

Chapter 2

Analyzing the External Environment of the Firm: Creating Competitive Advantages

36 (2-2)

Creating the Environmentally Aware Organization

38 (2-3)

*The Role of Scanning, Monitoring, Competitive Intelligence,
and Forecasting*

39 (2-4)

SWOT Analysis.....

42 (2-9)

The General Environment

43 (2-9)

The Demographic Segment

45 (2-10)

The Sociocultural Segment

45 (2-11)

The Political/Legal Segment

47 (2-12)

The Technological Segment

48 (2-12)

The Economic Segment

49 (2-13)

The Global Segment

49 (2-14)

Relationships among Elements of the General Environment

49 (2-14)

The Competitive Environment

52 (2-16)

Porter's Five Forces Model of Industry Competition.....

52 (2-16)

How the Internet and Digital Technologies

Are Affecting the Five Competitive Forces

58 (2-19)

Using Industry Analysis: A Few Caveats.....

61 (2-23)

Strategic Groups within Industries

64 (2-24)

Issue for Debate

67 (2-26)

Reflecting on Career Implications

68 (2-27)

Summary

68 (2-28)

Chapter 2

Analyzing the External Environment of the Firm:

Creating Competitive Advantages

Summary/Objectives

The purpose of this chapter is to familiarize students with techniques for evaluating a firm's external environment. This chapter focuses on the value managers add when they have a sense of events outside the company. By focusing on external events, managers are able to stay a step ahead of competitors by accurately anticipating and promptly responding to actions that can impact the organization. The chapter is organized into three sections.

1. The environmentally aware organization. Emphasize that managers use scanning, monitoring, and competitive intelligence to develop forecasts. Also, the role of scenario planning is discussed.
2. The influence of the six broad segments (demographic, sociocultural, political/legal, technological, economic, global) of the general environment of the firm.
3. The role of the competitive (also called the task or industry) environment and its analysis through the application of Porter's five-forces model. We address how industry and competitive practices are being affected by the Internet and digital technologies. We also address the concept of strategic groups. Managers use strategic groups to identify who its main competitors are and how a company fits in with the overall industry in which it competes.

Lecture/Discussion Outline

We lead off the chapter with the opening case of Cell Zone in LEARNING FROM MISTAKES. Here's a firm that clearly did a poor job of recognizing and understanding the opportunity and threats in the external environment. Ask:



Discussion Question 1: What is the biggest stumbling block for Cell Zone?

Response guidelines: Students should understand that there are a few links in the chain of events that prevent Cell Zone's success. Most obviously, there is the issue of low demand for the product. Few restaurants and libraries are willing to pay Cell Zone, or otherwise devote space, for its cell phone booths. Restaurants might support Cell Zone if loud cell phone conversations were more of a problem, and if Cell Zone offered an effective response. The next possible issue is the rise of quiet text messaging as a way to communicate in a more considerate way. In effect, a new technology, text messaging, solved much of the loud cell phone conversation problem.

But both these issues may be only part of Cell Zone's problem. Students may identify other relevant issues, such as the effectiveness of the Cell Zone booths, the possibility of imitation booths that may use similar design, consumers' use of other areas within restaurants for talking on their cell phones, and the possible unwillingness of customers to use the booths.



Discussion Question 2: *Are there other market segments where Cell Zone might work?*

Response guidelines: Students may come up with a few intriguing suggestions. After they do, instructors may want to develop characteristics of the market segments. Some characteristics may be:

- Situations where calls contain confidential information that should not be overheard, such as by lawyers, executives, military, police, and doctors.
- Places where the atmosphere requires quiet, such as libraries, lecture halls, or concert halls.

These two characteristics suggest segments such as law firms, prisons, government offices, schools, concert halls, and doctor's offices. This list is only suggestive, and students can be encouraged to consider other possibilities.

I. Creating the Environmentally Aware Organization

We address three important processes—scanning, monitoring, and gathering competitive intelligence—which managers use to develop environmental forecasts. EXHIBIT 2.1 depicts relationships among these activities. Also, we address scenario analysis and its role in anticipating future major changes in the external environment as well as the role of SWOT analysis.

We lead off the section with a discussion of Ram Charan's concept of "perceptual acuity"—the ability to sense what is coming before the fog clears. We give three examples of what three CEOs have done to improve their perceptual acuity: met with key managers periodically to discuss what is going on, met with the CEOs of other organizations four times a year, and asked outsiders to critique their firm's strategy.



