear doors that were prone to pausing, the car's limited cargo capacity, and a ride that was "too firm and choppy for a \$110,000 car."¹⁸ *Car and Driver's* review also expressed doubts about the wing doors, but gave the car overall a rating of five out of five stars, stating, "There are no other electric SUVs at the moment. And even against fossil-fuel-fed SUVs, the Tesla's effortless performance and efficiency can't be matched."¹⁹

By the end of 2016, the Model X had accumulated total sales of 25,524, ranking it seventh among the bestselling plug-in cars in the world (notably, cumulative sales of Tesla Model S reached 158,159 by the end of 2016, making it the second-best-selling plug-in car in the world, behind only the Nissan Leaf).²⁰ By the end of 2017, cumulative sales of the Model X reached approximately 72,059 units.²¹

CI5-1d Model 3

To achieve Musk's goal of making a real dent in fossil fuel use, Tesla needed a truly mass-market car. Thus, in Fall 2016, he announced the Model 3, a midsize, all-electric, four-door sedan with a range of 220 to 310 miles (depending on the battery

Figure 4 The Model 3

option), and a base price of \$35,000 (see Figure 4). Within a week, Tesla had received 325,000 reservations for the car, ranking it among the most sought-after cars in the world. A review in *Road and Track* said that the “Model 3 proves that Tesla is thinking far beyond the edges of the Model S and X. Stepping out of the 3, you realize that, as far as the S and X pushed the envelope, they were always meant as intermediaries, stepping stones designed to draw people away from comfortable convention and into the future of the automobile.”²² *Popular Mechanics* gave the car its 2018 Car of the Year award, and *Automobile Magazine* gave it the 2018 Design of the Year Award.

The company announced an extremely ambitious production ramp-up plan, with a goal of being able to produce 500,000 total units (across all three models) by the end of 2018. This would require a massive expansion in production capacity that many experts viewed as unattainable in such a short time frame. The Model 3 would also incorporate new hardware and software to enable automated driving that created significant new design and production challenges. By early 2018, it was clear that Model 3 production was well behind Musk’s initial ambitious projections, and criticism from analysts and the press was coming at a furious pace. As one analyst at Cowen and Co. noted, “Tesla needs to slow down and more narrowly focus its vision and come up for a breath of fresh air . . . Elon Musk needs to stop over promising and under delivering.”²³

CI5-1e Obstacles to the Adoption of Electric Vehicles

Numerous obstacles had slowed the adoption of electric vehicles by the mass market. The first was the price: Electric vehicles were, typically, significantly more expensive than comparable internal-combustion models. Complicating matters further, most consumers had a very difficult time estimating the cost of ownership of an electric car. How much would they pay to charge at home? How much would they pay to charge away from home? What would the maintenance and repairs of an electric vehicle cost? How long would the battery and/or car last? Would it have resale value?

To lessen these concerns, Elon Musk set out to make the cost of owning a Tesla as certain as possible. First, he created a “Supercharger” network that Model S owners could use for free, for the life of the car. As noted by Musk, “The clearest way to convey the message that electric cars are actually better than gasoline cars is to say charging is free.”²⁴ The hitch was that a user had to be within range of a Supercharger station. Second, Musk announced an unprecedented price-protection guarantee that permitted a Model S owner to trade in the car for a designated residual value anytime within the first 3 years of the car’s life. Musk also announced plans to offer free repairs, and a free replacement car while a customer’s car was being repaired. Needless to say, analysts scratched their heads at the potential costs of these guarantees.

The second major obstacle to the adoption of electric vehicles was their limited range and the associated “range anxiety” (concerns about driving in places where owners were not sure they would be able to charge their cars). These concerns were not so much of an issue for Tesla cars due to their exceptionally long range. Other “mass-market” electric vehicles faced tougher hurdles. For example, though a Nissan Leaf could be charged at an ordinary, 110-volt household outlet, a full charge by this method could take 8 hours. Level 2 charging with a 220-volt outlet could shorten that time to 4 hours, but this was still completely impractical for recharging during a trip. DC Fast Chargers and Tesla’s “Superchargers” promised to fully charge a vehicle in 30 minutes or less. While this is still significantly longer than the typical 6-minute gasoline fill-up, it meant that charging could be feasible if it were colocated with other services that drivers might appreciate, such

as restaurants or coffee shops. DC Fast Chargers and Tesla's Supercharging stations were expensive to purchase and install – up to \$250,000 depending on the location – and they had to be close to heavy-duty electricity transformers. By June 2018, Tesla had deployed over 10,000 Superchargers around the world.²⁵

CI5-2 THE GLOBAL ELECTRIC VEHICLE MARKET

In 2017, global sales of electric vehicles reached nearly 1.3 million vehicles and were forecasted to hit almost 2 million by 2018. Though this still represented a tiny fraction of the global auto market – under 2% of total unit sales – it also represented extremely fast growth. Some analysts estimated that plug-in electric vehicles could account for half of all auto sales by 2027.²⁶ Globally, China led the pack in electric vehicle sales (see Figure 5), and Chinese automakers Beijing Automobile Industry Corporation (BAIC) and BYD

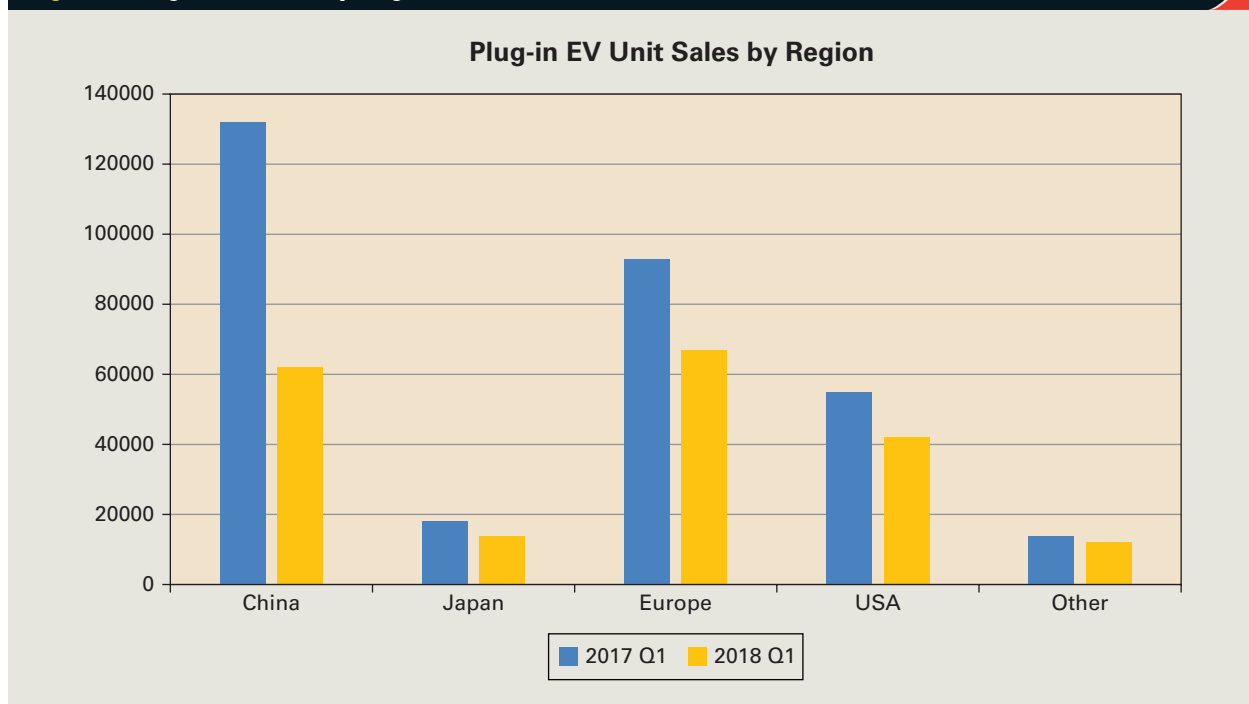
were among the biggest electric vehicle manufacturers in the world (see Table 3).

The Chinese auto market is the largest in the world, with over 28 million cars sold in 2017 compared to 17 million in the United States. Furthermore, the Chinese government had announced regulation that would push for 100% of autos to be electric by 2030.²⁷ Seizing on this opportunity, in July 2018, Musk announced that Tesla would build an auto manufacturing plant in Shanghai, China, capable of producing 500,000 cars a year (roughly the same as the target capacity of the Fremont plant).²⁸ Though full details of the deal had not yet been disclosed, it was revealed that the Shanghai government would help fund some of the capital costs of the project, and Tesla would own the plant independently, making it the first foreign auto manufacturer allowed to build a plant in China without a partner.

CI5-2a Tesla's Strategies

Automated Manufacturing Tesla's manufacturing process was highly automated, with extensive use of 8- to 12-foot-tall red robots (most produced by Kuka),

Figure 5 Plug-in EV Sales by Region



Source: EVVolumes, September 2018

Table 3 Global Deliveries of Electric Vehicles, 2017 and Q1 2018

<i>Electric Vehicle Model</i>	2018 Q1	YoY increase in same quarter sales	2017 Q1–Q4
<i>Nissan Leaf EV</i>	22,040	44%	47,211
<i>BJEV EC180/200 EV</i>	19,808	178%	78,079
<i>Toyota Prius Gen-2 PHEV</i>	12,005	14	50,833
<i>BYD Song PHEV</i>	11,784	NA	30,920
<i>Tesla Model S</i>	11,491	–19%	54,798
<i>Tesla Model X</i>	10,249	0%	46,688
<i>BYD Qin PHEV</i>	9,719	1431%	20,776
<i>Mitsubishi Outlander</i>	8,982	45%	25,530
<i>Renault Zoe EV</i>	8,825	–4%	31,535
<i>BMW i3EV/EREV</i>	8,405	10%	31,431
<i>Tesla Model 3</i>	8,180	NA	1,766
<i>JAC iEV6e</i>	7,800	NA	
<i>Chery eQ EV</i>	6,476	478%	27,444
<i>VW e-Golf EV</i>	6,229	234%	17,065
<i>Hyundai Ioniq Electric EV</i>	5,758	141%	15,497
<i>SAIC Roewe eRX5 PHEV</i>	5,707	77%	19,150
<i>Chevrolet Bolt EV</i>	5,160	51%	26,003
<i>SAIC Roewe i6 PHEV</i>	5,024	NA	8,925
<i>JMC E200 EV</i>	4,814	184%	12,347
<i>Chevrolet Volt EREV</i>	4,586	–30%	24,790
<i>BYD e5300/450 EV</i>	4,401	119%	23,632
<i>Zhi Dou D1/D2 EV</i>	4,023	–31%	42,342
<i>BMW 530e PHEV</i>	3,782	2526%	10,065
<i>VW Passat GTE PHEV</i>	3,668	9%	13,635
<i>Volvo XC60 PHEV</i>	3,620	NA	4,396
<i>Others</i>	109,873	30%	615,640
<i>Total</i>	312,409	58%	1,280,858

Source: EVVolumes, September 2018.

reminiscent of Iron Man. The largest robots were each named after characters from the Marvel series “X-Men” and could lift entire cars and maneuver them into position in the plant. Each robot had a single, multijointed arm. While typical auto factory robots perform only one function, Tesla’s robots perform up to four tasks: welding, riveting, bonding, and installing a component. Eight robots might work on a single car at each station of the assembly line in a choreographed pattern, like ballet. The robots produce up to 83 cars a day and can be reprogrammed to produce different models on the same assembly line.²⁹

Distribution Musk saw the franchise-dealership arrangements that U.S. car companies use to sell cars as an expensive, margin-killing model. Furthermore, selling an electric vehicle is more complicated than selling an internal combustion vehicle. Because consumers are less familiar with electric vehicles, they required more explanation about the electricity costs, service issues, potential resale value issues, and more. Musk thus chose to sell direct to consumers with boutique-like stores in upscale shopping malls where salespeople could provide high-touch service and answer customer questions without using high-pressure sales tactics. As of early 2018, the company operated 200 Tesla stores, 120 of which were outside of the United States. The company also sold direct to consumers on the Internet.

Musk’s decision to own and operate Tesla dealerships himself was a controversial move that provoked the ire of dealership networks. In the 1950s, regulation had been passed in the United States to protect dealers from exploitation by what were then very powerful auto manufacturers. This regulation prohibited auto manufacturers from competing with their own dealers by directly selling cars to consumers. The industry, however, had become increasingly competitive due to globalization, thereby lowering the power of auto manufacturers. Though most economic analysis suggested that the industry would be more efficient if the dealership restrictions were removed, the regulation remained largely unchallenged until Tesla’s entry.³⁰ Tesla was chipping away at them one by one. In 2018, over half of U.S. states still banned or limited direct sales, making it extremely difficult for Tesla to enter.

Marketing Tesla spends no money on advertising, nor does it have any plans to hire advertising agencies or run ads in the future. General Motors, by contrast,

spent \$3.2 billion in advertising in 2017; Toyota is estimated to have spent over \$4 billion; and in 2016, Nissan spent \$4.3 million on ads for the Leaf alone.³¹ Tesla has relied wholly on free attention from the press and the visibility of its cars, charging stations, and stores, which are located in high-traffic, high-rent locations. Thus far demand for Tesla vehicles has vastly exceeded supply, and there is a waitlist for each model.

CI5-3 NOT JUST A MOTOR COMPANY . . .

In 2016, Tesla began dropping the “Motors” from its name, signaling it was no longer just an auto company. In July 2016, Tesla opened Gigafactory 1 – a giant, lithium-ion battery factory built near Reno, Nevada, with its partner Panasonic. Musk justified the vertical integration move by arguing that the Gigafactory 1 would ultimately drive battery production costs down by as much as 30%. In addition to producing batteries for Tesla automobiles, the factory would build Powerwall and Powerpack energy storage devices. The Powerwall was a device for consumers to store solar energy at home. The Powerpack enabled industrial users to manage variable energy needs and provided a source for backup power.

In August 2016, Tesla also finalized a plan to acquire SolarCity, a company that leases and installs solar panels, for \$2.6 billion. Solar City was founded in 2006 by Peter and Lyndon Rive, Elon Musk’s cousins. Musk had sketched out the concept for the company around the time of Tesla’s founding and had helped his cousins start the company. He also served as its chairman of the board. The company had an innovative business model that enabled consumers to have solar panels installed on their roofs with no upfront costs, and to pay instead for the power generated by the panels at a price that was comparable to or less than the price they would normally pay for electricity.

In the same month that the Solar City acquisition plan was finalized, Musk announced that the company would begin producing house roofs made entirely from solar panels. “I think this is a really fundamental part of achieving differentiated product strategy, where you have a beautiful roof,” Musk said. “It’s not a thing on the roof. It is the roof.”³² By early 2018,

Tesla had also built a new Gigafactory 2 in Buffalo, New York, and reported that manufacture of solar roofs was already underway.

Tesla's cars had rapidly attracted a large and loyal fan base, and sales were growing at an impressive rate. However, designing and launching multiple major car

platforms while simultaneously building a large-scale battery company, a network of charging stations, and operating Solar City was a lot for a company to take on in its first 15 years. This left some analysts scratching their heads. Was Tesla trying to do too much too quickly?

Exhibit 1 Tesla Income Statement, in \$US Thousands

Revenue	12/31/2017	12/31/2016	12/31/2015	12/31/2014
Total Revenue	11,758,751	7,000,132	4,046,025	3,198,356
Cost of Revenue	9,536,264	5,400,875	3,122,522	2,316,685
Gross Profit	2,222,487	1,599,257	923,503	881,671
Operating Expenses				
Research Development	1,378,073	834,408	717,900	464,700
Selling General and Administrative	2,450,700	1,410,489	922,232	603,660
Nonrecurring	–	–	–	–
Others	–	–	–	–
Total Operating Expenses	13,365,037	7,645,772	4,762,654	3,385,045
Operating Income or Loss	–1,606,286	–645,640	–716,629	–186,689
Income from Continuing Operations				
Total Other Income/Expenses Net	–602,746	–100,708	–158,995	–97,947
Earnings Before Interest and Taxes	–1,606,286	–645,640	–716,629	–186,689
Interest Expense	–471,259	–191,810	–118,851	–100,886
Income Before Tax	–2,209,032	–746,348	–875,624	–284,636
Income Tax Expense	31,546	26,698	13,039	9,404
Minority Interest	1,395,080	1,152,214	1,152,214	1,152,214
Net Income from Continuing Ops	–2,240,578	–773,046	–888,663	–294,040
Non-recurring Events				
Discontinued Operations	–	–	–	–
Extraordinary Items	–	–	–	–
Effect of Accounting Changes	–	–	–	–
Other Items	–	–	–	–
Net Income				
Net Income	–1,961,400	–674,914	–888,663	–294,040
Preferred Stock and Other Adjustments	–	–	–	–
Net Income Applicable to Common Shares	–1,961,400	–674,914	–888,663	–294,040

Exhibit 2 Tesla Balance Sheet, in \$US Thousands

Period Ending	12/31/2017	12/31/2016	12/31/2015	12/31/2014
Current Assets				
Cash and Cash Equivalents	3,367,914	3,393,216	1,196,908	1,905,713
Short Term Investments	–	–	–	–
Net Receivables	515,381	499,142	168,965	226,604
Inventory	2,263,537	2,067,454	1,277,838	953,675
Other Current Assets	155,323	105,519	29,928	17,947
Total Current Assets	6,570,520	6,259,796	2,782,006	3,180,073
Long Term Investments	–	–	–	–
Property Plant and Equipment	20,491,616	15,036,917	5,194,737	2,596,011
Goodwill	60,237	–	–	–
Intangible Assets	361,502	376,145	12,816	–
Accumulated Amortization	–	–	–	–
Other Assets	1,171,497	991,218	78,380	54,583
Deferred Long Term Asset Charges	–	–	–	–
Total Assets	28,655,372	22,664,076	8,067,939	5,830,667
Current Liabilities				
Accounts Payable	2,390,250	1,860,341	916,148	777,946
Short/Current Long-Term Debt	12,115,948	8,588,115	2,898,994	2,540,480
Other Current Liabilities	3,188,866	1,960,675	1,038,261	574,082
Total Current Liabilities	7,674,740	5,835,789	2,858,320	2,165,362
Long Term Debt	8,896,914	6,053,860	2,021,093	1,818,785
Other Liabilities	4,196,294	3,546,009	1,903,433	903,410
Deferred Long-Term Liability Charges	–	–	–	–
Minority Interest	1,395,080	1,152,214	–	–
Negative Goodwill	–	–	–	–
Total Liabilities	23,023,050	16,758,951	6,984,235	4,918,957

Exhibit 2 Tesla Balance Sheet, cont'd

Stockholders' Equity				
Misc. Stocks Options Warrants	–	–	–	–
Redeemable Preferred Stock	–	–	–	–
Preferred Stock	–	–	–	–
Common Stock	169	161	131	126
Retained Earnings	–4,974,299	–2,997,237	–2,322,323	–1,433,660
Treasury Stock	33,348	–23,740	–3,556	–22
Capital Surplus	9,178,024	7,773,727	3,409,452	2,345,266
Other Stockholder Equity	33,348	–23,740	–3,556	–22
Total Stockholder Equity	4,237,242	4,752,911	1,083,704	911,710
Net Tangible Assets	3,815,503	4,376,766	1,070,888	911,710

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CASE 16

CHOTUKOOL: CHALLENGES AND OPPORTUNITIES IN FRUGAL INNOVATION

*This case was prepared by Melissa A. Schilling
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Godrej & Boyce, founded in India in 1897, sold a range of products to the Indian market, including household appliances, office furniture, and industrial process equipment. In recent years, international competitors such as Haier and Samsung were cutting deep into Godrej's market share for household appliances such as refrigerators, washing machines, and air conditioners. Management knew that to preserve the company would require innovative solutions.

One such solution was the Chotukool, a small, portable refrigerator. Though around the world refrigeration was considered a mature technology, in rural India as many as 90% of families could not afford household appliances, did not have reliable access to electricity, and had no means of refrigeration. This significantly limited the foods they could eat and how they could be prepared. Finding a way to provide refrigeration to this segment of the population offered the promise of both a huge market and making a meaningful difference in people's quality of life. As noted by Director of Special Projects Navroze Godrej, "We imagined we would be making

a shrunken down version of a refrigerator. Make it smaller, make it cheaper. And we had preconceived notions of how to build a brand that resonated with these users through big promotions and fancy ad campaigns."

These assumptions would turn out to be wrong. First, as Godrej's team looked at the options of how to reduce the cost of a conventional, compressor-based refrigerator, they quickly realized that they could not reduce its cost by enough to make a meaningful difference.¹ Second, they discovered that having the refrigerator be lightweight was more important than they had previously thought because many rural Indians lived migratory lives, moving to follow the availability of work. Third, because of the lack of refrigeration, most people were in the habit of cooking just enough for the day, and thus had relatively low refrigeration capacity needs. Fourth, of those few rural Indians that did have refrigerators, many did not plug them in for most of the day for fear of them being damaged by power surges. As Godrej noted, "We were surprised by many things, we were shocked by

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many things . . . we realized our original hypothesis was quite wrong.”²

Based on these insights, the company designed a small, portable refrigerator based on thermoelectric cooling (rather than compressor technology), that could operate for several hours on a 12-volt battery. Thermoelectric cooling was being used in laptops; it involved running a current between two semiconductors. It was far more expensive on a per-unit-of-cooling basis, but it had much lower power requirements and could be used on a much smaller scale than compressor cooling. This enabled Godrej to make a very small, lightweight refrigerator with a relatively low price (35 to 40% cheaper than traditional refrigerators). It also lowered the power costs of operating a refrigerator, as it could operate for several hours on its 12-volt battery, also making it much more adaptable to situations where power was unreliable.

In Godrej’s initial plan for the Chotukool, it would be cherry red and look like a cooler. Soon, however, managers realized that if the Chotukool was just perceived as inexpensive alternative to a refrigerator, it had the potential to be stigmatizing for consumers who, in turn, would not talk about them to their friends. This was a serious problem, because the company had counted on word of mouth to spread information about the refrigerators deep into rural communities. To get people to talk about the coolers, they needed to be aspirational—they needed to be *cool*.

Godrej revamped the design, giving the coolers a more sophisticated shape and making them customizable (buyers could choose from over 100 decorative skin colors for the Chotukool).³ They also decided to market the refrigerators to the urban, affluent market in addition to the rural market, as adoption by former would remove any stigma associated with buying them. To attract this market, they positioned the refrigerators as perfect for picnics, parties, offices, dorm rooms, use in cars, and so on.

To get the Chotukool to rural customers would require a dramatically different distribution system than Godrej had traditionally used. However, building out a distribution system into rural communities would prohibitively raise the cost of Chotukool, potentially rendering the product nonviable. The development team was initially stumped. Then, one day, G. Sunderraman, vice president of Godrej and leader of the Chotukool project, happened to inquire

with a university official about obtaining college application forms for his youngest son. The official pointed out that Sunderraman could get the forms at any post office. At that moment, Sunderraman realized that the post office, which had stations in every rural area of India, could be an ideal distribution channel for the Chotukool.⁴ It was a very novel proposition, but India Post agreed to the collaboration, and soon Chotukools were available in all post offices in the central region of India.⁵ As Sunderraman noted, “The India Post network is very well spread in India and is about three or four times larger than the best logistic suppliers.”⁶

The Chotukool won several design awards in its first years, and after selling 100,000 units in its second year *Fast Company* gave Godrej its “Most Innovative Company” award. Godrej and Sunderraman were disappointed to discover that it was not as rapidly adopted by rural, poor households as they had hoped; the roughly \$50 price was still too expensive for most poor rural families in India. However, the Chotukool turned out to be much more popular than anticipated among hotels, food stalls, flower shops, and other small stores because it enabled these small stores to offer higher-value products (such as cold drinks), or to keep products fresh longer, thereby increasing their profits. The Chotukool also became a popular lifestyle product among the urban affluent population, who began to widely use them in their cars.

Godrej’s experience developing and launching the Chotukool had provided many lessons. They had learned that to radically reduce the cost of a product might require completely rethinking the technology—sometimes even in ways that initially seem more expensive. They learned that customers who had adapted their way of life to the lack of a technology (like refrigeration) might not adopt that technology, even if it was made markedly less expensive. Finally, they learned not to underestimate the value of making a product work for multiple market segments, including those that might not be initially obvious as customers. Though some people considered Chotukool a failure because it had not achieved its original objective of wide adoption by the rural poor, Godrej (and many others) considered it a success: The product expanded Godrej’s market share, penetrated new market segments in which it had not formerly competed, and demonstrated Godrej’s innovative capabilities to the world.

NOTES

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CASE

17

IKEA IN 2018: FURNITURE RETAILER TO THE WORLD

*This case was prepared by Charles W. L. Hill of the
School of Business, University of Washington, Seattle.*

C17-1 INTRODUCTION

IKEA is one of the world's most successful global retailers. By 2017, it had 355 home furnishing superstores in 29 countries, and registered 817 million unique store visits. IKEA's low-priced, elegantly designed merchandise, displayed in large warehouse stores, generated sales of €31.4 billion in 2017, up from €4.4 billion in 1994, and €2.4 billion in net profit. Founder Ingvar Kamprad died in January 2018 at the age of 91. At the time, he was one of the world's richest men, with a net worth of \$58.7 billion.

C17-2 COMPANY BACKGROUND

IKEA was established by Ingvar Kamprad in Sweden in 1943 when he was 17 years old. The fledgling company sold fish, Christmas magazines, and seeds from his family farm. It wasn't his first business—that had been selling matches which the enterprising Kamprad had purchased wholesale in 100 box lots (with help from his Grandmother who financed the enterprise)

and then resold individually at a higher mark-up. The name IKEA was an acronym, I and K being his initials, while E stood for Elmtaryd, the name of the family farm, and A stood for Agunnaryd, the name of the village in Southern Sweden where the farm was located. Before long Kamprad had added ball-point pens to his list and was selling his products via mail order. His warehouse was a shed on the family farm. The customer fulfillment system utilized the local milk truck, which picked up goods daily and took them to the train station.

In 1948, Kamprad added furniture to his product line. In 1949, he published his first catalog, distributed then as now, for free. In 1953, Kamprad found himself struggling with another problem: The milk truck had changed its route, and he could no longer use it to take goods to the train station. Kamprad's solution was to buy an idle factory in nearby Almhult and convert it into his warehouse. With business now growing rapidly, Kamprad hired a 22-year-old designer, Gillis Lundgren. Lundgren originally helped Kamprad to do photo shoots for the early IKEA catalogs, but over time he started to design more and more furniture for IKEA, eventually designing as many as 400 pieces, including many bestsellers.

IKEA's goal as it emerged over time was to provide stylish, functional designs with minimalist lines

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that could be manufactured cost efficiently under contract by suppliers and priced low enough to allow most people to afford them. Kamprad's theory was that "Good furniture could be priced so that the man with that flat wallet would make a place for it in his spending and could afford it."¹ Kamprad was struck by the fact that furniture in Sweden was expensive at the time, something that he attributed to a fragmented industry dominated by small retailers. Furniture was also often considered a family heirloom, passed down across the generations. He wanted to change this: to make it possible for people of modest means to buy their own furniture. Ultimately, this led to the concept of what IKEA calls "democratic design"—a design that, according to Kamprad, "was not just good, but also from the start adapted to machine production and thus cheap to assemble."² Gillis Lundgren was instrumental in the implementation of this concept. Time and time again, he would find ways to alter the design of furniture to save on manufacturing costs.

Lundgren also stumbled on what was to become a key feature of IKEA furniture: self-assembly. Trying to efficiently pack and ship a long-legged table, he hit upon the idea of taking the legs off and mailing them packed flat under the tabletop. Kamprad quickly noticed that flat packed furniture reduced transport and warehouse costs, and also reduced damage (IKEA had been having many problems with furniture damaged during the shipping process). Moreover, customers seemed willing to take on the task of assembly in return for lower prices. By 1956, self-assembly was integral to the IKEA concept.

In 1957, IKEA started to exhibit and sell its products at home furnishing fairs in Sweden. By cutting retailers out of the equation and using the self-assembly concept, Kamprad could undercut the prices of established retail outlets, much to their chagrin. Established retailers responded by prohibiting IKEA from taking orders at the annual furniture trade show in Stockholm. Established outlets claimed that IKEA was imitating their designs. This was to no avail, however, so the retailers went further, pressuring furniture manufacturers not to sell to IKEA. This had two unintended consequences. First, without access to the designs of many manufacturers, IKEA was forced to design more of its products in house. Second, Kamprad looked for a manufacturer that would produce the IKEA designed furniture. Ultimately he found one in Poland.

To his delight, Kamprad discovered that furniture manufactured in Poland was as much as 50% cheaper than furniture made in Sweden, allowing him to cut prices even further. Kamprad also found that doing business with the Poles required the consumption of considerable amounts of vodka to celebrate business transactions, and for the next 40 years his drinking was legendary. Alcohol consumption apart, the relationship that IKEA established with the Poles was to become the archetype for future relationships with suppliers. According to one Polish manager, there were three advantages of doing business with IKEA: "One concerned the decision making; it was always one man's decision, and you could rely upon what had been decided. We were given long-term contracts, and were able to plan in peace and quiet . . . A third advantage was that IKEA introduced new technology. One revolution for instance, was a way of treating the surface of wood. They also mastered the ability to recognize cost savings that could trim the price."³ By the early 1960s, Polish-made goods were to be found on over half of the pages of the IKEA catalog.

By 1958, an expanded facility at the Almhult location became the first IKEA store. The original idea behind the store was to have a location where customers could see assembled IKEA furniture. It was a supplement to IKEA's main mail order business; but it very quickly became an important sales point in its own right. The store soon started to sell car roof racks so that customers could leave with flat packed furniture loaded on top. Noticing that a trip to an IKEA store was something of an outing for many shoppers (Almhult was not a major population center, and people often drove in from long distances), Kamprad experimented with adding a restaurant to the Almhult store so that customers could relax and refresh themselves while shopping. The restaurant was a hit and became an integral feature of all IKEA stores.