Teaching Tip: *Most students in your class will not likely be CEOs or top executives. So, one way to help them apply this idea is to ask them how they could apply it in their present position—or in a job to which they immediately aspire. Hopefully, they will come up with ideas such as spending time with people in their organization to address issues outside of their immediate job, describing how their efforts affect other areas/departments in the firm, and seeking perspectives of colleagues and friends who work in a different organization. The key point, of course, is to encourage them to look at issues from a broader perspective instead of focusing on their immediate work responsibilities.*

A. The Role of Scanning, Monitoring, Competitive Intelligence, and Forecasting

1. Environmental Scanning

Environmental scanning involves surveillance of the firm's external environment to predict environmental changes to come and detect changes that are already underway. We discuss the example of how Procter & Gamble, with its wide range of household products, can be a good barometer of household spending.



Discussion Question 3: *Would these “tips” be equally appropriate for all industries? Why? Why not?*

Discussion Question 4: *Could such an approach be used in other industries? What investments would be required?*

Environmental scanning can also involve obtaining information from your customer base. The SUPPLEMENT below provides an example of how this was effectively used by an online contact-lens retailer, Coastal Contacts.



Extra Example: Ask your Customers for Ideas

Coastal Contacts, one of the largest online contact-lens retailers in North America, came out of its two-day planning session with few ideas about how to spur growth. Thus, over the next six months CEO Roger Hardy and his senior team called customers each week to see whether they had any ideas. To the company's surprise, one recurring theme emerged—customers wanted to get their lenses the next day. “We started overnighting everything,” he reports. Sales in the U.S., where he recently made the change, were up 41 percent for the year, bringing company sales to \$155 million.

Source: Harnish, V. 2011. Five ways to get your strategy right. *Fortune*. April 11: 42.



Discussion Question 5: *What are some other examples of firms that got excellent ideas by simply asking their customers for input?*

2. Environmental Monitoring

Environmental monitoring tracks the evolution of trends, events, or streams of activities in the external environment. In this section, we present some of the factors monitored by three organizations: Motel 6, Pier 1 Imports, and Johnson and Johnson Medical Products. Such factors are vital for managers in determining their firm's strategic direction and resource allocations.

The SUPPLEMENT below represents the factors that the Director of Planning of Vought Aircraft considered critical. You may initially ask the students:



Discussion Question 6: *What indicators do you believe a firm should monitor that produces both (1) weapon systems for the military, and, (2) key components for the commercial aircraft industry?*



Extra Example: Factors to Monitor—Vought Aircraft

Commercial Aircraft:

1. Oil prices
2. Age of fleet of airlines
3. Profitability of airlines

Defense Department:

1. Where weapons are in the life cycle
2. Mission requirements of the military

Source: Authors' interviews.

The SUPPLEMENT below discusses how Cisco, the \$47 billion (2014 revenues) networking giant, learned from its mistakes during the Internet bust in 2001—and now carefully it monitors its inventory levels. It points out that managers must monitor key aspects of the firm's internal environment—as well as the firm's external environment.



Extra Example: How Cisco Learned from Its Mistakes

In April, 2001, Cisco made one of the more painful confessions of the Internet bust: It had so much networking gear piled up that it had to take a \$2.5 billion write-off for equipment that it figured nobody would ever buy. It has been working hard ever since to make sure that such a thing never happens again.

Supply chain chief Angel Mendez is grilled at monthly reviews by CEO John Chambers and other top executives. Now, Cisco has half the inventory it did in 2001—even though its revenues are twice as large. Says Mendez: "It didn't take John eight years to start asking questions (about inventory levels). He asks about every eight minutes."

Source: Burrows, P. 2009. Tech: Lean and Ready to Spring. *BusinessWeek*. April 27: 14-16.



Discussion Question 7: *Are you aware of other firms that have failed to effectively monitor key aspects of their internal environment (e.g., excessive numbers of employees and layers of management; high levels of inventory that became obsolescent; insufficient sales, marketing, engineers, etc. to meet increasing demand for goods/services and innovations, etc.)?*

The SUPPLEMENT below discusses why Caterpillar may serve as a macroeconomic early-warning system.



Extra Example: Caterpillar—A Macroeconomic Early-Warning System?