The response of IKEA's competitors to its success was to argue that IKEA products were of low quality. In 1964, just after 800,000 IKEA catalogs had been mailed to Swedish homes, the widely read Swedish magazine *Allt i Hemmet* (*Everything for the Home*) published a comparison of IKEA furniture to that sold in traditional Swedish retailers. The furniture was tested for quality in a Swedish design laboratory. The magazine's analysis, detailed in a 16-page spread, was that not only was IKEA's quality as good if not better than that from other Swedish furniture

manufacturers, the prices were much lower. For example, the magazine concluded that a chair bought at IKEA for 33 kronor (\$4) was better than a virtually identical one bought in a more expensive store for 168 kronor (\$21). The magazine also showed how a living room furnished with IKEA products was as much as 65% less expensive than one furnished with equivalent products from four other stores. This publicity made IKEA acceptable in middle-class households, and sales began to take off.

In 1965, IKEA opened its first store in Stockholm, Sweden's capital. By now, IKEA was generating the equivalent of €25 million and had already opened a store in neighboring Norway. The Stockholm store, its third, was the largest furniture store in Europe and had an innovative circular design that was modeled on the famous Guggenheim Art Museum in New York. The location of the store was to set the pattern at IKEA for decades. It was situated on the outskirts of the city, rather than downtown, and there was ample space for parking and good access roads. The new store generated a large amount of traffic, so much so that employees could not keep up with customer orders, and long lines formed at the checkouts and merchandise pick up areas. To reduce the lines, IKEA experimented with a self-service pick up solution, allowing shoppers to enter the warehouse, load flat packed furniture onto trolleys, and then take it through the checkout. It was so successful that this soon became the norm in all stores.

C17-3 INTERNATIONAL EXPANSION

By 1973, IKEA was the largest furniture retailer in Scandinavia with nine stores. The company enjoyed a market share of 15% in Sweden. Kamprad, however, felt that growth opportunities were limited. Starting with a single store in Switzerland, over the next 15 years the company expanded rapidly in Western Europe. IKEA met with considerable success, particularly in West Germany where it had 15 stores by the late 1980s. As in Scandinavia, Western European furniture markets were largely fragmented and served by high-cost retailers located in expensive downtown stores selling relatively expensive furniture that was

not always immediately available for delivery. IKEA's elegant, functional designs, with their clean lines, low prices, and immediate availability, were a breath of fresh air, as was the self-service store format. The company was met with almost universal success even though, as one former manager put it: "We made every mistake in the book, but money nevertheless poured in. We lived frugally, drinking now and again, yes perhaps too much, but we were on our feet bright and cheery when the doors were open for the first customers, competing in good Ikean spirit for the cheapest solutions."⁴

The man in charge of the European expansion was Jan Aulino, Kamprad's former assistant, who was just 34 years old when the expansion started. Aulino surrounded himself with a young team. Aulino recalled that the expansion was so fast paced that the stores were rarely ready when IKEA moved in. Moreover, it was hard to get capital out of Sweden due to capital controls, so the trick was to make a quick profit and get a positive cash flow going as soon as possible. In the haste to expand, Aulino and his team did not always pay attention to detail, and he reportedly clashed with Kamprad on several occasions and considered himself fired at least four times, although he never was. Eventually the European business was reorganized, and tighter controls were introduced.

IKEA was slow to expand in the United Kingdom, where the locally grown company Habitat had built a business that was similar in many respects to IKEA, offering stylish furniture and at a relatively low price. IKEA also entered North America, opening up seven stores in Canada between 1976 and 1982. Emboldened by this success, in 1985 the company entered the United States. It proved to be a challenge of an entirely different nature.

On the face of it, America looked to be fertile territory for IKEA. As in Western Europe, furniture retailing was a very fragmented business in the United States. At the low end of the market were the general discount retailers, such as Wal-Mart, Costco, and Office Depot, which sold a limited product line of basic furniture, often at a very low price. This furniture was very functional, lacked the design elegance associated with IKEA, and was generally of a fairly low quality. Then there were higher-end retailers, such as Ethan Allen, which offered high-quality, well-designed, high-priced furniture in full-service stores staffed by knowledgeable salespeople. High-end retailers would often

sell ancillary services as well, such as interior design. Typically, these retailers would offer home delivery service, including set up in the home, either for free or for a small additional charge. Since it was expensive to keep large inventories of high-end furniture, much of what was on display in stores was not readily available, and the client would often have to wait a few weeks before it was delivered.

IKEA opened its first U.S. store in 1985 in Philadelphia. The company had decided to locate on the coasts. Surveys of American consumers suggested that IKEA buyers were more likely to be people who had travelled abroad, who considered themselves risk takers, and who liked fine food and wine. These people were concentrated on the coasts. As one manager put it, "There are more Buicks driven in the middle than on the coasts."⁵

Although IKEA initially garnered favorable reviews, and enough sales to persuade it to start opening additional stores, by the early 1990s it was clear that things were not going well in America. The company found that its European-style offerings didn't always resonate with American consumers. Beds were measured in centimeters, not the king, queen, and twin sizes with which Americans are familiar. American sheets didn't fit on IKEA beds. Sofas weren't big enough, wardrobe drawers were not deep enough, glasses were too small, curtains too short, and kitchens didn't fit U.S. size appliances. In a story often repeated at IKEA, managers noted that customers were buying glass vases and using them to drink out of, rather than the small glasses for sale at IKEA. The glasses were apparently too small for Americans who like to add liberal quantities of ice to their drinks. To make matters worse, IKEA was sourcing many goods from overseas priced in the Swedish kroner, which was strengthening against the U.S. dollar. This drove up the price of goods in IKEA's American stores. Moreover, some stores were poorly located, and they were not large enough to offer the full IKEA experience familiar to Europeans.

Turning around its American operations required IKEA to take some decisive actions. Many products had to be redesigned to fit with American needs. Newer and larger store locations were chosen. To bring prices down, goods were sourced from lower cost locations and priced in dollars. IKEA also started to source some products from factories in the United States to reduce both transport costs

and dependency on the value of the dollar. At the same time, IKEA was noticing a change in American culture. Americans were becoming more concerned with design, and more open to the idea of disposable furniture. It used to be said that Americans changed their spouses about as often as they changed their dining room table, about 1.5 times in a life time, but something was shifting in American culture. Younger people were more open to risks and more willing to experiment, and there was a thirst for design elegance and quality. Starbucks was tapping into this, as was Apple Computer, and so did IKEA. According to one manager at IKEA, "Ten or 15 years ago, travelling in the United States, you couldn't eat well. You couldn't get good coffee. Now you can get good bread in the supermarket, and people think that is normal. I like that very much. That is more important to good life than the availability of expensive wines. That is what IKEA is about."⁶

To tap into America's shifting culture, IKEA re-emphasized design and started promoting itself with a series of quirky, hip advertisements aimed at a younger demographic; young, married couples, college students, and 20- to 30- something singles. One IKEA commercial, called "Unboring," made fun of the reluctance of Americans to part with their furniture. One famous ad featured a discarded lamp, forlorn and forsaken in some rainy American city. A man turns to the camera sympathetically. "Many of you feel bad for this lamp," he says in thick Swedish accent, "That is because you are crazy." Hip people, the commercial implied, bought furniture at IKEA. Hip people didn't hang onto their furniture either; after a while, they discarded it and replaced it with something else from IKEA.

The shift in tactics worked. IKEA's revenues doubled in a four-year period to \$1.27 billion in 2001, up from \$600 million in 1997. By 2017, the United States was IKEA's largest market after Germany, with 48 stores accounting for 14% of total global revenues. Having learned vital lessons about competing in foreign countries outside of continental Western Europe, IKEA continued to expand internationally in the 1990s and 2000s. It entered the United Kingdom in 1987, and by 2018 had 18 stores in the country. IKEA also acquired Britain's Habitat in the early 1990s and continued to run it under the Habitat brand name. In 1998, IKEA entered China, where it had 24 stores by 2016, followed by Russia in 2000

(14 stores by 2012), and in 2006 Japan, a country where it had failed miserably 30 years earlier (by 2012, IKEA had 6 stores in Japan). In total, by 2017 there were 355 IKEA stores in 29 countries. The company's plans call for continued global expansion, opening 20 to 25 stores per year, funded by an investment of around €20 billion.

As with the United States, some local customization has been the order of the day. In China, for example, the store layout reflects the layout of many Chinese apartments, and because many Chinese apartments have balconies, IKEA's Chinese stores include a balcony section. IKEA also has had to adapt its locations in China, where car ownership is still not widespread. In the West, IKEA stores are generally located in suburban areas and have lots of parking space. In China, stores are located near public transportation, and IKEA offers delivery services so that Chinese customers can get their purchases home. IKEA also found that prices considered low in Europe and North America were higher than average in China. Local furniture makers had access to cheap labor and raw materials, and their design costs were usually nil because they simply copied the furniture designs of other companies, including IKEA. IKEA also had to deal with relatively high tariffs on furniture imported into China. To deal with these problems, IKEA built a number of factories in China and increased local sourcing of materials, raising local sourcing from 30 to 65%. These moves enabled it to cut its prices on many items by up to 60%.

In something of a shift from its typical mass market approach, IKEA worked hard in China to position itself as an aspirational, Western brand for young middle-class Chinese. This demographic is benefiting from China's rapid economic development, has relatively high incomes, is better educated, and is more aware of Western styles and more open to IKEA's product.

The other decision IKEA had to make in China was how to respond to local competitors copying its designs, which occurred frequently. The company concluded that Chinese intellectual property laws were not yet strong enough to deter such activities, so it decided not to react with lawsuits. Instead, the company stepped up its marketing, using Chinese social media and microblogging website Weibo to target

the young, upwardly mobile middle class and build demand for the IKEA brand.⁷ All of these moves seem to be bearing fruit. IKEA's sales in China have been growing at a robust pace. For fiscal 2017, IKEA reported a 14% increase in sales in China to \$1.98 billion on the back of an 11% increase in store traffic. The company also announced plans to open another three Chinese stores.⁸

IKEA's latest target market is India, where it has plans to invest €1.5 billion and ultimately open 40 stores. In late 2012, India's foreign investment board approved Ikea's plans to open stores in the country. However, the approval came with strings attached. The board denied IKEA to offer products in areas that the government thinks are politically sensitive, and where it wants to protect local retailers. These include food and beverage outlets, which are a standard feature of its stores around the world, and 18 of the 30 product categories it had initially applied for. Those 18 categories include gift items, fabrics, books, toys, and consumer electronics.⁹ The government also required a significant amount of local sourcing. Adapting to these demands took time. After years of preparation, IKEA opened its first Indian store in Hyderabad in July 2018.¹⁰ The company hopes to have 30 stores open in India by 2025.

IKEA has refused to adapt to business practices that clash with its values. The company prides itself on its "clean" image and is willing to halt investment in order to protect that. In the mid 2000s it put investment in Russia on hold as a protest against endemic corruption. It subsequently fired two senior executives in the country for allegedly turning a bribe to a subcontractor to secure electricity supply for its St. Petersburg outlets.¹¹

Senior executives at IKEA have been known to complain that they could expand the business faster, were it not for administrative "red tape" in many countries that slows down the rate of expansion. According to the current CEO, Mikael Ohlsson, the amount of time it takes to open a store has roughly doubled to 5 or 6 years since the 1990s. Ohlsson singled out German local authorities for designing planning restrictions to protect local city center shops that are detrimental to IKEA's expansion plans. Ohlsson argues that such regulations are holding back investment by IKEA, and thus job creation, across the European Union.¹²

C17-4 THE IKEA CONCEPT AND BUSINESS MODEL

IKEA's target market is the young, upwardly mobile, global middle-class who are looking for low-priced but attractively designed furniture and household items. This group is targeted with somewhat wacky, offbeat advertisements that help to drive traffic into the stores. The stores are large warehouses festooned in the blue and yellow colors of the Swedish flag that offer 8,000 to 10,000 items, from kitchen cabinets to candlesticks. There is plenty of parking outside, and the stores are located with easy access to major roads.

The interior of the stores is configured almost as a maze that requires customers to pass through each department to get to checkout. The goal is simple: to get customers to make more impulse purchases as they wander through the IKEA wonderland. Customers who enter the store planning to buy a \$40 coffee table can end up spending \$500 on everything from storage units to kitchenware. The flow of departments is constructed with an eye to boosting sales. For example, when IKEA managers noticed that men would get bored while their wives stopped in the home textile department, they added a tool section just outside the textile department, and sales of tools skyrocketed. At the end of the maze, just before the checkout, is the warehouse where customers can pick up their flat packed furniture. IKEA stores also have restaurants (located in the middle of the store) and child-care facilities (located at the entrance for easy drop off) so that shoppers stay as long as possible.

Products are designed to reflect the clean Swedish lines that have become IKEA's trademark. IKEA has a product strategy council, a group of senior managers who establish priorities for IKEA's product lineup. Once a priority is established, product developers survey the competition, and then set a price point that is 30 to 50% below that of rivals. As IKEA's website states, "We design the price tag first, then the product." Once the price tag is set, designers work with a network of suppliers to drive down the cost of producing the unit. The goal is to identify the appropriate suppliers and least costly materials, a trial-and-error

process that can take as long as 3 years. In 2008, IKEA had 1,380 suppliers in 54 countries. The top sourcing countries were China (21% of supplies), Poland (17%), Italy (8%), Sweden (6%), and Germany (6%). Some suppliers have been with IKEA for a long time and work closely with the company on cost and quality issues. IKEA is often their major customer.

IKEA devotes considerable attention to finding the right supplier for each item. Consider the company's best-selling Klippan love seat. Designed in 1980, the Klippan, with its clean lines, bright colors, simple legs, and compact size, had sold over 1.5 million units by 2010. IKEA originally manufactured the product in Sweden but soon transferred production to lower-cost suppliers in Poland. As demand for the Klippan grew, IKEA decided that it made more sense to work with suppliers in each of the company's big markets to avoid the costs associated with shipping the product all over the world. In 2010, there were five suppliers of the frames in Europe, plus three in the United States and two in China. To reduce the cost of the cotton slipcovers, IKEA concentrated production in four core suppliers in China and Europe. The resulting efficiencies from these global sourcing decisions enabled IKEA to reduce the price of the Klippan by some 40% between 1999 and 2005.

Price declines over time, such as those seen with the Klippan love seat, are the norm at IKEA. The company's signature Poang chair, 1.5 million of which are sold every year, has gotten dramatically cheaper over time. In 1988, this chair cost \$350 (in 2016 dollars). By 2016, the price had fallen to \$79. Other IKEA mainstays have followed a similar path. The venerable Lack table sold for \$56 in 1985 (in 2016 dollars) but goes for \$10 today. The Billy bookcase costs 30% less in real terms than it did when introduced in 1978. In general, long-running products seem to drop in price by 1% per year, primarily due to constant tweaking of design, technological advances in production, and sheer economies of scale. Indeed, if IKEA can't figure out how to reduce prices over time, the product is often discontinued.¹³

For insight on how IKEA achieves this, consider the iconic Bang mug, some 25 million of which are sold every year. IKEA changed the height of the mug when it realized it could make slightly better use of the space in its supplier's kiln in Romania. Tweaking the handle design made them stack more compactly,

doubling the number that could be placed on a pallet, which halved the cost of getting them from the kiln in Romania to shelves in the shop. Initially, IKEA asked its Romanian supplier to price up to a million units in the first year. Then it asked, “What if we commit to five million a year for three years”? That cut costs by another 10%.

Then there is the Billy bookcase. The factory in Sweden that produces this bookcase makes 37 times as many bookcases per year as it did in the 1980s, yet the number of employees has only doubled thanks to automation. The factory employees never actually touch a bookshelf—their job is to tend the machines, imported from Germany and Japan, which work constantly to cut, glue, drill and pack the various components of the Billy bookcase. There are now 60 million Billy bookcases in the world, nearly one for every 100 people. Along the way IKEA and its supplier have clearly learned a lot about how to produce the bookcase more efficiently.¹⁴

Although IKEA contracts out manufacturing for most of its products, since the early 1990s a certain proportion of goods have been made internally (today, around 90% of all products are sources from independent suppliers, with 10% being produced internally). The integration into manufacturing was born out of the collapse of communist governments in Eastern Europe after the fall of the Berlin Wall in 1989. By 1991, IKEA was sourcing some 25% of its goods from Eastern European manufacturers. It had invested considerable energy in building long-term relationships with these suppliers, and had often helped them to develop and purchase new technology so that they could make IKEA products at a lower cost. As communism collapsed and new bosses came in to the factories, many did not feel bound by the relationships with IKEA. They effectively tore up contracts, tried to raise prices, and underinvested in new technology.

With its supply base at risk, IKEA purchased a Swedish manufacturer, Swedwood. IKEA used Swedwood as the vehicle to buy and run furniture manufacturers across Eastern Europe, with the largest investments being made in Poland. IKEA invested heavily in its Swedwood plants, equipping them with the most modern technology. Beyond the obvious benefits of providing IKEA a low-cost source of supply, Swedwood has also enabled it to acquire knowledge about manufacturing processes that are useful both in product design and in relationships with other

suppliers, giving IKEA the ability to help suppliers adopt new technology and drive down their costs.

For illustration, consider IKEA’s relationship with suppliers in Vietnam. It has expanded its supply base here to help support its growing Asian presence. IKEA was attracted to Vietnam by the combination of low-cost labor and inexpensive raw materials. IKEA drives a tough bargain with its suppliers, many of whom say that they make thinner margins on their sales to IKEA than they do to other foreign buyers. IKEA demands high quality at a low price. But there is an upside; IKEA offers the prospect of forging a long-term, high volume business relationship. Moreover, IKEA regularly advises its Vietnamese suppliers on how to seek out the best and cheapest raw materials, how to set up and expand factories, what equipment to purchase, and how to boost productivity through technology investments and management process.

C17-5 ORGANIZATION AND MANAGEMENT

In many ways, IKEA’s organization and management practices reflect the personal philosophy of its founder. A 2004 article in *Fortune* described Kamprad, then one of the world’s richest men, as an informal, frugal man who “insists on flying coach, takes the subway to work, drives a 10-year-old Volvo, and avoids suits of any kind. It has long been rumored in Sweden that when his self-discipline fails, and he drinks an overpriced Coke out of a hotel mini bar, he will go down to a grocery store to buy a replacement”.¹⁵ Kamprad’s thriftiness was attributed to his upbringing in Smaland, a traditionally poor region of Sweden. Kamprad’s frugality is now part of IKEA’s DNA. Managers are forbidden to fly first class and are expected to share hotel rooms.

Under Kamprad, IKEA became mission driven. He had a cause—and those who worked with him adopted it—to make life better for the masses, to democratize furniture. Kamprad’s management style was informal, nonhierarchical, and team based. Titles and privileges are taboo at IKEA. There are no special perks for senior managers. Pay is not particularly high, and people generally work there because they like the atmosphere. Suits and ties have always been

absent, from the head office to the loading docks. The culture is egalitarian. Offices are open plan, furnished with IKEA furniture, and private offices are rare. Everyone is called a “co-worker,” and first names are used throughout. IKEA regularly stages antibureaucracy weeks during which executives work on the store floor or tend to registers. In a *BusinessWeek* article, then CEO Andres Dahlvig described how he spent some time earlier in the year unloading trucks and selling beds and mattresses.¹⁶ Creativity is highly valued, and the company is replete with stories of individuals taking the initiative; from Gillis Lundgren’s pioneering of the self-assemble concept to the store manager in the Stockholm store who let customers go into the warehouse to pick up their own furniture. To solidify this culture, IKEA had a preference for hiring younger people who had not worked for other enterprises, and then promoting from within. IKEA has historically tended to shy away from hiring the highly educated status oriented elite because they often adapted poorly to the company.

Kamprad seems to have viewed his team as extended family. Back in 1957, he bankrolled a week-long trip to Spain for all 80 employees and their families as reward for hard work. The early team of employees all lived near each other. They worked together, played together, drank together, and talked about IKEA around the clock. When asked by an academic researcher what was the fundamental key to good leadership, Kamprad replied “Love.” Recollecting the early days, he noted that “when we were working as a small family in Aluhult, we were as if in love. Nothing whatsoever to do with eroticism. We just liked each other so damn much.”¹⁷ Another manager noted that “We who wanted to join IKEA did so because the company suits our way of life. To escape thinking about status, grandeur and smart clothes.”¹⁸

As IKEA grew, the question of taking the company public arose. While there were obvious advantages associated with doing so, including access to capital, Kamprad decided against it. His belief was that the stock market would impose short-term pressures on IKEA that would not be good for the company. The constant demands to produce profits, regardless of the business cycle, would in Kamprad’s view, make it more difficult for IKEA to take bold decisions. At the same time, as early as 1970, Kamprad started to worry about what would happen if he died. He decided that he did not want his sons to inherit the

business. His worry was that they would either sell the company, or squabble over control of the company and thus destroy it. All three of his sons, it should be noted, went to work at IKEA as managers.

The solution to this dilemma created one of the most unusual corporate structures in the world. In 1982, Kamprad transferred his interest in IKEA to a Dutch based charitable foundation, Stichting Ingka Foundation. This is a tax exempt, non-profit making legal entity that in turn owns Ingka Holding, a private Dutch firm that is the legal owner of IKEA. A five-person committee chaired by Kamprad, and which includes his wife, runs the foundation. In addition, the IKEA trademark and concept was transferred to IKEA Systems, another private Dutch company, whose parent company, Inter-IKEA, is based in Luxembourg. The Luxembourg company is in turn owned by an identically named company in the Netherlands Antilles, whose beneficial owners remain hidden from public view, but are almost certainly the Kamprad family. Inter-IKEA earns its money from a franchise agreement it has with each IKEA store. The largest franchisee is none other than Ingka Holdings. IKEA states that franchisees pay 3% of sales to Inter-IKEA. Thus, Kamprad has effectively moved ownership of IKEA out of Sweden, although the company’s identity and headquarters remains there, and established a mechanism for transferring funds to himself and his family from the franchising of the IKEA concept. Kamprad moved to Switzerland in the 1980s to escape Sweden’s high taxes, and he lived there until his death in 2018.

In 1986, Kamprad gave up day-to-day control of IKEA to Andres Moberg, a 36-year-old Swede who had dropped out of college to join IKEA’s mail order department. Despite relinquishing management control, Kamprad continued to exert influence over the company as an advisor to senior management and an ambassador for IKEA, a role he was still pursuing with vigor in his mid-80s.

C17-6 LOOKING FORWARD

IKEA has established an enviable position. It has become one of the most successful retail establishments in the world. It has expanded into numerous

foreign markets, learning from its failures and building on its successes. It has brought affordable, well-designed, functional furniture to the masses, helping them to, in Kamprad's words, achieve a better everyday life. IKEA's goal is to continue to grow, opening

10 to 15 new stores a year. Achieving that growth would mean continued expansion into nonwestern markets, including most notably China and India. Can the company do so? Is its competitive advantage secure?

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CASE 18

GENERAL ELECTRIC

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C18-1 INTRODUCTION

On June 12, 2017, Jeffery Immelt, who had been CEO of General Electric since 2001, announced that he would be stepping down in seven weeks. The market was flat that day, but GE's stock went up 4% on the news, to close at \$28.94. Investors had been growing increasingly frustrated with Immelt. Under his leadership General Electric had underperformed the market. Immelt's replacement was John Flannery, the head of GE's health care business and a 30-year GE veteran. Flannery made no bones about the problems that confronted GE. The company was spending more cash than it was generating, a situation that was unsustainable in the long run. While some of GE's businesses were strong, including health care and jet engines, others were in trouble. The company's power generation business was of particular concern. In October 2017, Flannery told investors his team was conducting an exhaustive review of the company, including its businesses, operating processes, management systems, and capital allocation practices. He left investors in no doubt that everything was on the table, including the option of breaking General Electric up into its constituent businesses.

C18-2 THE EVOLUTION OF GE

The history of General Electric dates back to 1890, when Thomas Edison established the Edison General Electric Company. Edison was a prolific entrepreneur

and inventor with over a thousand patents to his name. His inventions included the phonograph, the motion picture camera, and a long-lasting, incandescent lightbulb. In 1892, Edison merged the Edison General Electric Company with Thomson-Houston Electric Company to form General Electric. Edison remained associated with the General Electric company for the rest of his life through his patents and consulting duties. General Electric was one of the original components of the Dow Jones Industrial Index when it was established in 1896. It was the sole survivor of the founding companies when it was finally removed from Index on June 25, 2018.

C18-3 GENERAL ELECTRIC IN THE 1960S AND 1970S

By the early 1970s, General Electric was an extensively diversified corporation with activities ranging from plastics, home appliances and lighting, to power generation equipment and jet engines. Reg Jones, who became CEO in 1973, worried about the lack of industrial logic tying together the company's disparate businesses. He felt that the company had become too decentralized. His predecessor as CEO, Ralph Cordiner, had broken the company into departments that were "the size that a man could get his arms around." His philosophy was to give an executive a \$50-million business and say, "Here, grow this

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into a \$125 million business.” If he achieved that, the department would then be split into two departments. As a result of this policy, by the time Jones took over GE had 190 departments divided into 46 divisions and 10 groups.

While the company had been growing its revenues, profit growth under Cordiner had been disappointing. In part this was because the company was undertaking simultaneous large investments with long payback periods in nuclear power, jet engines, and computers. More generally, Jones attributed the profitless growth to an engineering culture where “we *can* do it” all too often became “we *should* do it.” The company was the champion of “make not buy,” of volume and diversification, but it was not focused on the bottom line.

Following a detailed study by management consultants McKenzie & Co, Jones’ solution was to reorganize the company into 43 strategic business units (SBU), each of which served a clearly defined end market. Jones tried to improve GE’s profit performance by developing a sophisticated strategic planning system that required each SBU to develop a strategy in close consultation with strategic planners at the head office. The idea was that the head office would add value by helping business unit managers develop and improved their strategy. However, it wasn’t clear that planners at the head office had the skill set to help develop strategies in businesses as diverse as plastics, power generation systems, jet engines and appliances. Moreover, there were complaints that the formal planning system was overly bureaucratic, centralized, involved a lot of game playing and upward merchandizing of plans, and devalued the contributions of SBU managers, who often thought that the planners at the head office lack the expertise to understand their businesses. The planning system also made it difficult to assign accountability.

By the end of his tenure, Jones acknowledged that the corporate office didn’t have the bandwidth to adequately review 43 different business unit plans. As another CEO who knew Jones at the time commented, he was “drowning in paper, his office was full of stacks of planning books.” Nevertheless, Jones believed that the strategic planning systems had injected necessary discipline into the

performance review process and improved capital allocation at GE. For the first time, GE had exited businesses that were underperforming, including computers. However, it still wasn’t clear to Jones, or many outside observers, how GE was more than the sum of its parts.

C18-4 THE WELCH YEARS; 1981–2001

When Jones retired in 1981, he chose as his successor a brash, hard-driving, abrasive young executive who had made his reputation running GE’s plastics business. His name was Jack Welch. Welch was just 45 when he became CEO in April 1981. He would run the company for the next two decades. In 1999, two years before his retirement, *Fortune* magazine ran an article that called Welch not just the best executive of the year, but quite possibly the best manager of the twentieth century.

One of Welch’s first actions was to dramatically reduce the strategic planning function of the head office. Welch thought that business level strategy should be done by the people who ran the businesses. Most of the planners at the head office were laid off or sent down to the businesses. Welch replaced the extensive planning process with a “real time” discussion of each business’ strategy that was built around a five-page strategy “playbook,” which Welch and his business leader discussed without the benefit of staff.

To remain part of GE, Welch told each business that it had to be number 1 or 2 in its market, and that it had to have a strategy for growing its profitability at 15% per annum. If the business was not number 1 or 2, the dictum was “fix, sell or close.” Of the 43 SBUs that Welch inherited from Jones, 14 passed the test of either being number 1 or 2 or having a plan for getting there. The remainder were either sold or closed. By 1990, Welch had sold off 200 product lines, raising \$11 billion in the process. During the same time period, he made over 370 acquisitions, investing more than \$21 billion. These acquisitions both strengthened the company’s core businesses and took

GE into new areas such as financial services and network broadcasting with the acquisitions of Kidder Peabody (an investment bank), Polaris (an aircraft leasing company), and NBC (a network broadcasting company that came with the acquisition of RCA). As part of the restructuring process, GE eliminated over 120,000 employee positions between 1981 and 1988, with about the same number leaving the company due to divestments. The layoffs earned Welch the nickname “Neutron Jack.” In 1980, GE had 404,000 employees. By 1990, even with extensive acquisitions, GE’s headcount was down to around 290,000.

In 1986, Welch shocked the company when he came in one Monday morning and replaced 12 of his 14 business unit heads. In Welch’s view these executives were wedded to the old way of doing things and were the wrong people to lead the cultural change that he envisaged. He thought the company was moving too slow and behaving too cautiously, partly due to push back from his own top management team. He replaced them with people that were more in his own mold.

Welch was explicit about the kind of managers he wanted at GE. They had to be able to make decisions and take *ownership* for their actions. They had to be good *stewards* of the assets under their control. They had to be *entrepreneurial*, willing to take risks. He also valued *excellence, reality and candor*, and *open communication*, all attributes he felt had not been valued under prior leadership. As part of the performance review process, Welch rated senior managers not only on their ability to hit financial objectives, but also on whether they lived up to the values he espoused.

By the late 1980s, Welch had the mix of growth businesses that he wanted. He now started to develop strategies for continually improving performance. His view was that while productivity could be increased by restructuring, that only got you so far. To continue to improve productivity over the long run, processes needed to be put in place that created the right incentives for employees to look for ways of reducing costs and adding value. The first such process was known as *work out*. Under work out, groups of 40 to 100 employees were invited to share their views about how their business could be improved with their boss. Employees worked with facilitators on ideas over three days, at the end of which they were presented to their boss.

The rules of the process required managers to make instant decisions about proposals on the spot in front of everyone. A manager’s boss normally sat behind them as they made decisions. About 80% of proposals got an immediate yes. By 1992, around two-thirds of GE’s employees had participated in workout. The result; productivity increases at GE which had been running at an annual rate of 2% from 1981 to 1987 doubled to 4% between 1988 and 1992.

Work out was followed by a series of additional productivity initiatives during the 1990s. These included *best practices* (an initiative aimed at learning of the best practices of market leading organizations and implementing them within GE), *boundaryless behavior* (which required managers to share best practices across businesses), and perhaps most famously, the *Six Sigma quality improvement process*. Introduced in 1996, by 1999 GE had invested \$500 million to train 85,000 employees in Six Sigma. As a result of Six Sigma programs, the company was reporting productivity improvements from more efficient product design, fewer production errors, less wasted materials and time, and better capacity utilization. To make sure that all of these initiatives were adopted, Welch insisted that a manager’s success at implementing an initiative would be a major component of his or her annual performance review, and that bonuses would be tied to this.

Welch devoted an enormous amount of time to human resource initiatives. He made stock options a major component of employee performance, expanding the number of option recipients from 300 to 30,000. He introduced a stack ranking system for performance evaluation. This required every manager to rank their subordinates into one of five categories. The bottom 10% were scored five and encouraged to leave the company (a practice that led to the system being known as “rank and yank”). He championed the introduction of 360-degree performance reviews, in which an employee’s performance was evaluated not just by his or her boss, but also by peers and subordinates. Perhaps most notably, he monitored, mentored, and evaluated the performance of the top 500 managers at General Electric. Welch saw his role as developing great managers who could lead any business. To him, allocating human capital was every

bit as important as allocating financial capital. Welch estimated that he spent up to 70% of his time on HR issues.

On the strategy side, the biggest trend during the Welch years was the expansion of GE's financial services business. GE had been involved in financial services through GE Capital since the 1930s. First established to help consumers buy home appliances such as refrigerators, under Welch GE Capital expanded into a mammoth profit machine. Much of this growth was driven by a series of major acquisitions in the 1980s that included insurance, investment banking, leasing, credit card, and mortgage companies. By the mid-1990s, over 40% of GE's profits were coming from GE Capital. GE Capital had become a financial conglomerate in its own right, making car loans, issuing credit cards, owning and leasing commercial aircraft, investing in commercial real estate, issuing mortgages, offering insurance, and a host of other activities. GE Capital helped GE's industrial businesses by offering financing for the customers that purchased its expensive heavy equipment, from jet engines and power turbines to locomotives and MRI machines. In return, GE's industrial businesses helped GE Capital by furnishing reliable earnings and tangible assets that helped the whole company to maintain a triple A credit rating. That rating allowed GE to borrow funds in world capital markets at a lower rate than any purely financial corporation could achieve. The result was a lower cost of capital that for years was a major source of advantage for the financial services business.

GE Capital also performed another critical function for its parent company—it helped GE to manage its earnings. Since financial assets are under normal conditions far more liquid than tangible assets, GE Capital was able to buy or sell assets in the final days of a quarter to make sure that GE's reported earnings rose smoothly and in line with Wall Street expectations. Investors seem willing to pay more for a company that can produce a steady and predictable stream of growing earnings. GE Capital helped GE achieve this, helping the stock to trade at a premium to purely industrial companies.

GE also grew its product services under Welch. GE realized that since it sold expensive capital

equipment that often remained in service for years, if not decades, it could make good money by offering life of equipment service contracts that provided ongoing diagnostics and preventative maintenance. In 1994, Welch noted that there was an installed base of 9,000 GE commercial jet engines, 10,000 turbines, 13,000 locomotives, and 84,000 pieces of diagnostic medical imaging equipment. The strategy was to monetize this installed base. For example, by putting diagnostic sensors in an MRI machine and remotely monitoring that data, GE could detect when a critical component was failing and replaced it before the part failed. Customers placed a high value on such services. They limited downtime and kept expensive capital equipment functioning efficiently. For GE, in addition to creating a new income stream, service contracts provided a steady and predictable earnings flow, which again helped the company to deliver the predictable earnings growth that pleased Wall Street.

On the face of it, the achievements of the Welch years were impressive. Over his 20 years as CEO the stock was up 2,790 %. When Welch became CEO, GE's earnings were \$1.65 billion; when he left they were \$12.74 billion. According to the company's own data, productivity at GE increased by 5% per annum compounded during Welch's tenure. On retirement, Welch collected a \$417-million severance package, the largest in corporate history. Was that large payout justified? GE's board clearly thought so. However, Welch had his critics. Some argued that the reliance on GE Capital was risky. Unlike a traditional bank, GE Capital had no large, stable source of deposits to fall back on in a financial crisis and carried a heavy debt load. Others believed that the increasing complexity and diversity of GE made it difficult to analyze the company's financial statements. They worried that the practice of drawing on GE Capital to smooth out earnings was an accounting trick that might be used to obscure serious operating problems in certain businesses. They were perplexed as to how to value a company that now included not just traditional industrial businesses, but also financial services and network broadcasting. Another concern was that GE in its current form was very much the creation of one man. It was unclear whether anyone could truly replace Welch.

C18-5 THE IMMELT ERA, 2001–2017

When Jack Welch retired in 2001, GE was at the top of its game. In a sense, though, he had been lucky. He took over in 1981, when the U.S. economy was in recession. He was helped in his early years by the robust economic recovery that followed. Apart from a brief recession in 1990–91, the 1990s were also a period of economic vitality in the United States. The stock market boomed, carrying many companies to record highs (GE's stock hit an all-time high of \$33.69 per share in August 2000, when it sported a price earnings ratio of close to 60). His successor, Jeffery Immelt, would have no such tailwinds.

Immelt joined GE in 1982 after graduating from Harvard with an MBA. He rose through the ranks to lead GE's medical equipment business. He was also on the board of GE Capital. He was selected to succeed Welch in October 2000 and assumed the CEO position on September 7, 2001. Four days later, two hijacked passenger aircraft slammed into the World Trade Center towers in the largest terrorist attack on U.S. soil in history. The stock market—already in retreat from its all-time highs in 2000—tumbled and the economy slipped into a recession. GE's insurance business took a direct hit from the attack and had to pay out \$600 million in claims. GE's aircraft engine and aircraft leasing businesses were also hurt by the attacks. By the end of Immelt's first week as CEO, the stock had lost 20% of its value.

Despite these adverse events, Immelt seemed committed to sticking with General Electric's diversification strategy. In the company's 2001 annual report, he noted that:

Our businesses are closely integrated. They share four leading-edge business initiatives: excellent financial disciplines and Controllershship; a tradition of sharing talent and best practices; and a culture whose cornerstone is absolute, unyielding integrity. Without these powerful ties, we actually could merit the label “conglomerate” that people often inaccurately apply to us. That word just does not apply to GE . . . Instead, what we have is a Company of diverse businesses whose sum truly is greater than the parts; a Company

executing with excellence despite a brutal global economy to deliver over \$17 billion of cash flow in 2001. Try “managing” your way to cash flow of that magnitude—year after year . . . Some companies are different. We believe GE is different, and one of the things that makes us different is that—in good times and bad—we deliver. That is who we are.

C18-5a Reshaping the Portfolio: Acquisitions and Divestments

If there were any doubts that Immelt would continue Welch's strategy of diversification via acquisitions into industries seen as having growth prospects, they were quickly dispelled by his early moves. Immelt made a series of acquisitions to strengthen several businesses, enter new ones, and reposition the company to capitalize from what he saw as major growth opportunities. Over his tenure he did hundreds of deals, claiming with some pride that he was the only CEO who has ever bought and sold over \$100 billion worth of businesses. By the company's own calculations, during Immelt's tenure GE made 380 acquisitions at a cost of over \$175 billion. It also sold off 370 business and product lines worth around \$400 billion. Put differently, during Immelt's tenure GE made an average of 46 acquisitions and divestitures annually at an average value of \$35 billion per year, churning roughly 9% of its total current enterprise value every year.

Before 2001 ended, Immelt had made significant acquisitions. He expanded GE's NBC business with the acquisitions of Telemundo (which served the rapidly growing Hispanic market) and with the purchase of the Bravo network. He took GE deeper into the media business in 2003 when the company acquired 80% of the Universal entertainment business from the French firm, Vivendi for \$5.5 billion. The acquisition included Universal's film library, film studio, cable services, and theme park. While critics wondered what GE was doing in the entertainment business, Immelt countered that “This is about stuff we know how to do . . . we understand the nuances of this industry and where it is going.”

Between 2001 and 2007, GE made \$75 billion worth of acquisitions in areas like energy, aviation, water treatment, health care and financial services.

Some of these acquisitions were great successes. For example, GE purchased Enron's wind turbine business for \$358 million in a bankruptcy auction, creating the foundation for a business that by 2016 brought in over \$10 billion in revenue. To help fund the acquisitions, the company also sold off businesses seen as having low growth potential. Among the divestments was GE's plastics business, which was sold to a Saudi company for \$11.6 billion, just before the 2008–2009 financial crisis. The price was more than analysts had expected and the deal was generally regarded as excellent for GE.

Not all of Immelt's bets paid off. Following the events of September 11, 2001, GE dived into the security business, buying two explosive detection companies for well over \$1 billion. In 2009, these businesses were packaged as GE Homeland Security and sold off for just \$760 million. Immelt's security bet turned out to be a bust. In another example, in 2004, with home prices surging, GE paid \$500 million for America's six largest subprime mortgage company, WMC. In 2007, the market for subprime loans collapsed and WMC lost \$1 billion. GE shut the company down and laid off most of its employees. As of 2018, however, WMC was still causing headaches for GE. Several investors that purchased mortgage backed securities from WMC were suing the company, claiming that it misrepresented the quality of its mortgages. The Justice Department had also launched an investigation of WMC. In 2018, GE set aside \$1.5 billion to cover potential losses from the investigation.

Perhaps Immelt's worst acquisition was his biggest, the purchase of the French power company Alstom for \$10.6 billion in 2015. Alstom, a competitor of GE Power, made and serviced the turbines that utilities use to generate power. Alstom's profit margins were low, but GE thought it could improve them. GE's strategy relied heavily upon selling services, but to comply with antitrust laws regulators made GE divest Alstom's service business. The acquisition added more than 30,000 high-cost employees, many in Europe. GE thought that they would pay for themselves, but the acquisition was mistimed. GE invested in Alstom's fossil-fuel-fired turbine business just as renewables were become cost competitive. The result was that global demand for GE Power's products collapsed and the unit's profit plunged by 45%.

GE made nine acquisitions valued at more than \$14 billion in the oil and gas industry between 2010

and 2014, a time when oil prices were hovering around \$100 a barrel. In 2016, with oil prices slumping to under \$40 a barrel, GE agreed to combine its oil and gas unit with Baker Hughes, a publicly traded oilfield services provider. The deal created the second largest oilfield service provider in the world, with revenues of \$23 billion and operations in 120 countries.

Immelt also made a series of acquisitions to bulk up GE Capital before the 2008–2009 global financial crisis (these included WMC). By 2007, GE Capital was accounting for 55% of the company's profit, more than at any time under Welch. However, this growth came at a price. Between 2001 and 2007, GE Capital took on over \$250 billion of additional debt to finance its lending and investment activities (unlike a traditional bank, GE Capital did not have a large deposit base, so it financed its lending and investments by issuing debt). Immelt allowed GE Capital to take greater risks, most notably by making direct investments in commercial real estate. It all worked well until the global financial crisis hit, when most of GE Capital's profits evaporated. Immelt had to cut GE's dividend for the first time since the Great Depression and was forced to ask Warren Buffett for a \$3 billion loan to meet GE Capital's short-term commitments.

GE Capital never fully recovered from the financial crisis. Investors who had favorably viewed GE Capital prior to the crisis now saw it as a volatile, risky business and attached a discount to GE's shares. In June 2015, GE announced its intention to exit from most of GE Capital, refocusing the portfolio on its industrial businesses. At the time, GE Capital controlled assets worth approximately \$500 billion, making it the seventh largest financial institution in the United States. GE's plan was to sell off the majority of GE Capital's assets. What would remain were assets directly related to GE's industrial business. By March 2017, this divestiture was largely complete. After shedding itself of most of GE Capital, GE said that it expected operating earnings from its industrial businesses to comprise over 90% of its earnings in 2018, up from 58% in 2014.

The global financial crisis also prompted Immelt to rethink GE's media strategy. GE decided to exit this business in order to raise capital and refocus on its industrial engineering core. In 2009, GE sold a 51% stake in NBCUniversal to Comcast for \$13.75 billion. Comcast paid GE \$6.5 billion in cash, and another \$7.25 billion in cable TV assets that Comcast owned,

which became part of NBCUniversal. However, as part of the deal GE had to pay Vivendi \$5.8 billion for the 20% of NBCUniversal that it still owned, leaving GE with less than a billion in cash. In 2013, Comcast purchased the remaining 49% of NBC Universal for \$12 billion. The deal was widely regarded as something of a coup for Comcast, which by several calculations acquired NBCUniversal assets at a discount to their underlying value.

Another major divestment occurred in 2016 when GE sold its home appliances business to Haier, a Chinese company, for \$5.4 billion. Immelt had decided that home appliances did not fit with the industrial core of the new GE he was building. Plus, the unit's profitability was subpar.

C18-5b Infrastructure, Globalization, and Ecomagination

Three interrelated strategic themes that came to represent the Immelt era were *infrastructure*, *globalization* and *ecomagination*. Immelt stressed the need for GE to position itself to benefit from the enormous spending on infrastructure that was taking place in fast growing developing countries. He often noted that when he was getting started at GE some 80% of revenues came from developed countries. He was positioning GE for a time when 80% of revenues would come from developing nations like China, India, Brazil and the like. To better drive growth in infrastructure sales to developing nations, he reorganized GE into six large groups, one of which was infrastructure. This sector included aircraft engines, rail products, power generation equipment, water treatment systems, and oil and gas equipment. The idea was to provide customers with one stop shopping for all infrastructure projects. Immelt's belief was that by focusing on the needs of an underserved customer group—the governments of developing nations—GE could benefit from the anticipated surge in developing country infrastructure projects.

Surprisingly for such a big company, when Immelt took charge GE was still doing 60% of its business in the United States. By the time he left in 2017, GE was operating in 180 countries and generating 61% of its revenues outside of the United States. Moreover, annual revenues from emerging markets had grown from \$10 billion to \$45 billion over his tenure. On the other

hand, some analysts complained that this growth was bought at too high a price. Immelt acknowledged that doing businesses in China and India was more difficult than he had anticipated.

Related to the infrastructure play was Immelt's ecomagination strategy. The idea behind ecomagination came out of a top management strategic planning review in 2004. The management team came to the realization that several of the company's core businesses were deeply involved in environment- and energy-related projects. The appliance business was exploring energy conservation. The energy business was looking into alternatives to fossil fuels, including wind, solar and nuclear. Other businesses were looking at ways to reduce emissions and use energy more efficiently. What was particularly striking was that GE had initiated almost all of these projects in response to requests from its customers.

When these common issues surfaced across different lines of business, the group realized that something deeper was going on that they needed to understand. They initiated a data gathering effort. They made an effort to educate themselves on the science behind energy and environmental issues, including greenhouse gas emissions. As CEO Jeff Immelt later explained, "We went through a process of really understanding and coming to our own points of view on the science." Immelt became convinced that climate change was a technical fact. GE executives engaged in "dreaming sessions" with customers in energy and heavy-industry companies to try and understand their concerns and desires. What emerged was a wish list from customers that included cleaner ways to burn coal, more efficient wastewater treatment plants, better hydrogen fuel cells, and so on. At the same time, GE talked to government officials and regulators to try and get a sense for where public policy might be going.

This external review came to the conclusion that energy prices would likely increase going forward, driven by rising energy consumption in developing nations, and creating demand for energy efficient products. The team also saw tighter environmental controls, including caps on greenhouse gas emissions, as all but inevitable. At the same time, they looked inside GE. While the company had already been working on numerous energy efficiency and environmental projects, the team realized there were some gaps in technological capabilities, and there was

a lack of overarching strategy. What emerged from these efforts was a belief that GE could build strong businesses by helping its customers to improve their energy efficiency and environmental performance. As Immelt soon became fond of saying, “Green is green.”

First rolled out in 2005, the ecomagination strategy cut across businesses. Immelt tapped one of the company’s promising young leaders to head the program. GE established targets for doubling investments in clean technology to \$1.5 billion per year by 2010 and growing annual revenues from eco products to \$20 billion from \$10 billion in 2004. In its own operations, GE set out to cut greenhouse gas emissions per unit of output by 30% by 2008, and to cut absolute emissions by 1% by 2010 (as opposed to a forecasted increase of 40% due to the growth of the business). These corporate goals were broken into sub-goals and handed down to the relevant businesses. Performance against goal was reviewed on a regular basis and the compensation of executives was tied to their ability to meet these goals.

The effort started to bear fruit, including a new generation of energy efficient appliances; a new jet engine that burned 10% less fuel; a hybrid locomotive that burned 3% less fuel and put out 40% lower emissions than its immediate predecessor; lightweight plastics to replace the steel in cars; and technologies for turning coal into gas in order to drive electric turbines, while stripping most of the CO₂ from the turbine exhaust.

By the end of its first 5-year plan, GE had met or exceeded most of its original goals, despite the global financial crisis that hit in 2008. GE sold more than \$20 billion worth of ecoproducts in 2010; according to management, these products were among the most profitable in GE’s portfolio. In total, GE reported that its ecomagination portfolio included over 140 products and solutions that had generated \$105 billion in revenues by 2011. One of the great growth stories in the company has been its wind turbine business, which it bought from Enron in 2002. In that year, it sold \$200 million worth of wind turbines. By 2008, it was a \$6-billion business that had installed 10,000 turbines. By 2012, GE had installed over 20,000 turbines worldwide and was predicting a surge in orders from developing nations. Sales from Brazil alone were forecast to be in the range of \$1 billion annually for another decade.

C18-5c Downfall

Despite all of Immelt’s acquisitions, divestments, and grand strategic initiatives, GE’s performance failed to live up to that of the Welch era. The profit growth simply wasn’t there. By early 2017, the stock was trading in the high 20s—still below the peak reached in the Welch years. To be sure, the PE multiple had compressed from a high of 50 in 2000 to 20, but even at that level it seemed expensive. GE’s stock had tracked the rebound in the S&P 500 from the market’s 2009 lows that followed the global financial crisis until 2015, but then it started to lag. The first problem to become evident was GE’s ill-timed expansion into the oil and gas business. This was made at a time when oil prices were around \$100 a barrel. New supply from American producers using fracking technology, combined with an attempt by Saudi Arabia to drive marginal American producers out of business by expanding its own output, led to a sharp fall in the price of oil, which ended 2015 trading below \$40 a barrel. This resulted in a decline in new exploration activity, and a fall in demand for GE’s oil and gas services. In addition, restructuring charges related to divestments from GE Capital and strategic changes at Alstom resulted in GE booking \$6.1 billion loss for the year, or −\$0.62 per share. Despite the loss, Immelt confidently predicted that GE would earn \$2 per share in 2018. The promise was enough to induce the Train Fund, run by activist investor Nelson Peltz, to buy a \$2.5-billion stake in GE. Immelt was now on the hook to deliver on this big bet.

By 2016, astute investors noticed that GE was spending far more cash than it was generating. The company could pay its bills, but its cash reserves were being run down. Despite this, Immelt continued to use cash flow to buy back stock and maintain the dividend. From 2015 through 2017, GE generated about \$30 billion in free cash flow and asset sales, but it spent about \$75 billion on stock buybacks, dividends, and acquisitions. Some \$29 billion was spent on share repurchases, at an average price of \$30 a share. Immelt had been encouraged to buy back stock by Peltz. Peltz had actually urged GE to borrow \$20 billion for additional repurchases (something the company didn’t do), based on his belief that the stock would surge when the earnings promised by Immelt arrived.

Problems at GE Power—a unit which, after the 2015 Alston acquisition, accounted for a third of GE’s revenues—brought things to a head. As recently

as May 2017, Immelt was telling Wall Street that the operating profit outlook for GE Power was very positive. Just two months later, GE reported that the unit's quarterly profits were down, orders were down, and the outlook wasn't good. To compound matters, to gain market share in a weak market, GE Power had been sharply discounting prices which pressured margins.

The problems at GE Power were the end for Immelt. He lost the support of the board and stepped down. At Immelt's retirement in August 2017 the stock was below the level when he took over 16 years earlier. Including dividends, GE gained just 8% with Immelt at the helm. The S&P 500 had risen 214% over the same period. It wasn't until Immelt had departed that the board learned the full scope of problems at GE Power. Orders dropped 25% in the fourth quarter of 2017 from a year earlier, and the unit's profits fell in half. In December 2017, GE said that it would lay off 12,000 people in its power business, nearly 18% of the workforce. Management at Siemens, GE's main competitor in the power business, said they had seen this decline coming for several years and had been proactively reducing capacity, while GE had been buying more.

After Immelt's ouster, some insiders at GE voiced the opinion to reporters at the *Wall Street Journal* that the company's problems were exacerbated by what they called Immelt's "success theater." Immelt and his deputies projected optimism about GE's business and its future that didn't always match the reality of its operations and markets. According to several executives interviewed by the *Wall Street Journal*, Immelt didn't like to hear bad news, and he didn't like delivering bad news either. He stressed the positive and downplayed the negative. One insider linked this to GE's culture. "GE itself has never been a culture where people say 'I can't'," she said. An outside stock analyst noted that "the history of GE is to only provide positive information . . . there is a credibility gap between what they say and the reality of what is to come."

C18-6 FLANNERY TAKES OVER

Immelt was replaced by John Flannery, another GE veteran who had risen to prominence running GE's medical equipment business. Flannery lost no time

in telling the market that Immelt's projections had been overly optimistic, and that the company would have to go through some wrenching changes. In October 2017, GE reported poor third-quarter results that were barely half of what Wall Street expected. After stripping out restructuring charges, GE earned 29 cents per share in the third quarter of 2017, compared to Wall Street expectations of 49 cents a share. Profits fell in half at the company's power business. GE also posted a loss in its oil and gas business. The company lowered its profit forecast for 2017 to \$1.05–\$1.10 a share from \$1.60–\$1.70 a share. Flannery told analysts that "The results I am about to share with you are completely unacceptable. Things will not stay the same at GE. Everything is on the table and there are no sacred cows."

Flannery took steps immediately. He cut GE's dividend in half, a move that would save \$4 billion annually. He vowed to transform GE's culture, particularly with regard to capital allocation decisions. He promised to be more disciplined and data driven in his decisions. He stated that he would realign pay for top executives so that they are rewarded when the firm generates more free cash flow. He also reformed the board of directors, shrinking it from 18 to 12, and replacing several long-standing directors. He also put a representative from outside investors Train Partners on the board.

Still the hits kept on coming. In December, GE announced that 12,000 employees at GE Power would be laid off. In January 2018, GE wrote off \$6.2 billion in connection with a long-term care insurance business that was part of GE Capital. Flannery stated that the insurance business would require another \$15 billion in write-offs over the next seven years. The charge was so big and unexpected that the SEC opened an investigation. In February, GE revealed that the Justice Department was investigating WMC Mortgage, a business that GE had shut down a decade earlier. In April 2018, GE announced that it would put \$1.5 billion in reserve for potential liabilities associated with the WMC investigation. The stock market did not respond well to this stream of bad news. Many investors speculated that another dividend cut was in the offing. By early June 2018, the stock was trading at around \$13 a share, less than half of its value a year earlier.

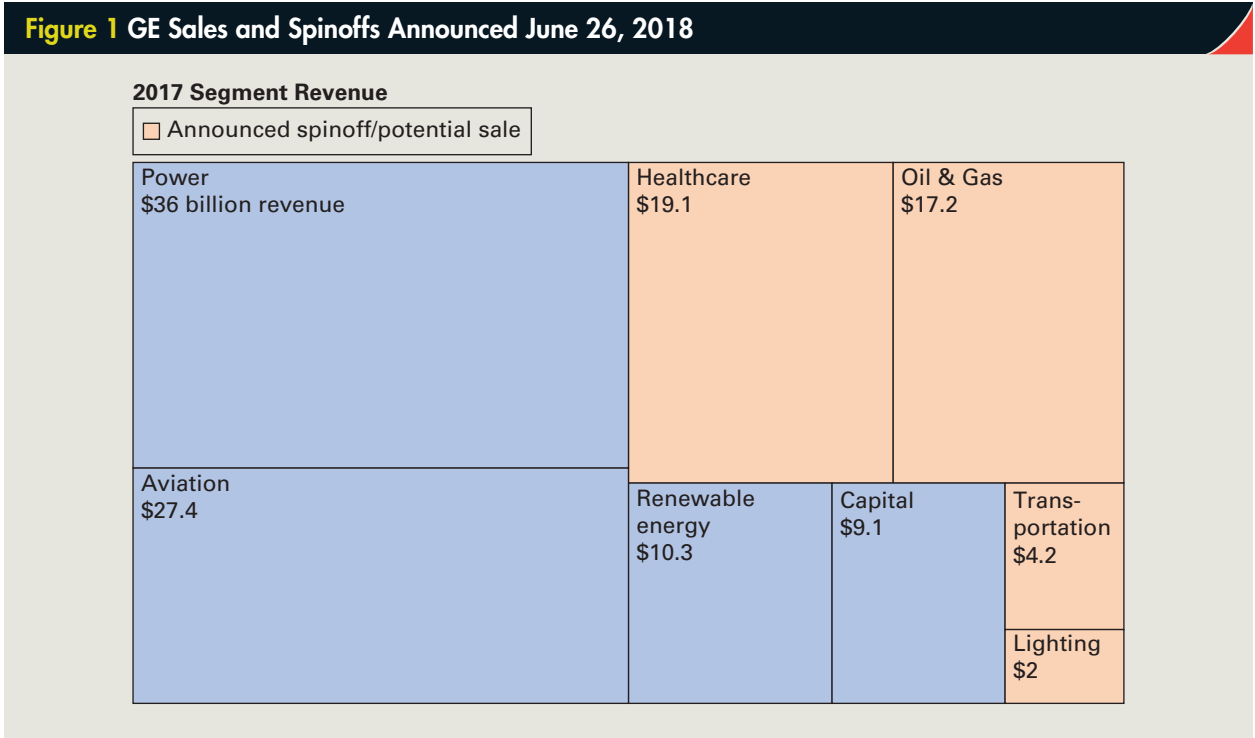
Shortly after taking over Flannery launched a top-to-bottom strategic review of all of GE's activities.

On June 26, 2018, Flannery announced the results of this review. They were dramatic (see Figure 1). The company would sell two big businesses, the profitable healthcare business, best known for making diagnostic equipment such as MRI scanners, and its oil and gas business, Baker Hughes. The company had announced earlier that it was selling its locomotive business for \$11 billion, and Flannery indicated that the lighting business would also be sold off. These sales would cut GE’s revenues by over a third. GE would hold onto its troubled power business, its profitable jet engine business, and its renewable energy business, along with the parts of GE Capital that were tied to sales of its industrial equipment.

In addition to asset disposals, Flannery stated that his plans called for a change in how GE was being managed, shifting from a centralized, top-down approach to a culture where the business units are the center of gravity. The company’s headquarters staff would be cut, saving \$500 million in annual cost. Flannery also indicated that GE would reduce its dividend after the sale of its healthcare business, and that

it will still need to pump cash into its GE Capital in 2019. The initial reaction from the stock market was favorable, with the stock rising \$1 to close at \$13.76 on the news.

In defending his choices about what to keep and what to sell, in an interview with *The Wall Street Journal*, Flannery started: “Unlike health care and Baker Hughes, there is significant shared technology (between power, aviation and renewables). . . . We get technology for GE fan blades for aircraft engines that we put into the renewable business, so there’s a lot of technology sharing back and forth, and we feel they can innovate and share investment in ways other parts of the company couldn’t . . . The business model is very similar. Big high-technology differentiation, installed base, long-term service.” As for GE Capital, Flannery noted that the broad strategy was to leverage the expertise in GE Capital employees to help support the industrial businesses, but from a balance sheet and investment perspective, the strategy was to “shrink materially the balance sheet of GE Capital.”



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CASE

19

3M: THE INNOVATION ENGINE

This case was prepared by Charles W. L. Hill of the School of Business, University of Washington, Seattle.

C19-1 INTRODUCTION

Established in 1902, 3M is one of the largest technology-driven enterprises in the United States. Its 2017 revenues were \$31.7 billion, 60% of which generated were outside the United States. The company was solidly profitable, earning \$4.86 billion in net income and generating a return on invested capital of 21.2%. Throughout its history, 3M researchers had driven much of the company's growth. The company commits 6% of its revenues to R&D. In 2017, around 8,100 of the company's 91,000 employees were scientists and researchers. The company had 112,400 patents, 9,000 of which had been accumulated since 2001.¹

This innovation engine had helped 3M to develop many of the 55,000 products that it sold in 2017. These products included Post-it Notes, Flex Circuits, various kinds of Scotch tape, abrasives, specialty chemicals, Thinsulate insulation products, Nexcare bandage, optical films, fiber optic connectors, drug delivery systems, and much more. In 2017, 3M's return on its investment in R&D outpaced each name on a list of the 10 most innovative companies in America compiled by the Boston Consulting Group. For every dollar of R&D spent in 2016, 3M yielded \$8.88

in 2017 gross profit versus an average of \$5.51 for the top 10. Over a 3-year period, 3M outpaced every firm on the list except number-one ranked Apple.² How had 3M built this innovation machine, and could it continue to keep innovating and growing profitably going forward?

C19-2 THE HISTORY OF 3M: BUILDING INNOVATIVE CAPABILITIES

The 3M story goes back to 1902, when five Minnesota businessmen established the Minnesota Mining and Manufacturing Company to mine a mineral that they thought was corundum, which is ideal for making sandpaper. The mineral, however, turned out to be low-grade anorthosite, nowhere near as suitable for making sandpaper, and the company nearly failed. To try and salvage the business, 3M turned to making the sandpaper itself using materials purchased from another source.

In 1907, 3M hired a 20-year-old business student, William McKnight, as assistant bookkeeper. This turned out to be a pivotal move in the history of the company. The hardworking McKnight soon made his mark. By 1929, he was CEO of the company and in 1949 he became chairman of 3M's board of directors, a position that he held through until 1966.

19-2a From Sandpaper to Post-it Notes

It was McKnight, then 3M's president, who hired the company's first scientist, Richard Carlton, in 1921. Around the same time, McKnight's interest had been peaked by an odd request from a Philadelphia printer by the name of Francis Okie for samples of every sandpaper grit size that 3M made. McKnight dispatched 3M's East Coast sales manager to find out what Okie was up to. The sales manager discovered that Okie had invented and patented a new kind of sandpaper. It was waterproof and could be used with water or oil to reduce dust and decrease the friction that marred auto finishes. In addition, the lack of dust reduced the poisoning associated with inhaling the dust of paint that had a high lead content. Okie had a problem though; he had no financial backers to commercialize the sandpaper. 3M quickly stepped into the breach, purchasing the rights to Okie's waterproof sandpaper, and hiring the young printer to join Carlton in 3M's lab. Wetordry™ sandpaper went on to revolutionize the sandpaper industry, and was the driver of significant growth at 3M.

Another key player in the company's history, Richard Drew, also joined 3M in 1921. Hired straight out of the University of Minnesota, Drew would round out the trio of scientists—Carlton, Okie, and Drew—who under McKnight's leadership would do much to shape 3M's innovative organization.

McKnight charged the newly hired Drew with developing a stronger adhesive to better bind the grit for sandpaper to paper backing. While experimenting with adhesives, Drew accidentally developed a weak adhesive that had an interesting quality—if placed on the back of a strip of paper and stuck to a surface, the strip of paper could be peeled off the surface it was adhered to without leaving any adhesive residue on that surface. This discovery gave Drew an epiphany. He had been visiting auto-body paint shops to see how 3M's Wetordry sandpaper was used, and he noticed that there was a problem with paint running.

His epiphany was to cover the back of a strip of paper with his weak adhesive, and use it as “masking tape” to cover parts of the auto body that were not to be painted. An excited Drew took his idea to McKnight, and explained how masking tape might create an entirely new business for 3M. McKnight reminded Drew that he had been hired to fix a specific problem, and pointedly suggested that he concentrate on doing just that.

Chastised, Drew went back to his lab, but he could not get the idea out of his mind. He continued to work on it at night, long after everyone else had gone home. Drew succeeded in perfecting the masking tape product, and then went to visit several auto-body shops to show them his innovation. He quickly received several commitments for orders. Drew then went to see McKnight again. He told him that he had continued to work on the masking tape idea on his own time, had perfected the product, and got several customers interested in purchasing it. This time it was McKnight's turn to be chastised. Realizing that he had almost killed a good business idea, McKnight reversed his original position and gave Drew the go ahead to pursue the idea.³

Introduced into the market in 1925, Drew's invention of masking tape represented the first significant product diversification at 3M. Company legend has it that this incident was also the genesis for 3M's famous 15% rule. Reflecting on Drew's work, both McKnight and Carlton both agreed that technical people could disagree with management, and should be allowed to go and do some experimentation on their own. The company then established a norm that technical people could spend up to 15% of their own workweek on projects that might benefit the consumer, without having to justify the project to their manager.

Drew was not finished. In the late 1920s, he was working with cellophane, a product that had been invented by DuPont, when lightning struck for a second time. Why, Drew wondered, couldn't cellophane be coated with an adhesive and used as a sealing tape? The result was Scotch cellophane tape. The first batch was delivered to a customer in September 1930, and Scotch tape went on to become one of 3M's bestselling products. Years later, Drew noted that “Would there have been any masking or cellophane tape if it hadn't been for earlier 3M research on adhesive binders for 3M™ Wetordry™ Abrasive Paper? Probably not!”⁴

Over the years, other scientists followed Drew's footsteps at 3M, creating a wide range of innovative products by leveraging existing technology and applying it to new areas. Two famous examples illustrate how many of these innovations occurred: The invention of Scotch Guard, and the development of the ubiquitous Post-it Notes.

The genesis of Scotch Guard was in 1953, when 3M scientist Patsy Sherman was working on a new kind of rubber for jet aircraft fuel lines. Some of the latex mixture splashed onto a pair of canvas tennis shoes. Over time, the spot stayed clean while the rest of the canvas soiled. Sherman enlisted the help of fellow chemist Sam Smith. Together they began to investigate polymers, and it didn't take long for them to realize that they were onto something. They discovered an oil and water repellant substance, based on the fluorocarbon fluid used in air conditioners, with enormous potential for protecting fabrics from stains. It took several years before the team perfected a means to apply the treatment using water as the carrier, thereby making it economically feasible for use as a finish in textile plants.

Three years after the accidental spill, the first rain and stain repellent for use on wool was announced. Experience and time revealed that one product could not, however, effectively protect all fabrics, so 3M continued working, producing a wide range of Scotch Guard products that could be used to protect all kinds of fabrics.⁵

The story of Post-it Notes began with Spencer Silver, a senior scientist studying adhesives.⁶ In 1968, Silver had developed an adhesive with properties like no other; it was a pressure sensitive adhesive that would adhere to a surface but was weak enough to easily peel off the surface and leave no residue. Silver spent several years shopping his adhesive around 3M, to no avail. It was a classic case of a technology in search of a product. One day in 1973, Art Fry, a new product development researcher who had attended one of Silver's seminars, was singing in his church choir. He was frustrated that his bookmarks kept falling out of his hymn book, when he had a "Eureka" moment. Fry realized that Silver's adhesive could be used to make a wonderfully reliable bookmark.

Fry went to work next day, and using 15% time started to develop the bookmark. When he started using samples to write notes to his boss, Fry suddenly realized that he had stumbled on a much bigger

potential use for the product. Before the product could be commercialized, however, Fry had to solve a host of technical and manufacturing problems. With the support of his boss, Fry persisted and after 18 months the product development effort moved from 15% time to a formal development effort funded by 3M's own seed capital.

The first Post-it Notes were test marketed in 1977 in four major cities, but customers were lukewarm at best. This did not gel with the experience within 3M, where people in Fry's division were using samples all the time to write messages to each other. Further research revealed that the test marketing effort, which focused on ads and brochures, didn't resonate well with consumers, who didn't seem to value Post-it Notes until they had the actual product in their hands. In 1978, 3M tried again, this time descending on Boise, Idaho, and handing out samples. Follow-up research revealed that 90% of consumers who tried the product said they would buy it. Armed with this knowledge, 3M rolled out the national launch of Post-it Notes in 1980. The product subsequently went on to become a bestseller.

C19-3 INSTITUTIONALIZING INNOVATION

Early on, McKnight set an ambitious target for 3M—a 10% annual increase in sales and 25% profit target. He also indicated how he thought that should be achieved with a commitment to plow 5% of sales back into R&D every year. The question, though, was how to ensure that 3M would continue to produce new products?

The answer was not apparent all at once, but rather evolved over the years from experience. A prime example was the 15% rule, which came out of McKnight's experience with Drew. In addition to the 15% rule and the continued commitment to push money back into R&D, many other mechanisms evolved at 3M to spur innovation.

Initially, research took place in the business units that made and sold products, but by the 1930s 3M had already diversified into several different fields, thanks in large part to the efforts of Drew and others. McKnight and Carlton realized that there was

a need for a central research function. In 1937, they established a central research laboratory which was charged with supplementing the work of product divisions and undertaking long-run, basic research. From the outset, the researchers at the lab were multidisciplinary, with people from different scientific disciplines often working next to each other on research benches.

As the company continued to grow, it became clear that there was a need for some mechanism to knit together the company's increasingly diverse business operations. This led to the establishment of the 3M Technical Forum in 1951. The goal of Technical Forum was to foster idea sharing, discussion, and problem solving between technical employees located in different divisions and the central research laboratory. The Technical Forum sponsored "problem-solving sessions" at which businesses would present their most recent technical nightmares in the hope that somebody might be able to suggest a solution—and that often was the case. The forum also established an annual event in which each division put up a booth to show off its latest technologies. Chapters were also created to focus on specific disciplines such as polymer chemistry or coating processes.

During the 1970s, the Technical Forum cloned itself, establishing forums in Australia and England. By 2001, the forum had grown to 9,500 members in 8 U.S. locations and 19 other countries, becoming an international network of researchers who could share ideas, solve problems, and leverage technology.

According to Marlyee Paulson, who coordinated the Technical Forum from 1979 to 1992, the great virtue of the Technical Forum is to cross-pollinate ideas:

3M has lots of polymer chemists. They may be in tape; they may be medical or several other divisions. The forum pulls them across 3M to share what they know. It's a simple but amazingly effective way to bring like mind together.⁷

In 1999, 3M created another unit within the company, 3M Innovative Properties (3M IPC) to leverage technical knowhow. 3M IPC is explicitly charged with protecting and leveraging 3M's intellectual property around the world. At 3M there has been a long tradition that while divisions "own" their products, the company as a whole "owns" the underlying technology or intellectual property. One task of 3M IPC is to find ways in which 3M technology can be applied

across business units to produce unique marketable products. Historically, the company has been remarkably successful at leveraging company technology to produce new product ideas.

Another key to institutionalizing innovation at 3M has been the principle of "patient money." The basic idea is that producing revolutionary new products requires substantial long-term investments, and often repeated failure, before a major payoff occurs. The principle can be traced back to 3M's early days. It took the company 12 years before its initial sandpaper business started to show a profit, a fact that drove home the importance of taking the long view. Throughout the company's history, similar examples can be found. Scotchlite reflective sheeting, now widely used on road signs, didn't show much profit for 10 years. The same was true of fluorochemicals and duplicating products. Patient money doesn't mean substantial funding for long periods of time, however. Rather, it might imply that a small group of five researchers is supported for 10 years while they work on a technology.

More generally, if a researcher creates a new technology or idea, they can begin working on it using 15% time. If the idea shows promise, they may request seed capital from their business unit managers to develop it further. If that funding is denied, which can occur, they are free to take the idea to any other 3M business unit. Unlike the case in many other companies, requests for seed capital do not require that researchers draft detailed business plans that are reviewed by top management. That comes later in the process. As one former senior technology manager has noted:

In the early stages of a new product or technology, it shouldn't be overly managed. If we start asking for business plans too early and insist on tight financial evaluations, we'll kill an idea or surely slow it down.⁸

Explaining the patient money philosophy, Ron Baukol, a former executive vice president of 3M's international operations, and a manager who started as a researcher, has noted that:

You just know that some things are going to be worth working on, and that requires technological patience . . . you don't put too much money into the investigation, but you keep one to five people

working on it for twenty years if you have to. You do that because you know that, once you have cracked the code, it's going to be big.⁹

An internal review of 3M's innovation process in the early 1980s concluded that despite the liberal process for funding new product ideas, some promising ideas did not receive funding from business units, or the central research budget. This led to the establishment in 1985 of Genesis Grants, which provide up to \$100,000 in seed capital to fund projects that do not get funded through 3M's regular channels. About a dozen of these grants are given every year. One recipient of these grants, a project that focused on creating a multilayered, reflective film, has subsequently produced a breakthrough reflective technology that may have applications in a wide range of businesses, from better reflective strips on road signs to computer displays and the reflective linings in light fixtures. Company estimates in 2002 suggest that the commercialization of this technology might ultimately generate \$1 billion in sales for 3M.

Underlying the patient money philosophy is recognition that innovation is a very risky business. 3M has long acknowledged that failure is an accepted and essential part of the new product development process. As former 3M CEO Lew Lehr once noted:

We estimate that 60% of our formal new product development programs never make it. When this happens, the important thing is to not punish the people involved.¹⁰

To reduce the probability of failure, in the 1960s, 3M started to establish a process for auditing the product development efforts ongoing in the company's business units. The idea has been to provide a peer review, or technical audit, of major development projects taking place in the company. A typical technical audit team is composed of 10 to 15 business and technical people, including technical directors and senior scientists from other divisions. The audit team looks at the strengths and weaknesses of a development program and its probability of success, both from a technical standpoint and a business standpoint. The team then makes nonbinding recommendations, but they are normally taken very seriously by the managers of a project. For example, if an audit team concludes that a project has enormous potential, but is terribly underfunded, managers of the unit

would often increase the funding level. Of course, the opposite can also happen, and in many instances, the audit team can provide useful feedback and technical ideas that can help a development team to improve their projects chance of success.

By the 1990s, the 3M's continuing growth had produced a company that was simultaneously pursuing a vast array of new product ideas. This was a natural outcome its decentralized and bottom-up approach to innovation, but it was problematic in one crucial respect: the company's R&D resources were being spread too thinly over a wide range of opportunities, resulting in potentially major projects being underfunded.

To channel R&D resources into projects that had blockbuster potential, in 1994, 3M introduced what was known as the Pacing Plus Program.

The program asked business to select a small number of programs that would receive priority funding, but 3M's senior executives made the final decision on which programs were to be selected for the Pacing Plus Program. An earlier attempt to do this in 1990 had met with limited success because each sector in 3M submitted as many as 200 programs. The Pacing Plus Program narrowed the list down to 25 key programs that by 1996 were receiving some 20% of 3M's entire R&D funds (by the early 2000s the number of projects funded under the Pacing Plus Program had grown to 60). The focus was on "leapfrog technologies," revolutionary ideas that might change the basis of competition and led to entirely new technology platforms that might, in typical 3M fashion, spawn an entire range of new products.

To further foster a culture of entrepreneurial innovation and risk taking, over the years 3M established a number of reward and recognition programs to honor employees who make significant contributions to the company. These include the Carton Society award, which honors employees for outstanding career scientific achievements and the Circle of Technical Excellence and Innovation Award, which recognizes people who have made exceptional contributions to 3M's technical capabilities.

Another key component of 3M's innovative culture has been an emphasis on dual career tracks. From its early days, many key players in 3M's history, people like Richard Drew, chose to stay in research, turning down opportunities to go into the management side of the business. Over the years, this became

formalized in a dual career path. Today, technical employees can choose to follow a technical career path or a management career path, with equal advancement opportunities. The idea is to let researchers develop their technical professional interests without being penalized financially for not going into management.

Although 3M's innovative culture emphasizes the role of technical employees in producing innovations, the company also has a strong tradition of emphasizing that new product ideas often come from watching customers at work. Richard Drew's original idea for masking tape, for example, came from watching workers use 3M Wetordry sandpaper in auto body shops. As with much else at 3M, the tone was set by McKnight who insisted that salespeople needed to "get behind the smokestacks" of 3M customers, going onto the factory floor, talking to workers and finding out what their problems were. Over the years this theme has become ingrained in 3M's culture, with salespeople often requesting time to watch customer work, and then bringing their insights about customer problems back into their organization.

By the mid-1990s, McKnight's notion of getting behind the smokestacks had evolved into the idea that 3M could learn a tremendous amount from what were termed "lead users," who were customers working in very demanding conditions. Over the years, 3M had observed that in many cases, customer themselves can be innovators, developing new products to solve problems that they face in their work setting. This was most likely to occur for customers working in very demanding conditions. To take advantage of this process, 3M instituted a lead user process in the company in which cross-functional teams from a business unit observe how customers work in demanding situations.

For example, 3M has a \$100-million business selling surgical drapes, which are drapes backed with adhesives that are used to cover parts of a body during surgery and help prevent infection. As an aid to new product development, 3M's surgical drapes business formed a cross-functional team that went to observe surgeons at work in very demanding situations—including on the battlefield, hospitals in developing nations, and in vets' offices. The result was a new set of product ideas, including low-cost surgical drapes that were affordable in developing nations, and devices for coating a patient's skin and surgical instruments with antimicrobial substances that would reduce the chance of infection during surgery.¹¹

The company also formalized the process for identifying promising avenues for research, developing potential products, and then taking those products to market. This process involves three-part teams known as "scouts," "entrepreneurs," and "implementers." The role of scouts is to identify problems that 3M might solve through innovation. Once an interesting problem has been identified, the project is handed over to the entrepreneurs, who attempt to come up with a solution. Once a solution has been found, the implementers step in to commercialize that solution and bring it to market. The scouts are predominantly research scientists, whereas the entrepreneurs and implementers are typically cross-functional teams.¹²

A case in point: In 2007, two scouts were talking to customers, visiting hospitals and clinics, and reviewing the medical research when they learned that concern was rising about surgical site infections (SSIs) caused by methicillin-resistant *Staphylococcus aureus* (MRSA) and other potentially deadly forms of that bacterial strain. Roughly 20% of people are persistent carriers of it, and 60% are intermittent carriers. *S. aureus* is typically found in the nose, putting many people at risk for infection during surgical procedures.

The scouts had found a problem. They sat down with a team of 3M entrepreneurs whose job it is to figure out how to capitalize on opportunities the scouts have identified. They ultimately came up with the idea of using iodine as a nasal treatment before each operation.

The scouts then stepped aside, and the entrepreneurs took over. They fleshed out an initial prototype and developed a number of chemical formulations for the product. Each was rigorously modeled, tested, analyzed, tweaked, and retested. The scouting phase took only three months, whereas the entrepreneurial development phase took about nine months. Once the entrepreneurs had gone through enough trials and due diligence to reach a viable solution, they passed it along to a team of around a dozen Implementers to ready it for commercialization. This was a longer process, stretching across roughly 18 months of rigorous market testing, seeking and adapting to regulatory guidelines, nailing down supply-chain quality and performance metrics, and building out the go-to-market roadmap. In 2010, the 3M™ Skin and Nasal Antiseptic Patient Preoperative Skin Preparation hit the market. Since then, it has been used in healthcare facilities and has helped reduce the likelihood of SSIs.

Driving the entire innovation machine at 3M has been a series of stretch goals set by top managers. The goals date back to 3M's early days and McKnight's ambitious growth targets. In 1977, the company established "Challenge 81," which called for 25% of sales to come from products that had been on the market for less than 5 years by 1981. By the 1990s, the goal had been raised to the requirement that 30% of sales should come from products that had been on the market less than 4 years.

The flip side of these goals was that, over the years, many products and businesses that had been 3M staples were phased out. More than 20 of the businesses that were 3M mainstays in 1980, for example, had been phased out by 2000. Analysts estimate that sales from mature products at 3M generally fall by 3 to 4% per annum. The company has a long history of inventing businesses, leading the market for long periods of time, and then shutting those businesses down or selling them off when they can no longer meet 3M's own demanding growth targets. Notable examples include the duplicating business, which 3M invented with Thermo Fax copiers (which were ultimately made obsolete by Xerox's patented technology) and the video and audio magnetic tape business. The former division was sold off in 1985, and the latter in 1995. In both cases the company exited these areas because they had become low growth commodity businesses which could not generate the kind of top line growth that 3M was looking for.

Still, 3M was by no means invulnerable in the realm of innovation and on occasion squandered huge opportunities. A case in point was the document copying business. 3M invented this business in 1951 when it introduced the world's first commercially successful Thermo Fax copier (which used specially coated 3M paper to copy original typed documents). 3M dominated the world copier business until 1970, when Xerox overtook the company with its revolutionary xerographic technology that used plain paper to make copies. 3M saw Xerox coming, but rather than develop their own plain-paper copier, the company invested funds in trying to improve its (increasingly obsolete) copying technology. It wasn't until 1975 that 3M introduced its own plain-paper copier, and by then it was too late. Ironically, 3M turned down the chance to acquire Xerox's technology 20 years earlier, when the company's founders had approached 3M.

19-3a Building the Organization

McKnight, a strong believer in decentralization, organized the company into product divisions in 1948, making 3M one of the early adopters of this organizational form. Each division was set up as an individual profit center that had the power, autonomy and resources to run independently. At the same time, certain functions remained centralized, including significant R&D, human resources, and finance.

McKnight wanted to keep the divisions small enough that people had a chance to be entrepreneurial and focused on the customer. A key philosophy of McKnight's was "divide and grow." Put simply, when a division became too big, some of its embryonic businesses were spun off into a new division. Not only did this new division then typically attain higher growth rates, but the original division had to also find new drivers of growth to make up for the contribution of the businesses that had gained independence. This drove the search for further innovations.

At 3M, the process of organic diversification by splitting divisions became known as "renewal." Examples of renewal within 3M are legion. A copying machine project for Thermo-Fax copiers grew to become the Office Products Division. When Magnetic Recording Materials was spun off from the Electrical Products division, it grew to become its own division, and then in turn spawned a spate of divisions.

However, this organic process was not without its downside. By the early 1990s, some of 3M's key customers were frustrated that they had to do business with many different 3M divisions. In some cases, there could be representatives from 10 to 20 3M divisions calling on the same customer. To cope with this problem, in 1992 3M started to assign key account representatives to sell 3M products directly to major customers. These representatives typically worked across divisional lines. Implementing the strategy required many of 3M's general managers to give up some of their autonomy and power, but the solution seemed to work well, particularly for 3M's consumer and office divisions.

Underpinning the organization that McKnight put in place was his own management philosophy. As explained in a 1948 document, his basic management philosophy consisted of the following values:¹³

As our business grows, it becomes increasingly necessary to delegate responsibility and to encourage

men and women to exercise their initiative. This requires considerable tolerance. Those men and women to whom we delegate authority and responsibility, if they are good people, are going to want to do their jobs in their own way.

Mistakes will be made. But if a person is essentially right, the mistakes he or she makes are not as serious in the long run as the mistakes management will make if it undertakes to tell those in authority exactly how they must do their jobs.

Management that is destructively critical when mistakes are made kills initiative. And it's essential that we have many people with initiative if we are to continue to grow.

At just 3% per annum, employee turnover rate at 3M has long been among the lowest in corporate America, a fact that is often attributed to the tolerant, empowering and family like corporate culture that McKnight helped to establish. Reinforcing this culture has been a progressive approach towards employee compensation and retention. In the depths of the Great Depression, 3M was able to avoid laying off employees while many others did because the company's innovation engine was able to keep building new businesses even through the worst of times.

In many ways, 3M was ahead of its time in management philosophy and human resource practices. The company introduced its first profit-sharing plan in 1916, and McKnight instituted a pension plan in 1930 and an employee stock purchase plan in 1950. McKnight was convinced that people would be much more likely to be loyal to a company in which they had a stake. 3M also developed a policy of promoting from within, and of giving its employees a plethora of career opportunities within the company.

19-3b Going International

The first steps abroad occurred in the 1920s. There were limited sales of Wetordry sandpaper in Europe during the early 1920s. These increased after 1929, when 3M joined the Durex Corporation, a joint venture for international abrasive product sales in which 3M was involved along with eight other U.S. companies. In 1950, however, the Department of Justice alleged that the Durex Corporation was a mechanism for achieving collusion among U.S. abrasive manufacturers, and a judge ordered that the corporation

be broken up. After the Durex Corporation was dissolved in 1951, 3M was left with a sandpaper factory in Britain, a small plant in France, a sales office in Germany, and a tape factory in Brazil. International sales at this point amounted to no more than 5% of 3M's total revenues.

Although 3M opposed the dissolution of the Durex Corporation, in retrospect it turned out to be one of the most important events in the company's history, for it forced the corporation to build its own international operations. By 2010, international sales amounted to 63% of total revenues.

In 1952, Clarence Sampair was put in charge of 3M's international operations and charged with getting them off the ground. He was given considerable strategic and operational independence. Sampair and his successor, Maynard Patterson, worked hard to protect the international operations from getting caught up in the red tape of a major corporation. For example, Patterson recounts:

I asked Em Monteiro to start a small company in Columbia. I told him to pick a key person he wanted to take with him. "Go start a company," I said, and no one from St Paul is going to visit you unless you ask for them. We'll stay out of your way, and if someone sticks his nose in your business you call me."¹⁴

The international businesses were grouped into an International Division that Sampair headed. From the get-go the company insisted that foreign ventures pay their own way. In addition, 3M's international companies were expected to pay a 5 to 10% royalty to the corporate head office. Starved of working capital, 3M's International Division relied heavily on local borrowing to fund local operations, a fact that forced those operations to quickly pay their own way.

The international growth at 3M typically occurred in stages. The company would start by exporting to a country and working through sales subsidiaries. In that way, it began to understand the country, the local marketplace, and the local business environment. Next 3M established warehouses in each nation, and stocked those with goods paid for in local currency. The next phase involved converting products to the sizes and packaging forms that the local market conditions, customs and culture dictated. 3M would ship jumbo rolls of products from the United States, which were then broken up and repackaged for each country.

The next stage was designing and building plants, then buying machinery and getting it up and running. Over the years, R&D functions were often added, and by the 1980s considerable R&D was done outside of the United States.

Both Sampair and Patterson set an innovative, entrepreneurial framework that according to the company, still guides 3M's international operations today. The philosophy can be reduced to several simple, key commitments: (1) get in early (within the company, the strategy is known as FIDO—"First in Defeats Others"); (2) hire talented, motivated local people; (3) become a good corporate citizen of the country; (4) grow with the local economy; (5) American products are not one-size-fits-all around the world; tailor products to fit local needs; and (6) enforce patents in local countries.

As 3M stepped into the international market vacuum, foreign sales surged from less than 5% in 1951 to 42% by 1979. By the end of the 1970s 3M was beginning to understand how important it was to integrate the international operations more closely with the U.S. operations, and to build innovative capabilities overseas. It expanded the company's international R&D presence (there are now more than 2,200 technical employees outside the United States), built closer ties between the United States and foreign research organizations, and started to transfer more managerial and technical employees between businesses in different countries.

In 1978, the company started the Pathfinder Program to encourage new product and new business initiatives born outside the United States. By 1983, products developed under the initiative were generating sales of over \$150 million a year. 3M Brazil invented a low-cost, hot melt adhesive from local raw materials, 3M Germany teamed up with Sumitomo 3M of Japan (a joint venture with Sumitomo) to develop electronic connectors with new features for the worldwide electronics industry, 3M Philippines developed a Scotch-Brite cleaning pad shaped like a foot after learning that Filipinos polished floors with their feet, and so on. On the back of such developments, in 1992, international operations exceeded 50% for the first time in the company's history.

By the 1990s, 3M started to shift away from a country-by-country management structure to more regional management. Drivers behind this development included the fall of trade barriers, the rise

of trading blocs such as the European Union and NAFTA, and the need to drive down costs in the face of intense global competition. The first European Business Center (EBC) was created in 1991 to manage 3M's chemical business across Europe. The EBC was charged with product development, manufacturing, sales, and marketing for Europe, but also with paying attention to local country requirements. Other EBCs soon followed, such as EBCs for disposable products and pharmaceuticals.

As the millennium ended, 3M was transforming into a transnational organization characterized by an integrated network of businesses that spanned the globe. The goal was to get the right mix of global scale to deal with competitive pressures, while at the same time maintaining 3M's traditional focus on local market differences and decentralized R&D capabilities.

C19-4 THE NEW ERA

19-4a The DeSimone Years

In 1991, Desi DeSimone became CEO of 3M. A long-time 3M employee, the Canadian born DeSimone was the epitome of a 21st-century manager—he had made his name by building 3M's Brazilian business, and spoke five languages fluently. Unlike most prior 3M CEOs, DeSimone came from the manufacturing side of the business rather than the technical aide. He soon received praise for managing 3M through the recession of the early 1990s. By the late 1990s, however, his leadership had come under fire from both inside and outside the company.

In 1998 and 1999, the company missed its earnings targets, and stock price fell as disappointed investors sold. Sales were flat, profit margins fell and earnings slumped by 50%. The stock had underperformed the widely tracked S&P 500 stock index for most of the 1980s and 1990s.

One cause of the earnings slump in the late 1990s was 3M's sluggish response to the 1997 Asian crisis. During the Asian crisis, the value of several Asian currencies fell by as much as 80% against the U.S. dollar in a matter of months. 3M generated a quarter of its sales from Asia, but it was slow to cut costs there in the face of slumping demand following the collapse

of currency values. At the same time, a flood of cheap Asian products cut into 3M's market share in the United States and Europe as lower currency values made Asian products much cheaper.

Another problem was that for all of its vaunted innovative capabilities, 3M had not produced a new blockbuster product since Post-it Notes. Most new products produced during the 1990s were just improvements over existing products, not truly new products.

DeSimone was also blamed for not pushing 3M hard enough earlier in the decade to reduce costs. An example was the company's supply chain excellence program. In 1995, 3M's inventory was turning over just 3.5 times a year, sub-par for manufacturing. An internal study suggested that every half point increase in inventory turnover could reduce 3M's working capital needs by \$700 million and boost its return on invested capital. But by 1998, 3M had made no progress on this front.¹⁵

By 1998, there was also evidence of internal concerns. Anonymous letters from 3M employees were sent to the board of directors, claiming that DeSimone was not as committed to research as he should have been. Some letters complained that DeSimone was not funding important projects for future growth; others that he had not moved boldly enough to cut costs; still others that the company's dual career track was not being implemented well, and that technical people were underpaid. Critics argued that he was a slow and cautious decision maker in a time that required decisive strategic decisions. For example, in August 1998, DeSimone announced a restructuring plan that included a commitment to cut 4,500 jobs, but reports suggest that other senior managers wanted 10,000 job cuts, and DeSimone had watered down the proposals.¹⁶

Despite the criticism, 3M's board, which included four previous 3M CEOs among its members, stood behind DeSimone until he retired in 2001. However, the board began a search for a new top executive in February 2000 and signaled that it was looking for an outsider. In December 2000, the company announced that it had found the person they wanted, Jim McNerney, a 51-year-old General Electric veteran who ran GE's medical equipment businesses, and before that GE's Asian operations. McNerney was one of the frontrunners in the race to succeed Jack Welsh as CEO of General Electric but lost out to

Jeffrey Immelt. One week after that announcement, 3M hired him.

19-4b McNerney's Plan for 3M

In his first public statement days after being appointed, McNerney said that his focus would be on getting to know 3M's people and culture and its diverse lines of business: "I think getting to know some of those businesses and bringing some of GE here to overlay on top of 3M's strong culture of innovation will be particularly important."¹⁷

It soon became apparent that McNerney's game plan was exactly that: to bring the GE play book to 3M and use it to boost 3M's results, while simultaneously not destroying the innovative culture that had produced the company's portfolio of 50,000 products.

The first move came in April 2001, when 3M announced that the company would cut 5,000 jobs, or about 7% of the workforce, in a restructuring effort that would zero in on struggling businesses. To cover severance and other costs of restructuring, 3M announced that it would take a \$600 million charge against earnings. The job cuts were expected to save \$500 million a year. In another effort to save costs, the company streamlined its purchasing processes, for example, by reducing the number of packaging suppliers on a global basis from 50 to 5, saving another \$100 million annually in the process.

Next, McNerney introduced the Six-Sigma process, a rigorous, statistic-based quality control process that was one of the drivers of process improvement and cost savings at GE. At heart, Six-Sigma is a management philosophy, accompanied by a set of tools, that is rooted in identifying and prioritizing customers and their needs, reducing variation in all business processes, and selecting and grading all projects based on their impact on financial results. Six-Sigma breaks every task (process) in an organization down into increments to be measured against a perfect model.

McNerney called for Six-Sigma to be rolled out across 3M's global operations. He also introduced a 3M-like performance evaluation system at 3M under which managers were asked to rank every single employee who reported to them.

In addition to boosting performance from existing business, McNerney quickly signaled that he wanted to play a more active role in allocating resources

between new business opportunities. At any given time, 3M has around 1,500 products in the development pipeline. McNerney stated that was too many, and he indicated that wanted to funnel more cash to the most promising ideas—those with a potential market of \$100 million a year or more—while cutting funding to weaker development projects.

In the same vein, he signaled that he wanted to play a more active role in resource allocation than had traditionally been the case for a 3M CEO, using cash from mature businesses to fund growth opportunities elsewhere. He scrapped the requirement that each division get 30% of its sales from products introduced in the past four years, noting that “To make that number, some managers were resorting to some rather dubious innovations, such as pink Post-it Notes. It became a game, what could you do to get a new SKU?”¹⁸

Some longtime 3M watchers, however, worried that by changing resource allocation practices McNerney might harm 3M’s innovative culture. If the company’s history proves anything, they say, it’s that it is hard to tell which of today’s tiny products will become tomorrow’s home runs. No one predicted that Scotch Guard or Post-it Notes would earn millions. They began as little experiments that evolved without planning into big hits. McNerney’s innovations all sound fine in theory, they say, but there is a risk that he will transform 3M into “3E” and lose what is valuable in 3M in the process.

In general, though, securities analysts greeted McNerney’s moves favorably. One noted that “McNerney is all about speed,” and that there will be “no more Tower of Babel—everyone speaks one language.” This “one company” vision was meant to replace the program under which 3M systematically spun off successful new products into new business centers. The problem with this approach, according to the analyst, was that there was no leveraging of best practices across businesses.¹⁹

McNerney also signaled that he would reform 3M’s regional management structure, replacing it with a global business unit structure that would be defined by either products or markets.

At a meeting for investment analysts, held on September 30, 2003, McNerney summarized several achievements.²⁰ At the time, the indications seemed to suggest that McNerney was helping to revitalize 3M. Profitability, measured by return on invested capital, had risen from 19.4% in 2001 and was projected to

hit 25.5% in 2003. 3M’s stock price had risen from \$42 just before McNerney was hired to \$73 in October 2003 (see Exhibit 5 for details).

Like his former boss, Jack Welch at GE, McNerney seemed to place significant value on internal executive education programs as a way of shifting to a performance-oriented culture. McNerney noted that some 20,000 employees had been through Six-Sigma training by the third quarter of 2003. Almost 400 higher level managers had been through an Advanced Leadership Development Program set up by McNerney and offered by 3M’s own internal executive education institute. Some 40% of participants had been promoted on graduating. All of the company’s top managers had graduated from an executive leadership program offered by 3M.

McNerney also emphasized the value of five initiatives that he put in place at 3M; indirect cost control, global sourcing, e-productivity, Six-Sigma, and the 3M Acceleration program. With regard to indirect cost control, some \$800 million had been taken out of 3M’s cost structure since 2001, primarily by reducing employee numbers, introducing more efficient processes that boost productivity, benchmarking operations internally and leveraging best practices. According to McNerney, internal benchmarking highlighted another \$200 to \$400 million in potential cost savings over the next few years.

On global sourcing, McNerney noted that more than \$500 million had been saved since 2000 by consolidating purchasing, reducing the number of suppliers, switching to lower cost suppliers in developing nations, and introducing dual sourcing policies to keep price increases under control.

The e-productivity program at 3M embraced the entire organization, and all functions. It involves the digitalization of a wide range of processes, from customer ordering and payment, through supply chain management and inventory control, to managing employee process. The central goal is to boost productivity by using information technology to more effectively manage information within the company, and between the company and its customers and suppliers. McNerney cited some \$100 million in annual cost savings from this process.

The Six-Sigma program overlays the entire organization, and focuses on improving processes to boost cash flow, lower costs (through productivity

enhancements), and boost growth rates. By late 2003, there were some 7,000 six sigma projects in process at 3M. By using working capital more efficiently, Six-Sigma programs had helped to generate some \$800 million in cash, with the total expected to rise to \$1.5 billion in by the end of 2004. 3M has applied the Six-Sigma process to the company's R&D process, enabling researchers to engage customer information in the initial stages of a design discussion. According to Jay Inlenfeld, VP of R&D, Six-Sigma tools "Allow us to be more closely connected to the market and give us a much higher probability of success in our new product designs."²¹

Finally, the 3M Acceleration program is aimed at boosting the growth rate from new products through better resource allocation, particularly by shifting resources from slower-growing to faster-growing markets. As McNerney noted: "3M has always had extremely strong competitive positions, but not in markets that are growing fast enough. The issue has been to shift emphasize into markets that are growing faster."²²

Part of this program is a tool termed 2X/3X, 2X is an objective for two times the number of new products that were introduced in the past, and 3X is a business objective for three times as many winning products as there were in the past. 2X focuses on generating more "major" product initiatives, and 3X on improving the commercialization of those initiatives. The process illustrated in Exhibit 3 is 3M's "stage gate" process, where each gate represents a major decision point in the development of a new product, from idea generation to post launch.

Other initiatives aimed at boosting 3M's organization growth rate through innovation include Six-Sigma process, leadership development programs, and technology leadership. The purpose of these initiatives was to help implement the 2X/3X strategy.

As a further step in the Acceleration Program, 3M decided to centralize its corporate R&D effort. Prior to the arrival of McNerney, there were 12 technology centers staffed by 900 scientists that focused on core technology development. The company is replacing these with one central research lab, staffed by 500 scientists, some 120 of whom will be located outside the United States. The remaining 400 scientists will be relocated to R&D centers in the business

units. The goal of this new corporate research lab is to focus on developing new technology that might fill high-growth "white spaces", which are areas where the company currently has no presence, but where the long-term market potential is great. An example is research on fuel cells, currently a major research project within 3M.

Responding to critics' charges that changes such as these might impact on 3M's innovative culture, Inlenfeld noted that "We are not going to change the basic culture of innovation at 3M. There is a lot of culture in 3M, but we are going to introduce more systematic, more productive tools that allow our researchers to be more successful."²³

For example, Inlenfeld repeatedly emphasized that the company remained committed to basic 3M principles such as the 15% rule and leveraging technology across businesses.

By late 2003, McNerney noted that some 600 new product ideas were under development, and that collectively they were expected to reach the market and generate some \$5 billion in new revenues between 2003 and 2006, up from \$3.5 billion 18 months earlier. Some \$1 billion of these gains was expected to come in 2003.

C19-5 GEORGE BUCKLEY TAKES OVER

In mid-2005, McNerney announced that he would leave 3M to become CEO and chairman of Boeing, a company on whose board he had served for some time. He was replaced in late 2005 by another outsider, George Buckley, the highly regarded CEO of Brunswick Industries. Buckley, a Brit with a Ph.D. in electrical engineering, describes himself as a scientist at heart. Over the next year, in several presentations, Buckley outlined his strategy for 3M, and it soon became apparent that he was sticking to the general course laid out by McNerney, albeit with some important corrections.²⁴

Buckley did not see 3M as an enterprise that needed radical change. He saw 3M as a company with impressive internal strengths, but one that had been too cautious about pursuing growth opportunities.²⁵

Buckley's overall strategic vision for 3M was that the company must solve customer needs through the provision of innovative, differentiated products that increase the efficiency and competitiveness of customers. Consistent with long-term 3M strategy, he saw this as being achieved by taking 3M's multiple technology platforms and applying them to different market opportunities.

Controlling costs and boosting productivity through Six-Sigma continued to be a major thrust under Buckley. This was hardly a surprise; Buckley had pushed Six-Sigma at Brunswick. By late 2006, some 55,000 3M employees had been trained in Six-Sigma methodology, 20,000 projects had been completed, and some 15,000 were under way. 3M was also adding techniques gleaned from Toyota's lean production methodology to its Six-Sigma tool kit. As a result of Six-Sigma and other cost control methods, between 2001 and 2005, productivity measured by sales per employee increased from \$234 to \$311, and some \$750 million were taken out of overhead costs.

However, Buckley departed from McNerney's playbook in one significant way: He removed Six-Sigma from the labs. The feeling of many at 3M was that Six-Sigma rules choked those working on innovation. As one 3M researcher noted, "It's really tough to schedule innovation."²⁶ When McNerney left 3M in 2005, the percentage of sales from new products introduced in the last five years had fallen to 21%, down from the company's long-term goal of 30%. By 2010, after 5 years of Buckley's leadership, the percentage was back up to 30%. According to many in the company, Buckley has been a champion of researchers at 3M, devoting much of his personal time to empowering researchers and urging them to restore the luster of 3M.

Buckley stressed the need for 3M to more aggressively pursue growth opportunities. He wanted the company to use its differentiated brands and technology to continue to develop core businesses and extend those core businesses into adjacent areas. In addition, like McNerney, Buckley wanted the company to focus R&D resources on emerging business opportunities, and he too seemed to be prepared to play a more proactive role in this process. Areas of focus include filtration systems, track and trace information technology, energy and mineral extraction, and food safety. 3M made a number of acquisitions since 2005 to achieve scale and acquire technology and other assets in these

areas. In addition, it increased its own investment in technologies related to these growth opportunities, particularly nanotechnology.

Buckley made selective divestitures of businesses not seen as core. Most notably, in November 2006, 3M reached an agreement to sell its pharmaceutical business for \$2.1 billion. 3M took this step after deciding that a combination of slow growth and high regulatory and technological risk made the sector an unattractive one that would dampen the company's growth rate.

Finally, Buckley was committed to continuing internationalization at 3M. 3M doubled its capital investment in the fast-growing markets of China, India, Brazil, Russia, and Poland between 2005 and 2010. All of these markets are seen as expanding two to three times as fast as the United States.

Judged by the company's financial results, the McNerney and Buckley eras did seem improve 3M's financial performance. The first decade of the twenty-first century was a difficult one, marked by sluggish growth in the United States, and in 2008–2009, a steep recession triggered by a global financial crisis. 3M weathered this storm better than most, bouncing out of the recession in 2010 with strong revenue and income growth, helped in large part by its new products and exposure to fast-growing international markets. For the decade, revenues expanded from \$16 billion in 2001 to \$26.66 billion in 2010; earnings per share expanded from \$1.79 to \$5.63; and ROIC increased from the mid-teens in the 1990s to the mid-20s for most of the decade.

C19-6 INGE THULIN: BACK TO THE FUTURE

In early 2012, George Buckley retired after a successful tenure during which he had skillfully navigated 3M through the great financial crisis of 2008–2009. The company's COO, Inge Thulin, replaced him. Thulin was originally from Sweden and first joined 3M in 1979. Fluent in five languages, Thulin has worked for 3M in Europe, the Middle East, Canada, and Hong Kong. Within the company he is seen as one of the chief architects of 3M's successful international business, which he oversaw as executive vice president for

international operations. He is also seen as an insider who knows 3M's culture intimately, and who places a high value on innovation. In his first shareholder meeting, he reaffirmed this, stating that "innovation is the center of our plan," and committing the company

to increasing R&D spending to 6% of company sales by 2017, up from 5.4% of sales in 2012. More generally, Thulin stated that he would continue to follow the road map laid out by Buckley, with whom he worked closely.

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CASE 20

NIKE: THE SWEATSHOP DEBATE 20 YEARS ON

This case was prepared by Charles W. L. Hill of the School of Business, University of Washington, Seattle.

C20-1 INTRODUCTION

Nike is in many ways the quintessential global corporation. Established in 1972 by former University of Oregon track star Phil Knight, Nike is now one of the leading marketers of athletic shoes, apparel, and athletic equipment. For fiscal 2018, the company had \$36 billion in annual revenues and sold its products in almost every country of the world. Nike does no manufacturing. Rather, it designs, markets, and sells its products, while contracting for their production from a global network of independent contract manufacturers who often operate multiple factories. Currently Nike's products are made in over 500 contract factories located in 42 countries. Around a million people work at factories that supply Nike. Factories in Vietnam, China, and Indonesia produce over 90% of all Nike shoes, while factories located in China, Vietnam, and Thailand make over 50% of all Nike branded apparel.¹ This huge corporation has made Phil Knight into one of the richest people in America.

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Nike's marketing phrase, "Just Do It!," has become as recognizable in popular culture as its "swoosh" logo or the faces of its celebrity sponsors such as Michael Jordan, Tiger Woods, Cristiano Ronaldo, and LeBron James.

For all its successes, the company was dogged for years by persistent accusations that its products were made in "sweatshops" where workers, many of them children, slaved away in hazardous conditions for below-subsistence wages. Nike's wealth, its detractors claimed, was built upon the backs of the world's poor. For many, Nike had become a symbol of the evils of globalization—a rich, Western corporation exploiting the world's poor to provide expensive shoes and apparel to the pampered consumers of the developed world. Niketown stores became standard targets for antiglobalization protesters. Several nongovernmental organizations, such as San Francisco-based Global Exchange, a human rights organization dedicated to promoting environmental, political, and social justice around the world, targeted Nike for repeated criticism and protests.² News shows such as CBS-TV's *48 Hours* ran exposés on working conditions in foreign factories that supply Nike. Students on the campuses

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of several major U.S. universities with which Nike had lucrative sponsorship deals protested against the ties, citing Nike's use of sweatshop labor.

For its part, Nike took many steps to try to counter the protests. Yes, it admitted, there were problems in some overseas factories. But the company signaled a commitment to improving working conditions. It required that foreign subcontractors meet minimum thresholds for working conditions and pay. It arranged for factories to be examined by independent auditors. It terminated contracts with factories that did not comply with its standards. As a result of its efforts, by the early 2000s, Nike was being held up as an example of a company that had fixed problems related to working conditions in the network of factories used by its contract manufacturers. Nike, according to many observers, had solved its sweatshop problem and should be held up as a model for other corporations. Then, in 2016, reports of abuses popped up again, and Nike found itself once more in the firing line of protestors.

C20-2 THE CASE AGAINST NIKE IN THE 1990S

Typical of the exposés against Nike was a CBS-TV *48 Hours* news report that aired October 17, 1996.³ Reporter Roberta Basin visited a Nike factory in Vietnam. With a shot of the factory, her commentary began:

The signs are everywhere of an American invasion in search of cheap labor. Millions of people who are literate, disciplined, and desperate for jobs. This is Nike Town near what used to be called Saigon, one of four factories Nike doesn't own but subcontracts to make a million shoes a month. It takes 25,000 workers, mostly young women, to "Just Do It." But the workers here don't share in Nike's huge profits. They work six days a week for only \$40 a month, just 20 cents an hour.

Baskin interviewed one of the workers in the factory, a young woman named Lap. Baskin tells the listener:

Her basic wage, even as sewing team leader, still doesn't amount to the minimum wage . . . She's

down to 85 pounds. Like most of the young women who make shoes, she has little choice but to accept the low wages and long hours. Nike says that it requires all subcontractors to obey local laws; but Lap has already put in much more overtime than the annual legal limit: 200 hours.

Baskin then asks Lap what would happen if she wanted to leave. If she was sick or had something she needed to take care of such as a sick relative, could she leave the factory? Through a translator, Lap replies: "It is not possible if you haven't made enough shoes. You have to meet the quota before you can go home."

The clear implication of the story was that Nike was at fault here for allowing such working conditions to persist in the Vietnam factory, which was owned by a South Korean company.

Another attack on Nike's subcontracting practices came in June 1996 from Made in the USA, a foundation largely financed by labor unions and domestic apparel manufacturers that oppose free trade with low-wage countries. According to Joel Joseph, chairman of the foundation, a popular line of high-priced Nike sneakers, the Air Jordans, were produced by 11-year-olds in Indonesia making 14 cents per hour. Nike spokeswoman Donna Gibbs countered that this was not true. According to Gibbs, the average worker made 240,000 rupiah (\$103) a month working a maximum 54-hour week, or about 45 cents per hour. Moreover, Gibbs noted that Nike had staff members in each factory monitoring conditions to make sure that they obeyed local minimum wage and child labor laws.⁴

Another example of the criticism against Nike is the following extract from a newsletter published by Global Exchange:⁵

During the 1970s, most Nike shoes were made in South Korea and Taiwan. When workers there gained new freedom to organize and wages began to rise, Nike looked for "greener pastures." It found them in Indonesia and China, where Nike started producing in the 1980s, and most recently in Vietnam.

The majority of Nike shoes are made in Indonesia and China, countries with governments that prohibit independent unions and set the minimum wage at rock bottom. The Indonesian government admits that the minimum wage

there does not provide enough to supply the basic needs of one person, let alone a family. In early 1997 the entry-level wage was a miserable \$2.46 a day. Labor groups estimate that a livable wage in Indonesia is about \$4.00 a day.

In Vietnam the pay is even less—20 cents an hour, or a mere \$1.60 a day. But in urban Vietnam, three simple meals cost about \$2.10 a day, and then of course there is rent, transportation, clothing, health care, and much more. According to Thuyen Nguyen of Vietnam Labor Watch, a living wage in Vietnam is at least \$3 a day.

In another attack on Nike's practices in September 1997, Global Exchange published a report on working conditions in four Nike and Reebok subcontractors in southern China.⁶ Global Exchange, in conjunction with two Hong Kong human rights groups, had interviewed workers at the factories in 1995 and again in 1997. According to Global Exchange, in one factory, a Korean-owned subcontractor for Nike, workers as young as 13 earned as little as 10 cents an hour and toiled up to 17 hours daily in enforced silence. Talking during work was not allowed, with violators fined \$1.20 to \$3.60 according to the report. The practices violated Chinese labor law, which states that no child under 16 may work in a factory, and the Chinese minimum wage requirement of \$1.90 for an 8-hour day. Nike condemned the study as "erroneous," stating the report incorrectly stated the wages of workers and made irresponsible accusations.

Global Exchange, however, continued to be a major thorn in Nike's side. In November 1997, the organization obtained and then leaked a confidential report by Ernst & Young of an audit that Nike had commissioned of a factory in Vietnam owned by a Nike subcontractor.⁷ The factory had 9,200 workers and made 400,000 pairs of shoes a month. The Ernst & Young report painted a dismal picture of thousands of young women, most under age 25, laboring 10½ hours a day, 6 days a week, in excessive heat and noise and in foul air, for slightly more than \$10 a week. The report also found that workers with skin or breathing problems had not been transferred to departments free of chemicals, and that more than half the workers who dealt with dangerous chemicals did not wear protective masks or gloves. It claimed workers were exposed to carcinogens that

exceeded local legal standards by 177 times in parts of the plant, and that 77% of the employees suffered from respiratory problems.

Put on the defensive yet again, Nike called a news conference and pointed out that it had commissioned the report and had acted on it.⁸ The company stated it had formulated an action plan to deal with the problems cited in the report, and had slashed overtime, improved safety and ventilation, and reduced the use of toxic chemicals. The company also asserted that the report showed that its internal monitoring system had performed exactly as it should have. According to one spokesman: "This shows our system of monitoring works . . . We have uncovered these issues clearly before anyone else, and we have moved fairly expeditiously to correct them."

C20-3 NIKE RESPONDS

Unaccustomed to playing defense, Nike formulated over the years a number of strategies and tactics to deal with the problems of working conditions and pay in subcontractors. In 1996, Nike hired onetime U.S. Ambassador to the United Nations, U.S. congressman, and former Atlanta Mayor Andrew Young to assess working conditions in subcontractors' plants around the world. Young released a mildly critical report of Nike in mid-1997. After completing a 2-week tour that covered three countries and 15 factories, Young informed Nike it was doing a good job in treating workers, though it should do better. According to Young, he did not see ". . . sweatshops, or hostile conditions . . . I saw crowded dorms . . . but the workers were eating at least two meals a day on the job and making what I was told were subsistence wages in those cultures."⁹

Young was widely criticized by human rights and labor groups for not taking his own translators and for doing slipshod inspections, an assertion he repeatedly denied.

In 1996, Nike joined a presidential task force designed to find a way of banishing sweatshops in the shoe and clothing industries. The task force included industry leaders such as Nike, representatives from human rights groups, and labor leaders.

In April 1997, they announced an agreement for workers' rights that U.S. companies could agree to when manufacturing abroad. The accord limited the workweek to 60 hours and called for paying at least the local minimum wage in foreign factories. The task force also agreed to establish an independent monitoring association—later named the Fair Labor Association (FLA)—to assess whether companies are abiding by the code.¹⁰

The FLA included among its members the Lawyers Committee for Human Rights, the National Council of Churches, the International Labor Rights Fund, some 135 universities (universities have extensive licensing agreements with sports apparel companies such as Nike), and companies such as Nike, Reebok, and Levi Strauss.

In early 1997, Nike also began to commission independent organizations such as Ernst & Young to audit the factories of its subcontractors. In September 1997, Nike tried to show its critics that it was involved in more than just a public relations exercise when it terminated its relationship with four Indonesia subcontractors, stating they had refused to comply with the company's standard for wage levels and working conditions. One subcontractor, Seyon, which manufactured specialty sports gloves for Nike, refused to meet a 10.7% increase in the monthly wage, to \$70.30, declared by the Indonesian government in April 1997.¹¹

On May 12, 1998, in a speech given at the National Press Club, Phil Knight spelled out in detail a series of initiatives designed to improve working conditions for the 500,000 people that make products for Nike at subcontractors.¹² Among the initiatives, Knight highlighted were the following:

We have effectively changed our minimum age limits from the ILO (International Labor Organization) standards of 15 in most countries and 14 in developing countries to 18 in all footwear manufacturing and 16 in all other types of manufacturing (apparel, accessories, and equipment.). Existing workers legally employed under the former limits were grandfathered into the new requirements.

During the past 13 months we have moved to a 100 percent factory audit scheme, where every Nike contract factory will receive an annual check by PricewaterhouseCoopers (PwC) teams who are

specially trained on our Code of Conduct Owner's Manual and audit/monitoring procedures. To date they have performed about 300 such monitoring visits. In a few instances in apparel factories they have found workers under our age standards. Those factories have been required to raise their standards to 17 years of age, to require three documents certifying age, and to redouble their efforts to ensure workers meet those standards through interviews and records checks.

Our goal was to ensure workers around the globe are protected by requiring factories to have no workers exposed to levels above those mandated by the permissible exposure limits (PELs) for chemicals prescribed in the OSHA indoor air quality standards.¹³

These moves were applauded in the business press, but they were greeted with a skeptical response from Nike's long-term adversaries in the debate over the use of foreign labor. While conceding that Nike's policies were an improvement, one critic writing in the *New York Times* noted:

Mr. Knight's child labor initiative is . . . a smoke-screen. Child labor has not been a big problem with Nike, and Philip Knight knows that better than anyone. But public relations is public relations. So he announces that he's not going to let the factories hire kids, and suddenly that is the headline.

Mr. Knight is like a three-card monte player. You have to keep a close eye on him at all times.

The biggest problem with Nike is that its overseas workers make wretched, below-subsistence wages. It's not the minimum age that needs raising; it's the minimum wage. Most of the workers in Nike factories in China and Vietnam make less than \$2 a day, well below the subsistence levels in those countries. In Indonesia the pay is less than \$1 a day.

The company's current strategy is to reshape its public image while doing as little as possible for the workers. Does anyone think it was an accident that Nike set up shop in human rights sinkholes, where labor organizing was viewed as a criminal activity and deeply impoverished workers were willing, even eager, to take their places on assembly lines and work for next to nothing?¹⁴

Other critics question the value of Nike's auditors, PricewaterhouseCoopers. Dara O'Rourke, an assistant professor at MIT, followed the PwC auditors around several factories in China, Korea, and Vietnam. He concluded that although the auditors found minor violations of labor laws and codes of conduct, they missed major labor practice issues including hazardous working conditions, violations of overtime laws, and violation of wage laws. The problem, according to O'Rourke, was that the auditors had limited training and relied on factory managers for data and to set up interviews with workers, all of which were performed in the factories. The auditors, in other words, were getting an incomplete and somewhat sanitized view of conditions in the factory.¹⁵

Fueled perhaps by the unforgiving criticisms of Nike that continued after Phil Knight's May 1998 speech, beginning in 1998 and continuing into 2001, a wave of protests against Nike occurred on many university campuses. The moving force behind the protests was the United Students Against Sweatshops (USAS). The USAS argued that the Fair Labor Association (FLA), which grew out of the presidential task force on sweatshops, was an industry tool and not a truly independent auditor of foreign factories. The USAS set up an alternative independent auditing organization, the Workers' Rights Consortium (WRC), which they charged with auditing factories that produce products under collegiate licensing programs (Nike is a high-profile supplier of products under these programs). The WRC is backed, and partly funded, by labor unions and refuses to cooperate with companies, arguing that doing so would jeopardize its independence.

By mid-2000, the WRC had persuaded some 48 universities to join the WRC, including all nine campuses of the University of California systems, the University of Michigan, and the University of Oregon, Phil Knight's alma mater. When Knight heard that the University of Oregon would join the WRC, as opposed to the FLA, he withdrew a planned \$30-million donation to the university.¹⁶ Despite this, in November 2000, another major northwestern university, the University of Washington, announced it too would join the WRC, although it would also retain its membership in the FLA.¹⁷

Nike continued to push forward with its own initiatives, updating progress on its website. In April 2000,

in response to accusations that it was still hiding conditions, it announced it would release the complete reports of all independent audits of its subcontractors' plants. Global Exchange continued to criticize the company, arguing in mid-2001 that the company was not living up to Phil Knight's 1998 promises, and that it was intimidating workers from speaking out about abuses.¹⁸ For its part, between 2002 and 2004, Nike performed some 600 factory audits, including repeat visits to problematic factories. In 2005, Nike became the first company in the apparel industry to publish a complete list of the factories it contracted with. Also in 2005, the company published a detailed report revealing conditions and pay in its factories and acknowledging issues, particularly in its southern Asian factories.

By 2005, the company's steady progress was starting to gain grudging respect from some campaign groups. Then came a sudden crisis that could have set things back but ended up having the opposite effect. In the runup to the 2006 World Cup, photos were presented to the company of Pakistani children hand stitching Nike footballs, raising concerns that the company was once again using child labor. It turned out that the Pakistani supplier, Saga Sports, had become overwhelmed with orders linked to the approaching World Cup. The company had gone against Nike's rules for contractors and sent the balls out to be made at local homes. After an investigation that confirmed the allegations, Nike responded by cancelling its contract with Saga and recalling the balls, an action that reportedly cost Nike millions of dollars. While pulling the contract resulted in a short-term financial hit, it sent a strong signal to the company's suppliers and customers that it was committed to upholding its supplier code of conduct. The impact on Saga was enormous, helping to drive the company into bankruptcy. Other suppliers based in Pakistan took note.¹⁹

C20-4 THE CONTROVERSY RESURFACES

By 2015, articles were being written in the business press holding up Nike as model for how to solve problems related to working conditions in

developing-world suppliers. Nike itself continued to raise the bar on compliance with its extensive code of conduct for suppliers.²⁰ The code—which was revised in 2011—was designed to protect the rights of workers, create a safe working environment, and safeguard the communities and areas where they operate. Nike regularly audits the factories in its supplier network, sometimes in collaboration with independent third-party organizations such as Better Work (a joint program between the United Nations and the World Bank) and the Fair Labor Association (FLA). In 2016, Nike audited 576 out of 663 factories in its supplier network, Better Work audited 31, and the FLA audited 7.

In 2011, Nike set a goal that by 2020 100% of the factories in its supplier network should comply with its code of conduct, which would earn them a “bronze rating.” Nike reserved silver and gold ratings for companies that exceeded the code of conduct, and red and yellow ratings for companies that did not meet the code of conduct. In 2011, some 48.8% of factories had a bronze rating or better. By 2015, 86% of factories had a bronze rating or better, and by 2017 the figure was 90.9%.²¹

Factories that get a yellow rating must develop plans to meet compliance, and those with a red rating are placed under review and may be cut out of the supplier network. In 2017, some 6 footwear factories (out of 127) and 14 apparel factories (out of 363) were given a red rating and placed under review. Typically, factories get a red rating when they fail to develop or act on plans to achieve compliance after receiving a yellow rating. In 2017, there were 4 footwear factories and 18 apparel factories with a yellow rating. The most common issues identified in noncompliance audits in 2017 were excessive working hours (found in 43% cases of noncompliance) and substandard wages and benefits (found in 36% cases of noncompliance cases).

These efforts have not been enough to stop issues arising that have a negative PR impact on the company. In 2015, workers at the Hansae Vietnam factory, which produces university-branded Nike clothes, held a pair of walkouts over working conditions.

The Workers’ Rights Consortium (WRC) got wind of this walkout and said that it wanted to inspect the factory on behalf of its now nearly 200-member schools, some 184 of which were in the United States. According to the WRC, Nike rebuffed the request. For its part, Nike stated that it could not control who inspects a supplier’s factory, but that it would not normally assist an outside group like the WRC. The WRC pointed out that Nike had helped facilitate its factory audits in the past, so it was surprised and concerned when the company did not do so this time around.

Nike countered that its stance towards the WRC has not changed. With regard to the WRC, a Nike spokesperson said

We respect the Worker Rights Consortium’s (WRC) commitment to workers’ rights while recognizing that the WRC was co-created by United Students Against Sweatshops, a campaigning organization that does not represent the multi-stakeholder approach that we believe provides valuable, long-lasting change.²²

In response, several colleagues that are WRC affiliates, including Georgetown, Northeastern, and Rutgers, either cut ties with Nike or said they would allow their contracts to expire due to the company’s stance on factory inspections. The University of Washington also put their contract renewal with Nike on hold as they awaited the results of negotiations between Nike and Georgetown. The hit to Nike was potentially significant since the company dominates the estimated \$4 billion market in university logo athletic ware.

In August 2017, Nike and Georgetown announced a new retail licensing contract. As part of that contract, Nike agreed to establish a new protocol with the WRC which provided the WRC with formal access to Nike supplier factories that manufacture WRC-affiliated collegiate products, to investigate working conditions and strengthen coordination regarding any remediation efforts.²³ With this agreement, which is a template for others, the potential for another round of protests seems to have faded.

NOTES

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CASE 21

HOW TO MAKE MONEY IN NEWSPAPER ADVERTISING

This case was prepared by Melissa A. Schilling of the School of Business, New York University.

The U.S. newspaper business is a declining industry. Newspaper circulation has been steadily falling since 1990, with the drop accelerating in recent years. According to the Newspaper Association of America, in 1990, 62.3 million newspapers were sold every day. By 2018, this figure had dropped to 31 million. The fall in advertising revenue has been even steeper, with revenues peaking in 2000 at \$48.7 billion, and falling to under \$17 billion in 2017. Reasons for the decline in circulation and advertising revenue are not hard to find; digitalization has disrupted the industry; news consumption has moved to the Web, and advertising has followed suit. While newspaper advertising spiraled downwards, advertising revenues at companies like Google soared. The online classified advertising website Craigslist has been particularly damaging to newspapers. Advertisers can post ads on Craigslist for free (in most cases) that are easy to search and update in real time, unlike a newspaper. According to research by professors Robert Seamans and Feng Zhu, Craigslist alone was responsible for over \$5 billion in lost revenues in the newspaper industry between 2000–2007.

The industry has responded in multiple ways, but implementing a response has proven to be anything but easy, as a change to one side of a newspaper's business model requires changes to its other side. Newspapers traditionally relied so heavily on advertising that they subsidized the consumer news side. According to research by Professor Seamans and Zhu, without classified advertising revenue to subsidize subscriptions, many newspapers decided to increase their subscription prices by 5 to 10%. This led to falling numbers of subscribers. In addition, some newspapers have rapidly expanded web-based news properties at the risk of cannibalizing their offline print customers.

Nearly 80% of the largest newspapers in the United States (circulation higher than 50,000) have a paywall (i.e., a way of charging readers) for digital content. *The New York Times*, for example, has a range of subscription options that include everything from online only, to select days of print in addition to online, to print only. Many newspapers also increased the price of single copies, and this, combined with the digital paywall movement of charging for online content, appeared to stabilize circulation revenues and

helped reduce the industry's historic dependence on advertising revenues.

Against this background, one local newspaper company is swimming against the tide, and making money at it. Community Impact Newspaper produces 23 hyperlocal editions that are delivered free each month to more than 1.8 million homes in the Austin, Houston, and Dallas areas. The paper is the brainchild of John Garrett, who used to work as an advertising director for the *Austin Business Journal*. In 2005, Garrett noticed that the large-circulation local newspapers in Texas did not cover news that was relevant to smaller neighborhoods—such as the construction of a local toll road, or the impact of a new corporate campus for Exxon Mobil. Nor could news about these projects be gleaned from the Web. Yet Garrett believed that local residents were hungry for news about local projects and events that might impact them. So he launched the inaugural issue of his paper, *Impact*, in September 2005, financing it with \$40,000 borrowed from low-interest credit cards.

Today, the paper has a staff of about 200. The newspaper emphasizes nonpartisan reporting. There is no investigative reporting, although *Impact* will run in-depth stories on controversial local issues, being careful not to take sides. “That would just lose us business,” says Garrett.

About half of each edition is devoted to local advertisements, and this is where *Impact* makes money. Advertisers are happy with the paper; while most newspapers have become increasingly focused on a national audience, *Impact* has retained a local focus that is very important for businesses that wish to

advertise in their particular community. “We’ve tried everything, from Google Ads to Groupon, but this is the most effective,” says Richard Hunter, who spends a few hundred dollars each month to advertise his Houston restaurant, Catfish Station. Another advertiser, Rob Sides, who owns a toy store, Toy Time, places 80% of his advertising dollars with *Impact*’s local edition in order to reach 90,000 homes in the area.

An analysis by *Forbes* estimated that each 40-page issue of *Impact* brings in about \$2.50 in ad revenue per printed copy. About 50 cents of that goes to mailing and distribution costs, 80 cents to payroll, and another 80 cents to printing and overhead, leaving roughly 40 cents per copy for Garrett and his wife, who own the entire company. If this analysis is right, *Impact* is making very good money for its owners in an industry where most players are struggling just to survive.

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CASE DISCUSSION QUESTIONS

1. What advantages do traditional print newspapers have for entering the online news business? What disadvantages do they have?
2. What do you think determines whether people will use print, online, or both sources for their news?
3. When a print newspaper initiates an online edition, what are the possible outcomes for its current display advertisers? Are they likely to prefer one channel over the other to reach their customers, or are they likely to select both?

If both, are they likely to expect a discount for a bundle of print and online advertising? How do these outcomes affect the newspaper’s bargaining power?

4. How do you think the cost structure of online advertising compares to the cost structure of print advertising?
5. Which print newspapers do you think will fare the best as online news continues to expand? Why?



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CASE 22

A BATTLE FOR DOMINANCE IN MOBILE PAYMENTS

*This case was prepared by Melissa A. Schilling
of the School of Business, New York University.*

By 2018, there were roughly 5 billion mobile broadband subscribers in the world.¹ As smartphones spread worldwide, so do mobile payment systems. The fastest growth is in developing economies in Asia, Africa, and Latin America, where many people do not have credit cards or bank cards, and are transitioning directly from cash payments to mobile payments (see Figure 1).² It is difficult to get a precise picture of worldwide mobile payment system use and estimates vary widely, but they are all large: from hundreds of billions to trillions of U.S. dollars. However, in 2018, there was no dominant mobile payment system standard, and a battle among competing mobile payment mechanisms and standards was unfolding.

Many large mobile payment systems such as Apple Pay, Samsung Pay, and Android Pay, use Near Field Communication (NFC) chips in smartphones. NFC chips enable communication between a mobile device and a point-of-sale system just by having the devices in close proximity.³ These systems transfer the customer's information wirelessly, and then merchant banks and credit card systems such as Visa or MasterCard complete the transaction. These systems are thus very much like existing ways of using credit cards, but enable completion of the purchase without contact. In emerging markets such as Asia-Pacific and Latin America, where NFC-enabled smartphones are less common, mobile

payment systems are more likely to use QR codes (machine readable bar codes), contactless stickers, and magnetic secure transmission (MST). MST sends a magnetic signal from a mobile device to a payment terminal.

The largest mobile payment system in the world, Alipay (owned by the Alibaba group in China) uses a system based on QR codes. With Alipay, a merchant generates a barcode at the point of sale, which the consumer scans with a smartphone. An application then shows the details of the transaction, and the consumer enters a pin to confirm payment. Alipay reports that by the end of 2017 it had 520 million active users.

Other competitors, such as Square (with Square Wallet) and PayPal, use a downloadable application and the Web to transmit a customer's information. Square had gained early fame by offering small, free, credit card readers that could be plugged into the audio jack of a smartphone. These readers enabled vendors that would normally only take cash (street vendors, babysitters, etc.) to accept major credit cards.⁴ Square processed \$30 billion in payments in 2014, making the company one of the fastest-growing tech startups in Silicon Valley.⁵ Square takes about 2.75 to 3 percent from each transaction it processes, but must split that with credit card companies and other financial institutions. In terms of installed base, however, PayPal had the clear advantage, with over 227 million active registered accounts by

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Figure 1 Proximity Mobile Payment Users Worldwide, by Region, 2016–2021

	2016	2017	2018	2019	2020	2021
Proximity mobile payment users (millions)						
Asia-Pacific	413.4	569.9	650.7	722.6	793.8	855.6
North America	42.0	53.0	60.7	68.0	74.2	79.3
Western Europe	33.4	42.2	49.7	56.6	62.9	68.6
Central & Eastern Europe	17.3	23.3	38.8	33.2	37.4	41.7
Latin America	17.4	23.2	28.7	34.2	39.9	45.1
Middle East & Africa	7.0	9.6	12.8	16.5	20.7	24.8
Worldwide	530.6	721.2	831.4	931.3	1,028.9	1,115.2
Proximity mobile payment user growth (% change)						
Middle East & Africa	61.5%	37.5%	32.4%	29.8%	24.8%	20.0%
Latin America	60.2%	33.4%	23.8%	19.6%	16.1%	13.2%
Central & Eastern Europe	49.5%	34.6%	23.7%	15.3%	12.8%	11.5%
Western Europe	38.4%	26.3%	17.6%	13.9%	11.1%	9.1%
North America	49.3%	26.0%	14.6%	12.1%	9.1%	6.9%
Asia-Pacific	90.3%	37.8%	14.2%	11.1%	9.8%	7.8%
Worldwide	79.1%	35.9%	15.3%	12.0%	10.5%	8.4%

Note: Ages 14+; mobile phone users who have made at least one proximity mobile payment transaction in the past 6 months; includes point-of-sale transactions made by using mobile devices as a payment method; excludes transactions made via tablet.

Source: eMarketer Report, January 2018.

year-end 2017. With PayPal, customers complete purchases simply by entering their phone numbers and a pin number, or use a PayPal-issued, magnetic-stripe card linked to their PayPal accounts. Users could opt to link their PayPal accounts to their credit cards, or directly to their bank accounts. PayPal also owned a service called Venmo, which enabled peer-to-peer exchanges with a Facebook-like interface that was growing in popularity as a way to exchange money without carrying cash. Venmo charged a 3% fee if the transaction used a major credit card, but was free if the consumer used it with a major bank or debit card.

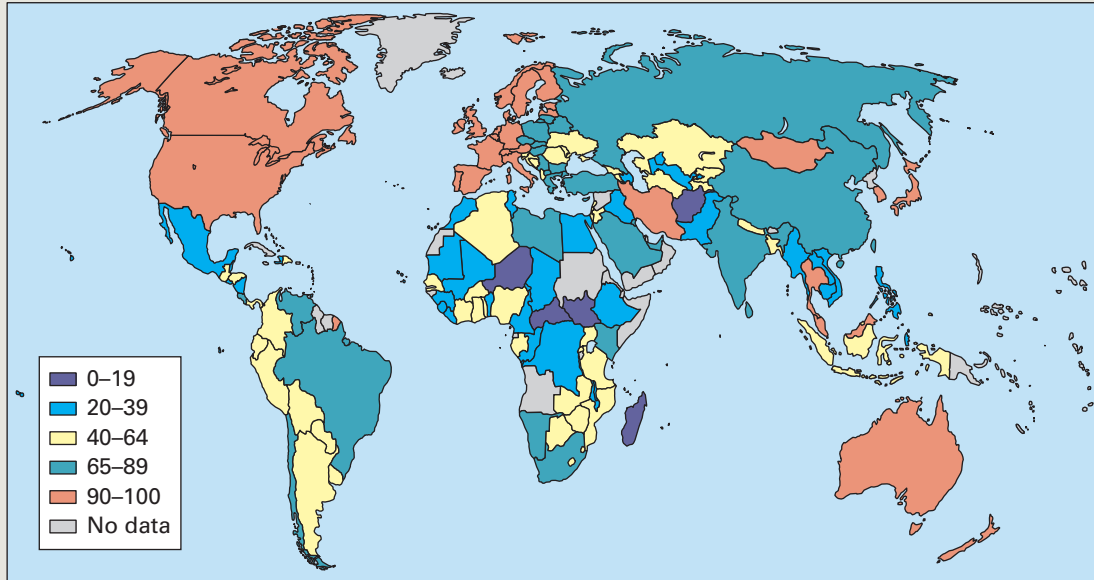
In other parts of the world, intriguing alternatives for mobile banking are gaining traction quickly.

In India and Africa, for example, there are enormous populations of “unbanked” or “underbanked” people (individuals who do not have bank accounts or make limited use of banking services). In these regions, the proportion of people with mobile phones vastly exceeds the proportion of people with credit cards. According to a GSMA report, for example, in sub-Saharan Africa, the number of mobile money accounts surpassed the number of bank accounts in 2015, and in 2016 more than 40% of the adult population of Kenya, Tanzania, Ghana, and Paraguay actively used mobile payment systems.⁶

The World Bank estimates that roughly two billion people worldwide do not have access to financial

Figure 2 Percent of Adults with a Bank Account

Today, 69% of adults around the world have an account
 Adults with an account (%), 2017



Source: Global Findex database.

services, and 31% of adults have no bank account (see Figure 2). This is a serious obstacle to overcoming poverty—access to banking is a very important resource for people to save money and utilize credit. Fortunately, the rise of mobile payment systems could have enormously beneficial social and economic consequences by helping the unbanked become banked.

In parts of Africa, where the proportion of people who are unbanked is very large, a system called M-Pesa (“M” for mobile, and “pesa,” which is Kiswahili for money) enables any individual with a passport or national ID card to deposit money into his or her phone account, and transfer money to other users using Short Message Service (SMS).⁷ By 2017, there were roughly 30 million M-Pesa users in 10 countries. The system had grown to offer a range of services including international transfers, loans, and health provision. It processed about 6 billion transactions in 2016, hitting a peak rate of 529 per second.⁸

As noted above, some mobile systems did not require the involvement of the major credit card companies. PayPal, and its peer-to-peer system Venmo, for

instance, did not require credit cards, nor does Alipay. A mobile payment system that cuts out the credit card companies could potentially save (or capture) billions of dollars in transaction fees. Credit card companies and merchants thus both have high incentives to influence the outcome of this battle.

For consumers, the key dimensions that influence adoption are convenience (does the customer have to type in a code at the point of purchase, and is it easily accessible on a device the individual already owns?); risk of fraud (is the individual’s identity and financial information at risk?); and ubiquity (can the system be used everywhere, and does it enable peer-to-peer transactions?). For merchants, the primary concerns are fraud and cost (what are the fixed costs and transaction fees of using the system?). Apple Pay had a significant convenience advantage in that customers can pay with their fingerprint.⁹ QR-code-based systems, by contrast, require the customer to open the application on their phone and get a QR code that is scanned at the checkout, or to type in a pin.

By early 2018, it was clear that mobile payments represented a game-changing opportunity that could accelerate e-commerce, smartphone adoption, and the global reach of financial services. However, lack of compatibility between many of the mobile payment

systems, and uncertainty over what type of mobile payment system would become dominant, still posed significant obstacles to consumer and merchant adoption, particularly in countries where most consumers already have credit cards.

CASE DISCUSSION QUESTIONS

1. What are some of the advantages and disadvantages of mobile payment systems in (a) developed countries, and (b) developing countries?
2. What are the key factors that differentiate the mobile payment systems? Which factors do consumers care most about? Which factors do merchants care most about?
3. Are there forces that are likely to encourage one mobile payment system to emerge as dominant?
4. If so, what do you think will determine which becomes dominant?
5. Is there anything the mobile payment systems can do to increase the likelihood of them becoming dominant?
6. How do these different mobile systems increase or decrease the power of (a) banks, and (b) credit cards?

NOTES

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CASE 23

THE MARKET FOR LARGE COMMERCIAL JET AIRCRAFT

This case was prepared by Charles W. L. Hill of the School of Business, University of Washington, Seattle.

Two companies, Boeing and Airbus, have long dominated the market for large commercial jet aircraft. Today Boeing planes account for 50% of the world's fleet of commercial jet aircraft, and Airbus planes account for 31%. The remainder of the global market is split between several smaller players, including Embraer of Brazil and Bombardier of Canada, both of which have a 7% share. Embraer and Bombardier, however, have to date focused primarily on the regional jet market, building planes of less than 100 seats. The market for aircraft with more than 100 seats has been totally dominated by Boeing and Airbus.

The overall market is large and growing. In 2017, Boeing delivered 763 aircraft and added 912 new orders, bringing its order backlog to 5,864 planes. Airbus delivered 718 aircraft and registered new orders. Demand for new aircraft is driven primarily by demand for air travel, which has grown at around 5% per annum compounded since 1980. Looking forward, in 2018 Boeing predicted that over the next 20 years the world economy would grow at 2.8% per annum, and airline traffic will grow at 4.7% per annum as more and more people from the world's emerging economies take to the air for business and pleasure trips. Given the anticipated growth in

demand, Boeing believes the world's airlines will need 42,730 new aircraft between 2018 and 2037 with a market value of \$6.3 trillion dollars in today's prices.

Clearly, the scale of future demand creates an enormous profit opportunity for the two main incumbents, Boeing and Airbus. Given this, many observers wonder if the industry will see new entries. Historically, it has been assumed that the high development cost associated with bringing new commercial jet aircraft to market, and the need to realize substantial economies of scale to cover those costs, has worked as a very effective deterrent to new entries. For example, estimates suggest that it cost Boeing some \$18 to \$20 billion to develop its latest aircraft, the wide-bodied Boeing 787, and that the company will have to sell 1,100 787s to break even, which will take 10 years. Given the costs, risks, and long-time horizon here, it has been argued that only Boeing and Airbus can afford to develop new large commercial jet aircraft.

However, in the last few years, three new entrants have appeared. All three are building smaller narrow-bodied jets with a seat capacity between 100 and 190. Boeing's 737 and the Airbus A320 currently dominate the narrow-bodied segment. Development costs are

typically lower for narrow bodied jets than wide-bodied jets, and the number of aircraft demanded is much larger. In 2017, there were 15,700 narrow-bodied jets in service, and 4,290 wide-bodied jets. Demand for narrow-bodied jets is also predicted to grow faster than demand for wide-bodied jets over the next 20 years (however, wide-bodied jets have a significantly higher sales price).

The Commercial Aircraft Corporation of China (Comac) is building a 170- to 190-seat narrow-bodied jet, the C919. Comac has around 1,000 orders for the aircraft, mostly from Chinese domestic airlines and leasing companies. The C919 is expected to enter commercial service in 2021. Bombardier has developed a 100- to 160-seat plane, known as the C-Series, which brought it into direct competition with Boeing and Airbus for the first time. The first aircraft in the C-Series were delivered in 2016, 2 years later than anticipated and reportedly \$2 billion over the forecasted development budget. Embraer too, has developed a 100–124 seat plane to compete in the narrow-bodied segment, the E-175. The E175, a stretched version of Embraer's successful regional jet line, competes with the smaller Boeing and Airbus jets. The new entry is occurring because all three producers believe that the market for narrow-bodied aircraft is now large enough to support more than Boeing and Airbus. Bombardier and Embraer can leverage the knowhow they developed manufacturing regional jets to help them move upmarket. For its part, Comac can count on orders from Chinese airlines and the tacit support of the Chinese government to help it get off the ground.

In response to these competitive threats, Boeing and Airbus started development of new, more

fuel-efficient versions of their own narrow-bodied planes, the 737 and A320. Although they hoped their new offerings will keep entrants in check, one thing seems clear: With potentially five producers rather than two in the market, it seemed likely that competition would become more intense in the narrow-bodied segment of the industry, which could drive prices and profits down for the big two incumbent producers.

Perhaps recognizing the risks here, in October 2017, Airbus entered into an agreement with Bombardier to purchase a 50.01% majority stake in the C-series program. At the time, Bombardier had 402 orders to the C-Series. The C-Series has now been renamed the Airbus A220. In exchange for control of the program, Airbus agreed to provide procurement, sales and marketing expertise to the C-Series Aircraft Limited Partnership, the entity that manufactures and sells the jet. On the heels of this deal, in mid-2018 Boeing announced that it had entered into an agreement with Embraer to establish a joint venture to develop, manufacture and market Embraer's line of commercial passenger jets, including its regional jets and the larger E175 series. Boeing paid Embraer \$3.8 billion for an 80% stake in the venture.

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CASE DISCUSSION QUESTIONS

1. Explain why the wide-bodied segment of the large commercial jet aircraft industry can only profitably support two players at present. What are the implications of your answer for barriers to entry into this segment?
2. Are entry barriers into the narrow-bodied segment the same as those into the wide-bodied segment? Explain your answer?
3. Given future projections for demand, how do you think the industry as a whole will do over the next twenty years? How might your forecast differ for the wide-bodied and narrow-bodied segments?
4. If you were a new entrant into the bottom part of the narrow-bodied industry, what would be your long-term development strategy?
5. Why did Boeing and Airbus enter into partnerships with Embraer and Bombardier? What was the strategic thinking here? Why do you think Embraer and Bombardier agreed to these deals?
6. What can Boeing and Airbus do to deter further entry into this industry, and/or keep new entrants boxed into the bottom end of the market (that is, smaller, narrow-bodied jets)?



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CASE 24

VERIZON WIRELESS: COMPETITIVE ADVANTAGE

This case was prepared by Charles W. L. Hill of the School of Business, University of Washington, Seattle.

Established in 2000 as a joint venture between Verizon Communications and Britain's Vodafone, over the last 18 years Verizon Wireless has emerged as the largest and consistently most profitable enterprise in the fiercely competitive U.S. wireless service. Today, the company has over 150 million subscribers and a 36% market share.

One of the most significant facts about Verizon is that it has the lowest churn rate in the industry. Customer churn refers to the number of subscribers who leave a service within a given time period. Churn is important because it costs between \$400 and \$600 to acquire a customer (with phone subsidies accounting for a large chunk of that). It can take months just to recoup the fixed costs of a customer's acquisition. If churn rates are high, profitability is eroded by the costs of acquiring customers who do not stay long enough to provide a profit to the service provider.

The risk of churn increased significantly in the United States after November 2003, when the Federal Communications Commission (FCC) allowed wireless subscribers to transfer their phone numbers when they switched to a new service provider. Over the next few years, Verizon Wireless emerged as the clear winner in the battle to limit customer defections. For example, in early 2018, Verizon's churn rate was 1.18% per month, compared to a rate of 1.32% at AT&T,

2.39% at Sprint, and 2.42% at T-Mobile. Verizon's low churn rate has enabled the company to grow its subscriber base faster than its rivals, which allows the company to better achieve economies of scale by spreading the fixed costs of building a wireless network over a larger customer base.

The low customer churn at Verizon is due to a number of factors. First, it has the most extensive network in the United States, blanketing 95% of the nation. This means fewer dropped calls and dead zones as compared to its rivals. For years, Verizon communicated its coverage and quality advantage to customers with its "Test Man" advertisements. In these ads, a Verizon Test Man wearing horn-rimmed glasses and a Verizon uniform wanders around remote spots in the nation asking on his Verizon cell phone, "Can you hear me now?" Verizon claims that the Test Man was actually the personification of a crew of 50 Verizon employees who each drive some 100,000 miles annually in specially outfitted vehicles to test the reliability of Verizon's network.

Second, the company has invested aggressively in high-speed wireless networks, including most recently 4G LTE, enabling rapid download rates on smartphones. Complementing this, Verizon has a high-speed, fiber-optic backbone for transporting data between cell towers. Verizon has invested some \$150 billion in its

wireless and fiber-optic network since 2000. The company also looks set to be a leader in next generation 5G wireless networks, set to start rolling out in 2019, that will have download rates up to 1,000 times faster than 4G networks. For customers, this means a high-quality user experience when accessing data such as streaming video on their smartphones. To drive this advantage home, in 2011, Verizon started offering Apple's market-leading iPhone in addition to the full range of Android smartphones it was already offering (the iPhone was originally exclusive to AT&T).

To further reduce customer churn, Verizon has invested heavily in its customer care function. Its automated software programs analyze the call habits of individual customers. Using that information, Verizon representatives will contact customers and suggest alternative plans that might better suit their needs. For example, Verizon might contact a customer and say, "We see that because of your heavy use of data, an alternative plan might make more sense for you and help reduce your monthly bills." The goal is to anticipate customer needs and proactively satisfy them, rather than have the customer take the initiative and possibly switch to another service provider.

Surveys by J.D. Power have repeatedly confirmed Verizon's advantages. A J.D. Power study ranked Verizon best in the industry in terms of overall network performance. The ranking was based on a number of factors, including dropped calls, late text message notifications, Web connection errors, and slow download rates. Another J.D. Power study looked at customer care in three customer contact channels—telephone, walk-in (retail store), and online. Again, Verizon had the best score in the

industry, reflecting faster service and greater satisfaction with the efficiency with which customer service reps resolved problems. This advantage has not only enabled Verizon to reduce its churn rate, it has also supported higher service prices than its rivals. In the face of intense competition for customers, Verizon charges 20 to 25% more than other wireless providers.

In addition to its market leading customer churn numbers, Verizon has an advantage based on economies of scale. It is able to spread its massive fixed costs for infrastructure over the largest subscriber base in the industry. Estimates suggest that Verizon's cost of service per connection run at about \$6 per month, while T-Mobile and Sprint spend about \$9 and \$13 per connection, respectively. Verizon also appears to have lower SG&A expenses per connection. These are about \$15 a month at Verizon, versus \$18 at T-Mobile. The company is continuing to drive down network delivery costs and SG&A expenses through ongoing initiatives such as network virtualization and higher digital customer service engagement.

Sources: R. Blackden, "Telecom's Giant Verizon Is Conquering America," *The Telegraph*, January 6, 2013; S. Woolley, "Do You Fear Me Now?" *Forbes*, November 10, 2003, pp. 78–80; A. Z. Cuneo, "Call Verizon Victorious," *Advertising Age*, March 24, 2004, pp. 3–5; M. Allevin, "Wheels of Churn," *Wireless Week*, September 1, 2006; J.D. Power, "2012 U.S. Wireless Customer Care Full-Service Performance Study," July 7, 2012; J. D. Power, "2012 U.S. Wireless Network Quality Performance Study," August 23, 2012; Statista, "Average monthly churn rate for wireless carriers in the United States," July 2018, www.statista.com; A. Nichols, "Verizon's solid 2Q growth driven by wireless revenue growth," *Morningstar*, July 24, 2018.

CASE DISCUSSION QUESTIONS

1. What resources underlie Verizon's strong competitive position in the U.S. wireless telecommunications industry?
2. Explain how these resources enable Verizon to improve one or more of the following: efficiency, quality, customer responsiveness, innovation.
3. Apply the VRIO framework discussed in chapter 3 and describe to what extent these resources can be considered valuable, rare, inimitable, and well organized.
4. What must Verizon do to maintain its competitive advantage going forward in the increasingly competitive U.S. wireless telecommunications industry?



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CASE 25

AMAZON.COM: COMPETITIVE ADVANTAGE AND FUNCTIONAL STRATEGY

*This Case was Prepared by Charles W. L. Hill of the
School of Business, University of Washington, Seattle.*

When Jeff Bezos founded Amazon.com in 1995, the online retailer focused solely on selling books. Music and videos were soon added to the mix. Today, one can purchase a wide range of media and general-merchandise products from Amazon, which is now the world's largest online retailer, with over \$200 billion in annual sales in 2018. According to Bezos, Amazon's success is based on three core factors: a relentless focus on delivering value to customers, operating efficiencies, and a willingness to innovate.

Amazon offers customers a much wider selection of merchandise than they can find in a physical store and does so at a low price. Amazon both stocks and sells merchandise directly, and acts as an online market place for third-party sellers (who accounted for more than 50% of total units sold in 2017). Online shopping and purchasing is made easy with a user-friendly interface, product recommendations, customer wish lists, and a one-click purchasing option for repeat customers. The percentage of traffic that Amazon gets from search engines such as Google has

been falling for several years, whereas other online retailers are becoming more dependent on third-party search engines. This indicates that Amazon is increasingly becoming the starting point for online purchases and has developed its own powerful search capabilities. As a result, its active customer base in 2018 numbered around 400 million.

To deliver products to customers quickly and accurately, Amazon has been investing heavily in a network of distribution centers. In the United States alone, there are now over 100 such centers. Sophisticated software analyzes customer purchasing patterns and informs the company what to order, where to store it in the distribution network, what to charge for it, and when to mark it down to shift it. The goal is to reduce inventory holding costs while always having product in stock. The increasingly dense network of distribution centers enables Amazon to reduce the time it takes to deliver products to consumers and to cut down on delivery costs. As Amazon grows, it can support a denser distribution network, which it turns enables it

to fulfill customer orders more rapidly and at a lower cost, thereby solidifying its competitive advantage over smaller rivals.

To make its distribution centers even more efficient, Amazon is embracing automation. Until recently, most picking and packing of products at Amazon distribution centers was done by hand, with employees walking as much as 20 miles per shift to pick merchandise off shelves and bring it to packing stations. Although walking 20 miles a day may be good for the physical health of employees, it represents much wasted time and hurts productivity. In 2012, Amazon purchased Kiva, a leading manufacturer of robots that service warehouses. Postacquisition, Kiva announced that, for the next 2 to 3 years, it would take no external orders and instead focus on automating Amazon's distribution centers. Kiva robots pick products from shelves and deliver them to packing stations. This reduces the staff needed per distribution center by 30 to 40%, and boosts productivity accordingly.

On the innovation front, Amazon has been a leader in pushing the digitalization of media. Its invention of the Kindle digital reader, and the ability of customers to use that reader either on a dedicated Kindle device or on a general-purpose device such as an iPad, turbocharged

the digital distribution of books—a market segment where Amazon is the clear leader. Digitalization of books is disrupting the established book-retailing industry and strengthening Amazon's advantage in this segment. To store digital media, from books to films and music, and to enable rapid customer download, Amazon has built huge server farms. Its early investment in “cloud-based” infrastructure has turned it into a leader in this field. It is now leveraging its expertise and infrastructure to build another business, Amazon Web Services (AWS), which hosts websites, data, and associated software for other companies. In 2018, AWS was projected to generate over \$22 billion in revenues, making Amazon the leader in the rapidly emerging field of cloud computing. Jeff Bezos is on record as stating that he believes AWS will ultimately match Amazon's online retail business in sales volume.

Sources: “Amazon to Add 18 New Distribution Centers,” *Supply Chain Digest*, August 7, 2012; A. Lashinsky, “Jeff Bezos: The Ultimate Disrupter,” *Fortune*, December 3, 2012, pp. 34–41; S. Banker, “The New Amazon Distribution Model,” *Logistics Viewpoints*, August 6, 2012; G. A. Fowler, “Holiday Hiring Call: People Vs Robots,” *The Wall Street Journal*, December 10, 2010, p. B1; R. J. Hottovy, “Advertising, AWS, prime engagement, and third-party sales reinforcing Amazon's cash flow potential,” *Morningstar*, July 27, 2018.

CASE DISCUSSION QUESTIONS

1. What functional-level strategies has Amazon pursued to boost its efficiency?
2. What functional-level strategies has Amazon pursued to boost its customer responsiveness?
3. What does product quality mean for Amazon? What functional-level strategies has Amazon pursued to boost its product quality?
4. How has innovation helped Amazon improve its efficiency, customer responsiveness, and product quality?
5. Do you think that Amazon has any rare and valuable resources? In what value creation activities are these resources located?
6. How sustainable is Amazon's competitive position in the online retail business?



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CASE 26

NORDSTROM: BUSINESS-LEVEL STRATEGY

This case was prepared by Charles W. L. Hill of the School of Business, University of Washington, Seattle.

Nordstrom is one of American's most successful fashion retailers. John Nordstrom, a Swedish immigrant, established the company in 1901 with a single shoe store in Seattle. From the very start, Nordstrom's approach to business was to provide exceptional customer service, selection, quality, and value. This approach remains Nordstrom's hallmark today.

The modern Nordstrom is a fashion specialty chain with 373 stores in 40 U.S. states, Puerto Rico, and Canada. Nordstrom generated almost \$15.5 billion in sales in fiscal 2018 and makes consistently higher-than-average returns on invested capital. Its return on invested capital (ROIC) was 14.6% in 2018—strong performance for a retailer, and well in excess of its estimated 8% cost of capital (Wal-Mart had an ROIC of 9.17%, and Target an ROIC of 12.5%, in the same period).

Nordstrom, a niche company, focuses on a relatively affluent customer base that is looking for affordable luxury. Its flagship department stores are located in upscale areas and have expensive fittings and fixtures that convey an impression of luxury. The stores invite browsing. Touches such as live music played on a grand piano help create an appealing atmosphere. The merchandise is fashionable and of high quality. What truly differentiates Nordstrom from many of its rivals, however, is its legendary excellence in customer service.

Nordstrom's salespeople are typically well groomed and dressed, polite, helpful, and known for their attention to detail. They are selected for their ability to interact with customers in a positive way. During the interview process for new employees, one of the most important questions asked of candidates is their definition of good customer service. Thank-you cards, home deliveries, personal appointments, and access to personal shoppers are the norm at Nordstrom. There is a no-questions-asked returns policy, with no receipt required. Nordstrom's philosophy is that the customer is always right. The company's salespeople are well compensated, with good benefits and commissions on sales that range from 6.75 to 10% depending on the department. Top salespeople at Nordstrom have the ability to earn over \$100,000 a year, mostly in commissions.

The customer service ethos is central to the culture and organization of Nordstrom. The organization chart is depicted as an inverted pyramid, with salespeople on the top and the CEO at the bottom. According to the president, Blake Nordstrom, this is because "I work for them. My job is to make them as successful as possible." Management constantly shares anecdotes emphasizing the primacy of customer service at Nordstrom in order to reinforce the culture. One story relates that when a customer in

Fairbanks, Alaska, wanted to return two tires (which Nordstrom does not sell), bought some time ago from another store once on the same site, a salesclerk looked up their price and gave him his money back.

Despite its emphasis on quality and luxury, Nordstrom has not neglected operating efficiency. Sales per square foot are \$400 despite the large, open-plan nature of the stores, and inventory turns exceed 5 times per year, up from 3.5 times a decade ago—good figures for a high-end department store. Management constantly seeks ways to improve efficiency and customer service. For example, it was among the first to put mobile checkout devices into the hands of 5,000 salespeople, eliminating the need for customers to wait in a checkout line.

Nordstrom has also segmented the market, offering discounted branded clothing at its Nordstrom Rack stores and associated website. Nordstrom Rack has a younger demographic than the full-line department stores and is an important source of

new customers. The stores are much smaller than Nordstrom's flagship department stores, are typically located in suburban shopping areas, and have a high inventory turnover. However, they share the same customer service philosophy as the flagship stores. As of 2018, around 230 of Nordstrom's stores were Nordstrom Rack stores. The Rack stores and website generated about one-fifth of the company's total revenues, and had higher sales per square foot than the full-line department stores—around \$500 compared to \$350 at the department stores.

Sources: A. Martinez, "Tale of Lost Diamond Adds Glitter to Nordstrom's Customer Service," *Seattle Times*, May 11, 2011 (www.seattletimes.com); C. Conte, "Nordstrom Built on Customer Service," *Jacksonville Business Journal*, September 7, 2012 (www.bizjournals.com/Jacksonville); W. S. Goffe, "How Working as a Stock Girl at Nordstrom Prepared Me for Being a Lawyer," *Forbes*, December 3, 2012; Jaime Katz, "Nordstrom: placing Department Store Retailers Under Review," *Morningstar*, August 14, 2018.

CASE DISCUSSION QUESTIONS

1. What is Nordstrom's segmentation strategy? Who does it serve?
2. With regard to its core department store segment, what does Nordstrom offer its customers?
3. Using the Porter model described in Chapter 5, which generic, business-level strategy is Nordstrom pursuing?
4. What actions taken at the functional level have enabled Nordstrom to successfully implement its strategy?
5. How do the Nordstrom Rack stores fit into the company's business-level strategy?
6. What is the source of Nordstrom's long-term, sustainable, competitive advantage? What valuable and rare resources does Nordstrom have that its rivals find difficult to imitate?
7. Is Nordstrom organized for success?



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CASE 27

PROCTER & GAMBLE: EVOLUTION OF GLOBAL STRATEGY

*This case was prepared by Charles W. L. Hill of the
School of Business, University of Washington, Seattle.*

Founded in 1837, Cincinnati-based Procter & Gamble (P&G) has long been one of the world's most international companies. Today, P&G is a global colossus in the consumer products business, with annual sales in excess of \$66 billion, over half of which are generated outside of the United States. P&G sells more than 200 brands—including Ivory Soap, Olay, Tide, Fairy, Mr. Clean, Luv's, Pepto-Bismol, Scope, and Vicks—to consumers in 160 countries. Historically, the strategy for competing internationally at P&G was well established. The company developed new products in Cincinnati and then relied on semiautonomous foreign subsidiaries to manufacture, market, and distribute those products in different nations. In many cases, foreign subsidiaries had their own production facilities and tailored the packaging, brand name, and marketing message to local tastes and preferences. For years, this strategy delivered a steady stream of new products and reliable growth in sales and profits. By the 1990s, however, profit growth at P&G was slowing.

The problem was that P&G's costs were now too high because of extensive duplication of manufacturing, marketing, and administrative facilities in different national subsidiaries. The duplication of assets made sense in the 1960s, when national markets were segmented from each other by high barriers to cross-border trade. Products produced in Great

Britain, for example, could not be sold economically in Germany due to high tariff duties levied on imports into Germany. By the 1980s, however, barriers to cross-border trade were falling rapidly worldwide, and fragmented national markets were merging into larger regional or global markets due to the emergence of the World Trade Organization (WTO) and regional trade agreements, including the European Union and North American Free Trade Agreement (NAFTA). Also, the retailers through which P&G distributed its products were growing larger and more global themselves. Retailers such as Wal-Mart, Tesco from the United Kingdom, and Carrefour from France were expanding internationally, and they were using their global sales volume to demand deep price discounts from P&G.

In the 1990s, P&G embarked on a major reorganization in an attempt to control its cost structure and recognize the new reality of emerging regional and global markets. The company shut down some 30 manufacturing plants around the globe, laid off 13,000 employees, and concentrated production in fewer plants that could better realize economies of scale and serve regional markets. It wasn't enough: Profit growth remained sluggish, so in 1999 P&G launched its second reorganization of the decade, "Organization 2005." The goal was to transform P&G into a

truly global company. P&G replaced its old organization, which was based on countries and regions, with one based on seven self-contained, global business units, ranging from baby care to food products. Each business unit was given complete responsibility for generating profits from its products, and for manufacturing, marketing, and product development. Each business unit was directed to rationalize production, concentrating it in fewer larger facilities; to try to build global brands wherever possible, thereby reducing marketing difference between countries; and to accelerate the development and launch of new products. P&G announced that as a result of this initiative, it would close another 10 factories and lay off 15,000 employees, mostly in Europe, where there was still extensive duplication of assets. The annual cost

savings were estimated to be about \$800 million. P&G planned to use the savings to cut prices and increase marketing spending in an effort to gain market share, and thus further lower costs through the attainment of scale economies. This time the strategy seemed to work. P&G returned to an era of growth in both sales and profits. Significantly, P&G's global competitors, such as Unilever, Kimberly-Clark, and Colgate-Palmolive, continued to struggle as P&G thrived.

Sources: Neff, "P&G Outpacing Unilever in Five-Year Battle," *Advertising Age*, November 3, 2003, pp. 1–3; G. Strauss, "Firm Restructuring into Truly Global Company," *USA Today*, September 10, 1999, p. B2; *Procter & Gamble 10K Reports, 2005, 2017*; M. Kolbasuk McGee, "P&G Jump-Starts Corporate Change," *Information Week*, November 1, 1999, pp. 30–34.

CASE DISCUSSION QUESTIONS

1. What strategy for competing internationally was P&G using in the period prior to the 1990s? For decades this strategy seemed to work well. Why?
2. What changed in P&G's competitive environment in the 1990s? How did these environmental changes impact P&G?
3. What was P&G trying to achieve in the 1990s as it shifted its strategy? What strategy for competing internationally was the company now pursuing? Why do you think the company needed to change its organization structure to implement the new strategy?
4. Can you see any problems with the strategy that P&G had adopted by the early 2000s? How might they be mitigated?



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CASE 28

JCB IN INDIA

This case was prepared by Charles W. L. Hill of the School of Business, University of Washington, Seattle.

In 1979, JCB, the large British manufacturer of construction equipment, entered into a joint venture with Escorts, an Indian engineering conglomerate, to manufacture backhoe loaders for sale in India. Escorts held a majority 60% stake in the venture, and JCB held 40%. The joint venture was a first for JCB, which historically had exported as much as two-thirds of its production from Britain to a wide range of nations. However, high tariff barriers made direct exports to India difficult.

JCB would probably have preferred to go it alone in India, but government regulations at the time required foreign investors to create joint ventures with local companies. JCB believed the Indian construction market was ripe for growth and could become very large. The company's managers believed that it was better to get a foothold in the nation, thereby gaining an advantage over global competitors, rather than wait until the growth potential was realized.

Twenty years later, the joint venture was selling some 2,000 backhoes in India and had an 80% share of the Indian market for that product. After years of deregulation, the Indian economy was booming. However, JCB felt that the joint venture limited its ability to expand. For one thing, much of JCB's global success was based upon the utilization of leading-edge manufacturing technologies and relentless product innovation, but the company was very hesitant about transferring this knowhow to a venture where it did not have a majority stake and therefore lacked control. The last thing JCB wanted was for these valuable technologies to leak out of the joint venture into

Escorts, which was one of the largest manufacturers of tractors in India and might conceivably become a direct competitor in the future. Moreover, JCB was unwilling to make the investment in India required to take the joint venture to the next level unless it could capture more long-run returns.

In 1999, JCB took advantages of changes in government regulations to renegotiate the terms of the venture with Escorts, purchasing 20% of its partner's equity to give JCB majority control. In 2002, JCB took this to its logical end when it responded to further relaxation of government regulations on foreign investment to purchase all of Escorts' remaining equity, transforming the joint venture into a wholly-owned subsidiary. Around the same time, JCB also invested in wholly-owned factories in the United States and Brazil.

In early 2005, having gained full control, JCB increased its investment in India, announcing it would build a second factory that would serve the fast-growing Indian market. At the same time, JCB announced it would set up another wholly-owned factory in China to serve that market. India and China, the two most populous nations in the world, were growing rapidly; construction was booming; and JCB, then the world's fifth-largest manufacturer of construction equipment, was eager to expand its presence to match its global rivals, particularly Caterpillar, Komatsu, and Volvo, which were also expanding aggressively in these markets.

By 2008, JCB's foreign investment was bearing fruit. The product line had been expanded from

120 machines in 2001 to over 250. JCB had 47 dealers and some 275 outlets around India, and it claimed a market share in India of 53%. Over the next few years, JCB continued to gain business in India. By 2016, it was the market leader for construction equipment in India, with a 66% share and a network of 60 dealers and 600 outlets. In 2016, boosted by strong demand growth due to heavy infrastructure investment in India, JCB opened two new factories in the country, increasing its local workforce to 5,000. By 2018, it was generating £2.62 billion in annual sales, over £1.4 billion of which came from India. In addition to

strong demand in India, JCB's Indian factories were also now exporting to 93 other countries. India had become the jewel in the crown for JCB.

Sources: P. Marsh, "Partnerships Feel the Indian Heat," *Financial Times*, June 22, 2006, p. 11; P. Marsh, "JCB Targets Asia to Spread Production," *Financial Times*, March 16, 2005, p. 26; D. Jones, "Profits Jump at JCB," *Daily Post*, June 20, 2006, p. 21; R. Bentley, "Still Optimistic about Asia," *Asian Business Review*, October 1, 1999, p. 1; "JCB Launches India-Specific Heavy Duty Crane," *The Hindu*, October 18, 2008; M. Pooler, "JCB Piles Up Big Profits Despite Dwindling Global Markets," *Financial Times*, July 12, 2016; M. Ghosh, "JCB India Revenues Rise," *Livemint.com*, April 16, 2018.

CASE DISCUSSION QUESTIONS

1. What was the strategic rationale underlying JCB's entry into India in 1979, and into China in 2005? Given that capital to fund expansion is limited, does it make more sense for JCB to expand its presence in these markets, as opposed to more developed markets such as those of Western Europe?
2. Why do you think JCB chose to enter India via a joint venture, as opposed to some other entry mode?
3. Why did JCB not simply license its technology to Escorts?
4. What were the potential disadvantages of JCB's joint venture with Escorts?
5. What were the benefits of gaining full control of the Indian joint venture in 2002? Can you think of any drawbacks?
6. Why do you think JCB has been so successful in India?

NOTE

¹P. Marsh, "Partnerships Feel the Indian Heat," *Financial Times*, June 22, 2006, p. 11; P. Marsh, "JCB Targets Asia to Spread Production," *Financial Times*, March 16, 2005, p. 26; D. Jones, "Profits Jump

at JCB," *Daily Post*, June 20, 2006, p. 21; R. Bentley, "Still Optimistic about Asia," *Asian Business Review*, October 1, 1999, p. 1; and "JCB Launches India-Specific Heavy Duty Crane," *The Hindu*, October 18,

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CASE 29

OUTSOURCING AND VERTICAL INTEGRATION AT APPLE

*This case was prepared by Melissa A. Schilling
of the School of Business, New York University.*

At a dinner for Silicon Valley luminaries in February 2011, U.S. President Barack Obama asked Steve Jobs of Apple, “What would it take to make iPhones in the United States?” Jobs replied, “Those jobs aren’t coming back.” Apple’s management had concluded that overseas factories provided superior scale, flexibility, diligence, and access to industrial skills—“Made in the U.S.A.” just did not make sense for Apple anymore.

As an example of the superior responsiveness of Chinese factories to Apple’s needs, an executive described a recent event when Apple wanted to re-vamp its iPhone manufacturing just weeks before it was scheduled for delivery to stores. At the last minute, Apple had redesigned the screen, and new screens arrived at the Chinese factory at midnight. Fortunately, the 8,000 workers slept in dormitories at the factory—they were woken, given a cookie and a cup of tea, and were at work fitting glass screens into their beveled frames within 30 minutes. Soon the plant was producing 10,000 iPhones per day. The executive commented, “The speed and flexibility is breathtaking . . . There’s no American plant that can match that.”

“Foxconn City,” a complex where the iPhone is assembled, has 230,000 employees, many of whom work 6 days a week and up to 12 hours a day. It is owned by Foxconn Technology, which has dozens of factories in Asia, Eastern Europe, Mexico, and Brazil. It is estimated that Foxconn assembles 40% of the world’s consumer electronics. It boasts a customer list that includes Amazon, Dell, Hewlett-Packard, Motorola, Nintendo, Nokia, Samsung, and Sony, in addition to Apple. Foxconn can hire thousands of engineers overnight and house them in dorms—something no American firm could do. Nearly 8,700 industrial engineers were needed to oversee the 200,000 assembly-line workers required to manufacture iPhones. Apple’s analysts estimated that it could take 9 months to find that many qualified engineers in the United States. It only took 15 days in China. Moreover, China’s advantage was not only in assembly; it also offered advantages across the entire supply chain. As noted by an Apple executive, “The entire supply chain is in China now. You need a thousand rubber gaskets? That’s the factory next door. You need a million screws? That factory is a block away. You need that screw made a little bit different? It will take three hours.” Of Apple’s

64,000 employees, nearly one-third are outside of the United States. In response to criticisms about failing to support employment in its home country, Apple executives responded, “We sell iPhones in over a hundred countries. . . . Our only obligation is making the best product possible.”

Although Apple epitomizes the opportunities for strategic outsourcing, it is also—paradoxically, perhaps—more vertically integrated than most computer or smartphone firms. Apple’s decision to produce its own hardware and software—and tie them tightly together, and sell them its own retail stores—was widely known and hotly debated. However, the vertical integration did not end there. Apple also spends billions of dollars buying production equipment that is used to outfit new and existing Asian factories that will be run by others (an example of quasivertical integration), and then requires those factories to commit to producing for Apple exclusively. By providing the upfront investment, Apple removes most of the risk for its suppliers in investing in superior technology or scale. For decades, the computer and mobile phone industries have been characterized by commoditization and rapid cost reduction. Suppliers had to work hard to reduce costs to win competitive bids, and standardized production facilities trumped specialized facilities as they enabled suppliers to smooth out volatility in scale by working with multiple buyers. This meant that most suppliers to the computer and phone industry could produce cost-efficient hardware, but not “insanely great” hardware. Apple’s strategy of paying upfront for both the technology and capacity enabled it to induce its suppliers to make specialized investments

in technologies that were well beyond the industry standard, and to hold excess capacity that would enable rapid scaling. The net result is that Apple develops superior flexibility and technological sophistication that its competitors cannot match.

Seeming to acknowledge the advantages of Apple’s strategy of controlling device design and production, Microsoft announced in 2012 that it too would design and produce its own tablet, the Surface. It also launched its own chain of dedicated Microsoft retail stores that looked remarkably similar to Apple stores. Both moves proved challenging at Microsoft; it lacked both the tightly woven ecosystem that Apple has developed around those strategies, and its decades of experience in implementing them. In 2013, Microsoft had to take a \$900-million writedown due to the spectacular failure of the Surface RT. But Microsoft stuck with the Surface, and the product ultimately grew to account for roughly \$5 billion in revenues in 2017—roughly 20% of Apple’s Mac sales. Microsoft’s retail move does not appear to have been as successful. Though Microsoft had roughly 20% of the number of stores of Apple in 2018 (102 for Microsoft versus 502 for Apple), its sales per square foot were estimated to be a small fraction of those at Apple, which at \$5,546 per square foot was the top retailer in the world.

Sources: C. Duhigg and K. Bradsher, “How the U.S. Lost Out on iPhone Work,” *New York Times*, January 21, 2012, p. 1; C. Guglielmo, “Apple’s Secret Plan for Its Cash Stash,” *Forbes*, May 7, 2012, pp. 116–120; Bott, E. 2018. “Surface by the numbers: How Microsoft reinvented the PC. ZDNet, July 26; Miller, C. 2017. “Apple again found to be the world’s top retailer in sales per square foot,” *9to5Mac*, July 29.

CASE DISCUSSION QUESTIONS

1. What are the advantages and disadvantages to Apple of outsourcing its production to factories in China?
2. What factors influence the choice of countries to which a firm might outsource its production?
3. Is there anything that might cause Apple to eventually shift production back to the United States?
4. Why is Apple more vertically integrated than many other computer makers?
5. What factors will help or impede Microsoft in matching the advantages Apple gains from its vertical integration strategies?



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CASE 30

CITIGROUP: THE OPPORTUNITIES AND RISKS OF DIVERSIFICATION

This case was prepared by Melissa A. Schilling of the School of Business, New York University.

In 2018, Citigroup was a \$71.4-billion, diversified, financial services firm known around the world. However, its history had not always been smooth. From the late 1990s through 2010, the company's diversification moves, and its role in the mortgage crisis, combined to bring the company to its knees, raising fears that the venerable bank—one of the oldest and largest in the United States—would not survive.

Citigroup traces its history all the way back to 1812, when it was formed by a group of merchants in response to the abolishment of the First Bank of the United States (the First Bank's charter had been permitted to lapse due to Thomas Jefferson's arguments about the dangers of centralized control of the economy). The merchants, led by Alexander Hamilton, created the City Bank of New York in 1812, which they hoped would be large enough to replicate the scale advantages that had been offered by the First Bank. The bank played key roles in the rise of the United States as a global power, including lending money to support the purchasing of armaments for the War of 1812, financing the Union war effort in the mid-1800s, and later pioneering foreign-exchange trading, which helped to bring the United States to the

world stage in the early 1900s. By 1929, it was the largest commercial bank in the world.

The bank's capital resources and its trusted brand name enabled it to successfully diversify into a range of consumer banking services. The highly innovative company was, for example, the first to introduce savings accounts with compound interest, unsecured personal loans, checking accounts, and 24-hour ATMs, among other things. However, its business remained almost entirely within traditional, retail-banking services. That would soon change with the rise of a new concept: the "financial supermarket."

During the 1990s, there was much buzz in the financial industry about the value of having a wide range of financial services within the same bank. Why have your savings account in New Jersey, your stock broker in California, and your insurance agent in Maryland, when you could have them all under one roof? Merging such services would enable numerous "cross-selling" opportunities: Each company's customer bases could be more fully leveraged by promoting other financial products to them. Furthermore, cost savings might be realized by consolidating operations such as

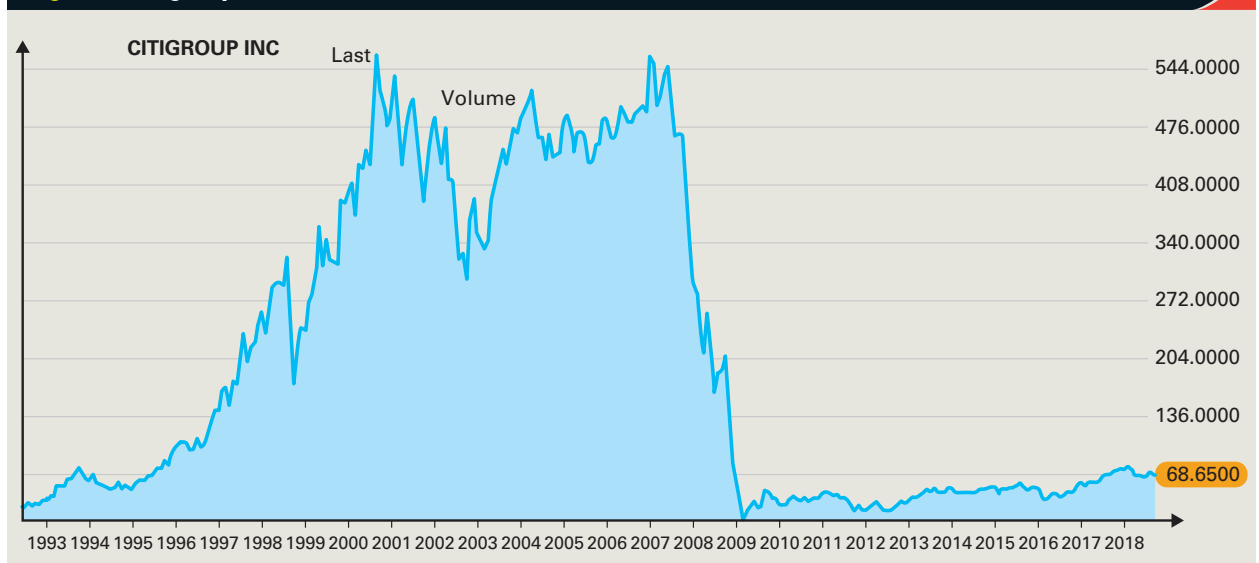
information technology, customer service and billing, and so forth. In 1998, Sanford “Sandy” Weill, who had already begun creating his own financial supermarket, which included Travelers insurance, Aetna, Primerica, Salomon Brothers, and Smith Barney Holdings, convinced Citicorp chairman and CEO John Reed that the two companies should merge. Travelers Group purchased all of Citicorp’s shares for \$70 billion, and issued 2.5 new Citigroup shares for each Citicorp Share. Existing shareholders of each company thus owned approximately half of the new firm. The merger created a \$140-billion firm with assets of \$700 billion. Renamed Citigroup, it was now the largest financial-services organization in the world.

Unfortunately, at almost exactly the same time, the Internet rendered the bricks-and-mortar financial supermarket obsolete: The best deals were to be found at the financial supermarket on the Web. To make matters worse, rather than cross-selling, the different divisions of Citi and Travelers began battling each other to protect their turf. Savings in consolidating back-office operations also turned out to be meager and costly to realize. Harmonizing each company’s information technology systems, for example, was going to be so expensive that ultimately the legacy systems were left intact. Additionally, though the merged company shed more than 10,000 employees, it was harder to part with executives—indeed, the company kept so many pairs of executives with “co-” titles

(including co-CEOs Weill and Reed) that some people compared Citi to Noah’s Ark. According to Meredith Whitney, a banking analyst who was an early critic of Citi’s megabank model, Citi had become “a gobbledygook of companies that were never integrated . . . The businesses didn’t communicate with each other. There were dozens of technology systems and dozens of financial ledgers.”

To boost earnings, Citi began investing in subprime loans, the risk of which was camouflaged by bundling the loans into mortgage-backed securities known as collateralized debt obligations (CDOs). Trouble began brewing before even Citi knew the scale of risk it had undertaken. Loose lending policies had resulted in a large number of poor-quality mortgages, the vast majority of which were adjustable-rate mortgages (i.e., the initial rate was very low but would increase over time). This combined with a steep decline in housing prices that made it next to impossible for homebuyers to refinance their mortgages as their interest rates climbed—their homes were now worth less than what they owed. Delinquencies and foreclosures soared, meaning that banks holding those mortgages had assets of rapidly declining value. A lawsuit by Citi’s shareholders in 2006 accused the company of using a “CDO-related quasi-Ponzi scheme” to falsely give the appearance that it had a healthy asset base and to conceal the true risks the company was facing, but even Citi’s CEO at the time, Charles O. Prince III, did not know how much the

Figure 1 Citigroup’s Stock Price, 1993–2018



Source: NASDAQ

company had invested in mortgage-related assets. Prince found out at a September 2007 meeting that the company had \$43 billion in mortgage related assets, but was assured by Thomas Maheras (who oversaw trading at the bank) that everything was fine. Soon, the company was posting billions in losses, and its stock price fell to the lowest it had been in a decade (see Figure 1). To Lynn Turner, a former chief accountant with the Securities and Exchange Commission, Citi's crisis was no surprise. He pointed out that Citi was too large, did not have the right controls, and lacked sufficient accountability for individuals undertaking risks on the company's behalf, making such problems inevitable. The amalgamation of businesses had created conflicts of interest, and Citi's managers lacked the ability to accurately gauge the risk of the exotic financial instruments that were proliferating. As the true scope of the problem was revealed, Citi found itself in very dire circumstances. The losses from writing down its mortgage assets threatened to destroy the entire company, bringing down even its profitable lines of business.

While the U.S. government kept the bank from failing with a \$45-billion bailout (out of fear that Citi's failure would cause an even greater economic collapse—giving rise to the phrase “too big to fail”), Citigroup began reducing its workforce and selling off everything it could, dismantling its financial supermarket. Over the next 2 years, it slashed over 80,000 jobs and sold Smith Barney, Phibro (its commodities-trading unit), Diner's Club (a credit card), its Japanese brokerage operations, Primerica, and more. Furthermore, to raise capital it sold 5% of its equity to the Abu Dhabi Investment authority for \$7.5 billion, and then raised another \$12 billion by selling shares to a group of investors that included Prince Alwaleed Bin Talal of Saudi Arabia in 2008. It also restructured into two operating units: Citicorp for retail and institutional client business, and Citi Holdings for its brokerage and asset management. This reorganization would help isolate Citi's banking operations from the riskier assets it wished to sell.

In 2010, Citigroup finally returned to profitability. It repaid its U.S. government loans, and its managers and the investment community breathed a sigh of relief, optimistic that the worst was over. In 2014, Citi posted \$76.9 billion in revenues and \$7.3 billion in net income. Today, roughly 50% of its revenues come from its consumer businesses (retail banking, credit cards, mortgages, and commercial banking for small-to-medium businesses); just over 40% comes from its Institutional Clients group (which provides investment and banking services for corporations, governments, institutions, and ultra-high-net-worth individuals); and Citi Holdings accounts for just under 10% of revenues.

The saga of Citi seriously undermined the investment community's faith in the financial supermarket model, although in the wake of the mortgage crisis it was difficult to assess how much had been gained and lost through the diversification of the firm. One thing was clear, however: Having a very large, complex organization had made it more difficult to provide sufficient, and effective, oversight within the firm. This, in turn, allowed problems to grow very threatening before being detected. Citi's managers knew they would have to think much more carefully about their business choices in the future, and about how to manage the interdependencies between those businesses.

Sources: R. Wile, “Dramatic Highlights from Citi's 200-Year History,” *Business Insider*, April 4, 2012, www.businessinsider.com/presenting-a-history-of-citi-2012-4?op=1; “About Citi—Citibank, N.A.,” www.citigroup.com; M. Martin, “Citicorp and Travelers Plan to Merge in Record \$70 Billion Deal,” *New York Times*, April 7, 1998, p. 1; A. Kessler, “The End of Citi's Financial Supermarket,” *The Wall Street Journal*, January 16, 2009, p. A11; “Fall Guy,” *The Economist*, November 5, 1998; E. Dash and J. Creswell, “Citigroup Saw No Red Flags Even as It Made Bolder Bets,” *New York Times*, November 22, 2008, p. 14; P. Hurtado and D. Griffin, “Citigroup Settles Investors' CDO Suit for \$590 Million,” *Bloomberg.com*, August 29, 2012; D. Ellis, “Citi Plunges 26%—Lowest in 15 Years,” *CNNMoney.com*, November 20, 2008; Citigroup 2014 10-K; Citigroup 2018 10-K, NASDAQ data from August 2018.

CASE DISCUSSION QUESTIONS

1. What advantages did Citigroup's managers think would result from creating a “financial supermarket”?
2. Why didn't the “financial supermarket” concept pay off the way Citi's managers had anticipated?
3. Why do you think it was so hard to integrate the different companies that were merged?
4. What are some challenges involved with managing a very large, diverse, financial services company?

CASE 31

HP'S DISASTROUS ACQUISITION OF AUTONOMY

*This case was prepared by Melissa A. Schilling
of the School of Business, New York University.*

In 2011, HP was churning on many fronts simultaneously. It had decided to abandon its tablet computer and was struggling with a decision about whether to exit its \$40-billion-a-year personal computer (PC) business altogether. It also had a new CEO, Leo Apotheker (formerly the head of German software company SAP AG), who was intent on making a high-impact acquisition that would transform the firm from being primarily a hardware manufacturer into a fast-growing software firm. The firm also had a new chairman of the board, Ray Lane, who was a software specialist as well as former president of Oracle.

Apotheker had proposed buying two midsized software companies, but both deals fell through. The first was nixed by the board's finance committee, and the second fell apart during negotiations over price. In frustration, Apotheker told Lane, "I'm running out of software companies."

Then, in Summer 2011, Apotheker proposed looking at Autonomy, a British company that makes software firms use to search for information in text files, video files, and other corporate documents. Lane was enthusiastic about the idea. When Apotheker brought the proposal to the board members in July 2011, half of them were already busy analyzing the decision to jettison the PC business, so only half of the board evaluated the acquisition proposal. The board approved a price for Autonomy that was about a 50% premium

over its market value, which was already high at about 15 times its operating profit. HP announced the acquisition on August 18, 2011—the same day that it announced it would abandon its tablet computer and was considering exiting the PC industry. The price of the acquisition was \$11.1 billion—12.6 times Autonomy's 2010 revenue. Notably, Oracle had already considered acquiring Autonomy and decided that, even if the numbers Autonomy was presenting were taken at face value, it was not worth buying even at a \$6-billion price tag. HP's stock fell by 20% the next day.

In the days following the announcement, HP's stock continued to tumble, and backlash from shareholders and others in the investment community was scathing. Lane asked HP's advisers if the company could back out of the deal and was told that, according to U.K. takeover rules, backing out was only possible if HP could show that Autonomy engaged in financial impropriety. HP began frantically examining the financials of Autonomy, hoping for a way to get out of the deal. In the midst of harsh disapproval from HP's largest stockholders and other senior executives within the firm, HP fired Leo Apotheker on September 22, 2012, less than a month after the acquisition's announcement, and only 11 months into his tenure as CEO.

By May 2012, it was clear that Autonomy was not going to hit its revenue targets, and Michael Lynch, Autonomy's founder (who had been asked to stay on

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and run the company) was fired. In late November 2012, HP wrote down \$8.8 billion of the acquisition, essentially admitting that the company was worth 79% less than it had paid for it. Then the finger pointing began in earnest. HP attributed more than \$5 billion of the write-down to a “willful effort on behalf of certain former Autonomy employees to inflate the underlying financial metrics of the company in order to mislead investors and potential buyers. . . . These misrepresentations and lack of disclosure severely impacted management’s ability to fairly value Autonomy at the time of the deal.”

Lynch denied the charges, insisting he knew of no wrongdoing at Autonomy, arguing that auditors from Deloitte had approved its financial statements, and pointing out that the firm followed British accounting guidelines, which differ in some ways from American rules. Lynch also accused HP of mismanaging the acquisition, saying “Can HP really state that no part of the \$5-billion writedown was, or should be, attributed to HP’s operational and financial mismanagement of Autonomy since acquisition? . . . Why did HP senior management apparently wait six months to inform its shareholders of the possibility of a material event related to Autonomy?”

Many shareholders and analysts also pointed their fingers at HP, claiming that the deal was shockingly overpriced. Sanford C. Bernstein & Company analyst Toni Sacconaghi wrote, “We see the decision to purchase Autonomy as value-destroying,” and Richard Kugele, an analyst at Needham & Company, wrote, “HP may have eroded what remained of Wall Street’s confidence in the company” with the “seemingly overly expensive acquisition of Autonomy for over \$10B.” Apotheker responded by saying, “We have a pretty rigorous process inside HP that we follow for all our acquisitions, which is a D.C.F.-based model Just take it from us. We did that analysis at great length, in great detail, and we feel that we paid a very fair price for Autonomy.” However, when Lane was questioned, he seemed unfamiliar with

any cash flow analysis done for the acquisition. He noted instead that he believed the price was fair because Autonomy was unique and critical to HP’s strategic vision.

According to an article in *Fortune*, Catherine A. Lesjak, the chief financial officer at HP, had spoken out against the deal before it transpired, arguing that it was not in the best interests of the shareholders and that HP could not afford it. Furthermore, outside auditors for Autonomy apparently informed HP (during a call in the days leading up to the announcement) that an executive at Autonomy had raised allegations of improper accounting at the firm, but a review had deemed the allegations baseless, and they were never passed on to HP’s board or CEO.

In the third quarter of 2012, HP lost \$6.9 billion, largely because of the Autonomy mess. Its stock was trading at \$13—almost 60% less than it had been worth when the Autonomy deal was announced. In April 2013, Ray Lane stepped down as chairman of the board (although he continued on as a board member).

Did Autonomy intentionally inflate its financial metrics? Did Apotheker and Lane’s eagerness for a “transformative acquisition” cause them to be sloppy in their valuation of Autonomy? Or was the value of Autonomy lost due to the more mundane cause of integration failure? Financial forensic investigators are trying to answer these questions, but irrespective of the underlying causes, Sacconaghi notes that Autonomy “will arguably go down as the worst, most value-destroying deal in the history of corporate America.”

Sources: J. Bandler, “HP Should Have Listened to Its CFO,” *Fortune*, November 20, 2012; www.fortune.com; J. B. Stewart, “From HP, a Blunder That Seems to Beat All,” *New York Times*, November 30, 2012, www.nytimes.com; M. G. De La Merced, “Autonomy’s Ex-Chief Calls on HP to Defend Its Claims,” *New York Times*, Dealbook, November 27, 2012, www.nytimes.com/pages/business/dealbook; B. Worthen and J. Scheck, “Inside H-P’s Missed Chance to Avoid a Disastrous Deal,” *The Wall Street Journal*, January 21, 2013, pp. A1–A16.

CASE DISCUSSION QUESTIONS

1. Why do you think Apotheker was so eager to make an acquisition?
2. Why do most acquisitions result in paying a premium over the market price? Was the 50% premium for Autonomy reasonable?
3. Was it unethical for Apotheker to propose the acquisition at the 50% premium? Was it unethical
4. Is there anything HP and Autonomy could have done differently to avoid the public backlash and share price drop the company suffered?

CASE 32

ORGANIZATION AT APPLE

This case was prepared by Charles W. L. Hill of the School of Business, University of Washington, Seattle.

Apple has a legendary ability to produce a steady stream of innovative new products and product improvements that are differentiated by design elegance and ease of use. Product innovation is in many ways the essence of what the company has always done, and what it strives to continue doing. Innovation at Apple began with the Apple II in 1979. The original Macintosh computer, the first personal computer (PC) to use a graphical user interface, a mouse, and on-screen icons, followed in 1984. After the late founder and former CEO Steve Jobs returned to the company in 1997, the list of notable innovations expanded to include the iPod and iTunes, the Mac Airbook, the iPhone, the Apple App store, and the iPad.

Unlike most companies of its size, Apple has a functional structure. The employees reporting directly to current CEO Tim Cook include the senior vice presidents of operations, Internet software and services, industrial design, software engineering, hardware engineering, and worldwide marketing, along with the CFO and company general council. This group meets every Monday morning to review the strategy of the company, its operations, and ongoing product development efforts.

The industrial design group takes the lead on new-product development efforts, dictating the look and feel of a new product, and the materials that must be used. The centrality of industrial design is unusual—in most companies engineers first develop products, with industrial design coming into the picture quite

late in the process. The key role played by industrial design at Apple, however, is consistent with the company's mission of designing beautiful products that change the world. The industrial design group works closely with hardware and software engineering to develop features and functions for each new product, with operations to ensure that manufacturing can be rapidly scaled up following a product launch, and with worldwide marketing to plan the product launch strategy.

Thus, product development at Apple is a cross-functional effort that requires intense coordination. This coordination is achieved through a centralized command and control structure, with the top-management group driving collaboration and the industrial design group setting key parameters. During his long tenure as CEO, Jobs was well known for clearly articulating who was responsible for what in the product development process, and for holding people accountable if they failed to meet his high standards. His management style could be unforgiving and harsh—there are numerous stories of people being fired on the spot for failing to meet his standards—but it did get the job done.

Even though Jobs passed away in 2011, the focus on accountability persists at Apple. Each task is given a “directly responsible individual,” or DRI in “Apple-speak.” Typically, the DRI's name will appear on an agenda for a meeting, so everyone knows who is responsible. Meetings at Apple have an action list, and

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next to each action item will be a DRI. By such clear control processes, Apple pushes accountability down deep within the ranks.

A key feature of the Apple culture is the secrecy surrounding much of what the company does. Information that reaches the outside world tightly controlled, and so is the flow of information within the company. Many employees are kept in the dark about new-product development efforts and frequently do not know what others are working on. Access to buildings where teams are developing new products or features is tightly controlled, with only team members allowed in. Cameras monitor sensitive workspaces to make sure that this restriction is not violated. Disclosing what the

company is doing to an outside source, or an unauthorized inside source, is grounds for termination—as all employees are told when they join the company. The goal is to keep new products under very tight wraps until launch day. Apple wants to control the message surrounding new products. It does not want to give the competition time to respond, or media critics time to bash products under development.

Sources: J. Tyranigel, “Tim Cook’s Freshman Year: The Apple CEO Speaks,” *Bloomberg Businessweek*, December 6, 2012; A. Lashinsky, “The Secrets Apple Keeps,” *CNNMoney*, January 10, 2012; and B. Stone, “Apple’s Obsession with Secrecy Grows Stronger,” *New York Times*, June 23, 2009.

CASE DISCUSSION QUESTIONS

1. Describe as best you can the organizational architecture at Apple, specifically its organizational structure, control systems, incentives, product development processes, and culture.
2. What do you think is different about the way Apple is organized compared to most high-tech firms?
3. What is Apple trying to achieve with its current organizational architecture? What are the strengths of this architecture? What are the potential weaknesses?
4. Are there changes that you think Apple should make in its organizational architecture? What are these changes? How might they benefit Apple?

GLOSSARY

A

- absolute cost advantage** A cost advantage that is enjoyed by incumbents in an industry and that new entrants cannot expect to match.
- acquisition** When a company uses its capital resources to purchase another company.
- advanced factors of production** Resources such as process knowledge, organizational architecture, and intellectual property that contribute to a company's competitive advantage.
- anticompetitive behavior** A range of actions aimed at harming actual or potential competitors, most often by using monopoly power, and thereby enhancing the long-run prospects of the firm.
- autonomous subunit** A subunit that has all the resources and decision-making power required to run the operation on a day-to-day basis.
- availability error** A bias that arises from our predisposition to estimate the probability of an outcome based on how easy the outcome is to imagine.

B

- barriers to imitation** Factors or characteristics that make it difficult for another individual or company to replicate something.
- basic factors of production** Resources such as land, labor, management, plants, and equipment.
- benchmarking** Measuring how well a company is doing by comparing it to another company, or to itself, over time.
- brand loyalty** Preference of consumers for the products of established companies.
- broad differentiation strategy** When a company differentiates its product in some way, such as by recognizing different segments or offering different products to each segment.
- broad low-cost strategy** When a company lowers costs so that it can lower prices and still make a profit.
- bureaucratic control** Control through a formal system of written rules and procedures.
- bureaucratic costs** The costs associated with solving the transaction difficulties between business units and corporate headquarters as a company obtains the benefits from transferring, sharing, and leveraging competencies.
- business ethics** Accepted principles of right or wrong governing the conduct of businesspeople.

- business-level strategy** The business's overall competitive theme, the way it positions itself in the marketplace to gain a competitive advantage, and the different positioning strategies that can be used in different industry settings.
- business model** The conception of how strategies should work together as a whole to enable the company to achieve competitive advantage.
- business unit** A self-contained division that provides a product or service for a particular market.

C

- capital productivity** The sales produced by a dollar of capital invested in the business.
- causal ambiguity** When the way that one thing, A, leads to an outcome (or "causes"), B, is not clearly understood.
- centralization** Structure in which the decision-making authority is concentrated at a high level in the management hierarchy.
- chaining** A strategy designed to obtain the advantages of cost leadership by establishing a network of linked merchandising outlets interconnected by information technology that functions as one large company.
- code of ethics** Formal statement of the ethical priorities to which a business adheres.
- cognitive biases** Systematic errors in decision making that arise from the way people process information.
- commonality** A skill or competency that, when shared by two or more business units, allows them to operate more effectively and create more value for customers.
- competitive advantage** The achieved advantage over rivals when a company's profitability is greater than the average profitability of firms in its industry.
- confirmation bias** Refers to the fact that decision makers who have strong prior beliefs tend to make decisions on the basis of these beliefs, even when presented with evidence that their beliefs are wrong.
- control** The process through which managers regulate the activities of individuals and units so that they are consistent with the goals and standards of the organization.
- controls** The metrics used to measure the performance of subunits and make judgments about how well managers are running them.
- corruption** Can arise in a business context when managers pay bribes to gain access to lucrative business contracts.
- credible commitment** A believable promise or pledge to support the development of a long-term relationship between companies.

cross-selling When a company takes advantage of or leverages its established relationship with customers by way of acquiring additional product lines or categories that it can sell to them. In this way, a company increases differentiation because it can provide a “total solution” and satisfy all of a customer’s specific needs.

customer defection The percentage of a company’s customers who defect every year to competitors.

customer response time Time that it takes for a good to be delivered or a service to be performed.

D

decentralization Structure in which the decision-making authority is distributed to lower-level managers or other employees.

delaying The process of reducing the number of levels in a management hierarchy.

devil’s advocacy A technique in which one member of a decision-making team identifies all the considerations that might make a proposal unacceptable.

dialectic inquiry The generation of a plan (a thesis) and a counterplan (an antithesis) that reflect plausible but conflicting courses of action.

diseconomies of scale Unit cost increases associated with a large scale of output.

distinctive competencies Firm-specific strengths that allow a company to differentiate its products and/or achieve substantially lower costs to achieve a competitive advantage.

diversification The process of entering new industries, distinct from a company’s core or original industry, to make new kinds of products for customers in new markets.

diversified company A company that makes and sells products in two or more different or distinct industries.

divestment strategy When a company decides to exit an industry by selling off its business assets to another company.

dominant design Common set of features or design characteristics.

E

economies of scale Reductions in unit costs attributed to large output.

economies of scope The synergies that arise when one or more of a diversified company’s business units are able to lower costs or increase differentiation because they can more effectively pool, share, and utilize expensive resources or capabilities.

employee productivity The output produced per employee.

environmental degradation Occurs when a company’s actions directly or indirectly result in pollution or other forms of environmental harm.

escalating commitment A cognitive bias that occurs when decision makers, having already committed significant resources to a project, commit even more resources after receiving feedback that the project is failing.

ethical dilemmas Situations where there is no agreement over exactly what the accepted principles of right and wrong are, or where none of the available alternatives seems ethically acceptable.

ethics Accepted principles of right or wrong that govern the conduct of a person, the members of a profession, or the actions of an organization.

experience curve The systematic lowering of the cost structure and consequent unit cost reductions that have been observed to occur over the life of a product.

external stakeholders All other individuals and groups that have some claim on the company.

F

first mover A firm that pioneers a particular product category or feature by being first to offer it to market.

first-mover disadvantages Competitive disadvantages associated with being first to market.

fixed costs Costs that must be incurred to produce a product regardless of level of output.

flat hierarchies An organizational structure with very few layers of management.

flexible production technology A range of technologies designed to reduce setup times for complex equipment, increase the use of machinery through better scheduling, and improve quality control at all stages of the manufacturing process.

focus differentiation strategy When a company targets a certain segment or niche, and customizes its offering to the needs of that particular segment through the addition of features and functions.

focus low-cost strategy When a company targets a certain segment or niche, and tries to be the low-cost player in that niche.

focus strategy When a company decides to serve a limited number of segments, or just one segment.

format wars Battles to control the source of differentiation, and thus the value that such differentiation can create for the customer.

fragmented industry An industry composed of a large number of small-and medium-sized companies.

franchising A strategy in which the franchisor grants to its franchisees the right to use the franchisor’s name, reputation, and business model in return for a franchise fee and often a percentage of the profits.

functional-level strategies Actions that managers take to improve the efficiency and effectiveness of one or more value creation activities.

functional managers Managers responsible for supervising a particular function; that is, a task, an activity, or an operation such as accounting, marketing, research and development (R&D), information technology, or logistics.

functional structure The organizational structure is built upon the division of labor within the firm with different functions focusing on different tasks.

G

general managers Managers who bear responsibility for the overall performance of the company or for one of its major, self-contained subunits or divisions.

general organizational competencies Competencies that result from the skills of a company's top managers and that help every business unit within a company perform at a higher level than it could if it operated as a separate or independent company.

generic business-level strategy A strategy that gives a company a specific form of competitive position and advantage vis-à-vis its rivals that results in above-average profitability.

global standardization strategy A business model based on pursuing a low-cost strategy on a global scale.

global strategic alliances Cooperative agreements between companies from different countries that are actual or potential competitors.

goal A desired future state that an organization attempts to realize.

greenmail Source of gaining wealth whereby corporate raiders either push companies to change their corporate strategy to one that will benefit stockholders, or charge a premium for stock when the company wants to buy it back.

H

harvest strategy When a company reduces to a minimum the assets it employs in a business to reduce its cost structure and extract or "milk" maximum profits from its investment.

holdup When a company is taken advantage of by another company it does business with after it has made an investment in expensive specialized assets to better meet the needs of the other company.

horizontal differentiation The formal division of the organization into subunits.

horizontal integration The process of acquiring or merging with industry competitors to achieve the competitive advantages that arise from a large size and scope of operations.

hostage taking A means of exchanging valuable resources to guarantee that each partner to an agreement will keep its side of the bargain.

I

illusion of control A cognitive bias rooted in the tendency to overestimate one's ability to control events.

incentives The devices used to encourage desired employee behavior.

industry A group of companies offering products or services that are close substitutes for each other.

influence costs The loss of efficiency that arises from deliberate information distortions for personal gain within an organization.

information asymmetry A situation where an agent has more information about resources he or she is managing than the principal has.

information manipulation When managers use their control over corporate data to distort or hide information in order to enhance their own financial situation or the competitive position of the firm.

inside directors Senior employees of the company, such as the CEO.

integrating mechanisms Processes and procedures used for coordination subunits.

intellectual property Knowledge, research, and information that is owned by an individual or organization.

internal capital market A corporate-level strategy whereby the firm's headquarters assesses the performance of business units and allocates money across them. Cash generated by units that are profitable but have poor investment opportunities within their business is used to cross-subsidize businesses that need cash and have strong promise for long-run profitability.

internal new venturing The process of transferring resources to, and creating a new business unit or division in, a new industry to innovate new kinds of products.

internal stakeholders Stockholders and employees, including executive officers, other managers, and board members.

J

just-in-time (JIT) inventory system System of economizing on inventory holding costs by scheduling components to arrive just in time to enter the production process or only as stock is depleted.

K

killer applications Applications or uses of a new technology or product that are so compelling that customers adopt them in droves, killing competing formats.

knowledge network A network for transmitting information within an organization that is based not on formal organizational structure but on informal contacts between managers within an enterprise and on distributed-information systems.

L

leadership strategy When a company develops strategies to become the dominant player in a declining industry.

learning effects Cost savings that come from learning by doing.

leveraging competencies The process of taking a distinctive competency developed by a business unit in one industry and using it to create a new business unit in a different industry.

limit price strategy Charging a price that is lower than that required to maximize profits in the short run to signal new entrants that the incumbent has a low cost structure that the entrant likely cannot match.

localization strategy A strategy focused on increasing profitability by customizing a company's goods or services so that they provide a favorable match to tastes and preferences in different national markets.

location economies The economic benefits that arise from performing a value creation activity in an optimal location.

M

market controls The regulation of the behavior of individuals and units within an enterprise by setting up an internal market for valuable resource such as capital.

market development When a company searches for new market segments for a company's existing products to increase sales.

market segmentation The way a company decides to group customers based on important differences in their needs to gain a competitive advantage.

marketing strategy The position that a company takes with regard to pricing, promotion, advertising, product design, and distribution.

mass customization The use of flexible manufacturing technology to reconcile two goals that were once thought to be incompatible: low cost and differentiation through product customization.

mass market A market into which large numbers of customers enter.

matrix structure An organizational structure in which managers try to achieve tight coordination between functions, particularly R&D, production, and marketing.

merger An agreement between two companies to pool their resources and operations and join together to better compete in a business or industry.

mission The purpose of the company, or a statement of what the company strives to do.

modularity The degree to which a system's components can be separated and recombined.

multidivisional company A company that competes in several different businesses and has created a separate, self-contained division to manage each.

multidivisional structure An organizational structure in which a firm is divided into divisions, each of which is responsible for a distinct business area.

multinational company A company that does business in two or more national markets.

N

network effects The network of complementary products as a primary determinant of the demand for an industry's product.

niche strategy When a company focuses on pockets of demand that are declining more slowly than the industry as a whole to maintain profitability.

non-price competition The use of product differentiation strategies to deter potential entrants and manage rivalry within an industry.

norms Social rules and guidelines that prescribe the appropriate behavior in particular situations.

O

on-the-job consumption A term used by economists to describe the behavior of senior management's use of company funds to acquire perks (lavish offices, jets, etc.) that will enhance their status, instead of investing it to increase stockholder returns.

opportunism Seeking one's own self-interest, often through the use of guile.

opportunistic exploitation Unethical behavior sometimes used by managers to unilaterally rewrite the terms of a contract with suppliers, buyers, or complement providers in a way that favors to the firm.

opportunities Elements and conditions in a company's environment that allow it to formulate and implement strategies that enable it to become more profitable.

organizational architecture The totality of a firm's organizational arrangements, including its formal organizational structure, control systems, incentive systems, organizational culture, organizational processes, and human capital.

organizational culture The norms and value systems that are shared among the employees of an organization.

organizational design skills The ability of a company's managers to create a structure, culture, and control systems that motivate and coordinate employees to perform at a high level.

organizational processes The manner in which decisions are made and work is performed within the organization.

organizational structure The combination of the location of decision-making responsibilities, the formal division of the organization into subunits, and the establishment of integrating mechanisms to coordinate the activities of the subunits.

output controls Setting goals for units or individuals and monitoring performance against those goals.

outside directors Directors who are not full-time employees of the company, needed to provide objectivity to the monitoring and evaluation of processes.

outside view Identification of past successful or failed strategic initiatives to determine whether those initiatives will work for project at hand.

P

parallel sourcing policy A policy in which a company enters into long-term contracts with at least two suppliers for the same component to prevent any incidents of opportunism.

peer control The pressure that employees exert on others within their team or work group to perform up to or in excess of the expectations of the organization.

people The employees of an organization, as well as the strategy used to recruit, compensate, motivate, and retain those individuals; also refers to employees' skills, values, and orientation.

performance ambiguity The difficulty of identifying with precision the reason for the high (or low) performance of a subunit such as a function or team.

personal control Control by personal contact with and direct supervision of subordinates.

personal ethics Generally accepted principles of right and wrong governing the conduct of individuals.

platform ecosystem "Ecosystem," a contraction of "ecological" and "system," refers to a system where elements share some form of mutual dependence. A platform in this context is a stable core that mediates the relationship between a range of components, complements, and end users. Thus "platform ecosystem" refers to a system of mutually dependent entities mediated by a stable core.

positioning strategy The specific set of options a company adopts for a product based upon four main dimensions of marketing: price, distribution, promotion and advertising, and product features.

potential competitors Companies that are currently not competing in the industry but have the potential to do so.

price leadership When one company assumes the responsibility for determining the pricing strategy that maximizes industry profitability.

price signaling The process by which companies increase or decrease product prices to convey their intentions to other companies and influence the price of an industry's products.

primary activities Activities related to the design, creation, and delivery of the product, its marketing, and its support and after-sales service.

process innovation Development of a new process for producing and delivering products to customers.

process knowledge Knowledge of the internal rules, routines, and procedures of an organization that managers can leverage to achieve organizational objectives.

product bundling Offering customers the opportunity to purchase a range of products at a single, combined price; this increases the value of a company's product line because customers often obtain a price discount when purchasing a set of products at one time, and customers become used to dealing with only one company and its representatives.

product development The creation of new or improved products to replace existing products.

product innovation Development of products that are new to the world or have superior attributes to existing products.

product proliferation strategy The strategy of "filling the niches," or catering to the needs of customers in all market segments to deter entry by competitors.

profit growth The increase in net profit over time.

profitability The return a company makes on the capital invested in the enterprise.

public domain Government- or association-set standards of knowledge or technology that any company can freely incorporate into its product.

Q

quasi integration The use of long-term relationships, or investment in some activities normally performed by suppliers or buyers, in place of full ownership of operations that are backward or forward in the supply chain.

R

razor and blade strategy Pricing the product low in order to stimulate demand, and pricing complements high.

reasoning by analogy Use of simple analogies to make sense out of complex problems.

related diversification A corporate-level strategy based on the goal of establishing a business unit in a new industry that is related to a company's existing business units by some form of commonality or linkage between their value-chain functions.

representativeness A bias rooted in the tendency to generalize from a small sample or even a single, vivid anecdote.

resources Assets of a company.

restructuring The process of reorganizing and divesting business units and exiting industries to refocus upon a company's core business and rebuild its distinctive competencies.

return on invested capital Return on invested capital is equal to net profit divided by capital invested in the company.

risk capital Equity capital invested with no guarantee that stockholders will recoup their cash or earn a decent return if a company fails and goes bankrupt.

S

scenario planning Formulating plans that are based upon "what-if" scenarios about the future.

segmentation strategy When a company decides to serve many segments, or even the entire market, producing different offerings for different segments.

self-dealing Managers using company funds for their own personal consumption.

self-managing teams Teams where members coordinate their own activities and make their own hiring, training, work, and reward decisions.

shareholder value Returns that shareholders earn from purchasing shares in a company.

socially complex Something that is characterized by, or is the outcome of, the interaction of multiple individuals.

span of control The number of direct reports that a manager has.

stakeholders Individuals or groups with an interest, claim, or stake in the company—in what it does and in how well it performs.

standard A performance requirement that the organization is meant to attain on an ongoing basis.

standardized interface A point of interconnection between two systems or parts of a system that adheres to a standard to ensure those systems or parts can connect or exchange information, energy, or other resources, e.g. a USB slot on a computer enables it to communicate and power a range of peripherals; USB is a type of standardized interface.

standardization strategy When a company decides to ignore different segments, and produce a standardized product for the average consumer.

stock options The right to purchase company stock at a predetermined price at some point in the future, usually within 10 years of the grant date.

strategic alliances Long-term agreements between two or more companies to jointly develop new products or processes that benefit all companies that are a part of the agreement.

strategic commitments Investments that signal an incumbent's long-term commitment to a market or market segment.

strategic leadership Creating competitive advantage through effective management of the strategy-making process.

strategic outsourcing The decision to allow one or more of a company's value-chain activities to be performed by independent, specialist companies that focus all their skills and knowledge on just one kind of activity to increase performance.

strategy A set of related actions that managers take to increase their company's performance.

strategy formulation Selecting strategies based on analysis of an organization's external and internal environment.

strategy implementation Putting strategies into action.

subgoal An objective, the achievement of which helps the organization to attain or exceed its major goals.

substandard working conditions Arise when managers underinvest in working conditions, or pay employees below-market rates, in order to reduce their production costs.

supply chain management The task of managing the flow of inputs and components from suppliers into the company's production processes to minimize inventory holding and maximize inventory turnover.

support activities Activities of the value chain that provide inputs that allow the primary activities to take place.

sustained competitive advantage A company's strategies enable it to maintain above-average profitability for a number of years.

switching costs Costs that consumers must bear to switch from the products offered by one established company to the products offered by a new entrant.

SWOT analysis The comparison of strengths, weaknesses, opportunities, and threats.

T

tacit A characteristic of knowledge or skills such that they cannot be documented or codified but may be understood through experience or intuition.

takeover constraint The risk of being acquired by another company.

tall hierarchies An organizational structure with many layers of management.

tapered integration When a firm uses a mix of vertical integration and market transactions for a given input. For example, a firm might operate limited semiconductor manufacturing while also buying semiconductor chips on the market. Doing so helps to prevent supplier holdup (because the firm can credibly commit to not buying from external suppliers) and increases its ability to judge the quality and cost of purchased supplies.

technical standards A set of technical specifications that producers adhere to when making a product or component.

technological paradigm shift Shifts in new technologies that revolutionize the structure of the industry, dramatically alter the nature of competition, and require companies to adopt new strategies in order to survive.

technology upgrading Incumbent companies can deter entry by investing in costly technology upgrades that potential entrants have trouble matching.

threats Elements in the external environment that could endanger the integrity and profitability of the company's business.

total quality management (TQM) Increasing product reliability so that it consistently performs as it was designed to and rarely breaks down.

transfer pricing The price that one division of a company charges another division for its products, which are the inputs the other division requires to manufacture its own products.

transferring competencies The process of taking a distinctive competency developed by a business unit in one industry and implanting it in a business unit operating in another industry.

transnational strategy A business model that simultaneously achieves low costs, differentiates the product offering across geographic markets, and fosters a flow of skills between different subsidiaries in the company's global network of operations.

turnaround strategy When managers of a diversified company identify inefficient, poorly managed companies in other industries and then acquire and restructure them to improve their performance—and thus the profitability of the total corporation.

U

unrelated diversification A corporate-level strategy based on a multibusiness model that uses general organizational competencies to increase the performance of all the company's business units.

V

value chain The concept that a company consists of a chain of activities that transforms inputs into outputs.

value innovation When innovations push out the efficiency frontier in an industry, allowing for greater value to be offered through superior differentiation at a lower cost than was previously thought possible.

values A statement of how employees should conduct themselves and their business to help achieve the company mission; ideas or shared assumptions about what a group believes to be good, right, and desirable.

vertical differentiation The location of decision-making responsibilities within a structure, referring to centralization or decentralization, and number of layers in a hierarchy, referring to whether to organizational structure is tall or flat.

vertical disintegration When a company decides to exit industries, either forward or backward in the industry value chain, to its core industry to increase profitability.

vertical integration When a company expands its operations either backward into an industry that produces inputs for the company's products (backward vertical integration) or forward into an industry that uses, distributes, or sells the company's products (forward vertical integration).

virtual corporation When companies pursued extensive strategic outsourcing to the extent that they only perform the central value creation functions that lead to competitive advantage.

vision The articulation of a company's desired achievements or future state.

VRIO framework A framework managers use to determine the quality of a company's resources, where *V* is value, *R* is rarity, *I* is inimitability, and *O* is organization.

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