Although it is hard to confuse a 40-ton excavator with a crystal ball, forecasters could do worse than tracking retail sales of the huge, yellow machines sold by Caterpillar Inc. Being the largest seller of equipment used to build stuff or extract the stuff from the ground used to build that stuff, Caterpillar's customers' appetite is sort of a macroeconomic early-warning system.

Two big worries—the slowdown in China's property market and a related slump in demand for commodities from crude oil to iron ore—show up quickly in its monthly sales reports, helpfully broken down by region and type of machinery.

2014 has, not surprisingly, been a tough year for the firm's shareholders. Its stock price trailed the S&P 500 by 31 percent.

Source: Jakab, S. 2015. Caterpillar is stuck in its cocoon. *Wall Street Journal*. April 23: C1.

3. Competitive Intelligence

Competitive intelligence helps firms define and understand their industry and identify rivals' strengths and weaknesses. Done properly, competitive intelligence helps a company to avoid surprises by effectively anticipating and responding to competitors' moves.

We briefly address the importance of competitive intelligence to firms in the banking, airline, and automobile industry.



Discussion Question 8: *What are other industries where competitive intelligence is extremely important? How might such information be collected?*

We address how the Internet has accelerated the speed at which firms can find competitive intelligence.

STRATEGY SPOTLIGHT 2.1 discusses some of the ethical guidelines that United Technologies has implemented.



Discussion Question 9: *Are you aware of ethical guidelines that other companies have developed? Were they effective? Why? Why not?*



Teaching Tip: *The discussion of Competitor Intelligence provides the instructor with an opportunity to introduce the subject of ethics into the classroom. We suggest presenting scenarios that are not “black and white.” For example, a firm advertises a position in order to get a chance to interview employees of a rival company with no intention to hire them. While this may not be illegal, clearly it is difficult to justify morally. The ensuing discussion will help to clarify the distinction between illegal and unethical behavior.*

4. Environmental Forecasting

Environmental scanning, monitoring, and competitive intelligence are important inputs for analyzing the external environment. However, they are of little use unless they provide raw material that is accurate enough to help managers make accurate forecasts.

We address the twin problems of either assuming that the world is certain and open to precise predictions, or the assumption that it is uncertain and totally unpredictable. And, we provide the famous example of poor forecasting by Digital Equipment Corp., which caused it to ignore the potential of personal computers.



Discussion Question 10: *What are some other errors in forecasting with which you are familiar?*

The SUPPLEMENT below provides another error (most likely!) in forecasting—the value of Apple’s stock.



Extra Example: Forecasting Apple’s Stock Price

With every \$100 level increment in Apple’s (AAPL) stock price, we hear a chorus of worrywarts on business TV saying it just can’t continue. It’s unprecedented they say. . . . Yet no company this big before has ever had the opportunities and relatively low market share that Apple now has.

We’re at \$600 now (March 21, 2012), but I think Apple has much further to go from here. If things play out as I expect, Apple will hit \$1,650 by the end of 2015.

(Note: Apple was at \$430 in early-April, 2013.)

Source: Jackson, E. 2012. Why Apple will hit \$1,650 by the end of 2015. forbes.com. March 21. np.



Discussion Question 11: *Do you agree with this forecast? (Although one can't predict where Apple's stock price will be at the end of 2015, what do you think Mr. Jackson's reasoning was for making such a prediction?) Note: At the end of April 2015, Apple's stock price was \$125 (the equivalent of \$875 before a 7 to 1 stock split on June 9, 2014).*

5. Scenario Analysis

Scenario analysis provides a set of tools that enable managers to imagine threats and opportunities the future may bring. As a general rule, scenarios should be used by businesses whose external environments are prone to fundamental or sudden change and whose anticipation of such change is of vital strategic importance.

It is important to note that scenario analysis draws on a wide range of disciplines and interests, among them economics, psychology, sociology, and demographics.



Discussion Question 12: *Why must scenario analysis and scenario planning draw on a variety of disciplines and interests?*

STRATEGY SPOTLIGHT 2.2 includes the example of how PPG Industries has benefited from the use of scenario analysis and planning.

We address the value of a firm in creating an environmentally aware organization—which includes environmental scanning and monitoring, as well as competitive intelligence, forecasting, and scenario planning. In contrast, the late Steve Jobs (Apple's former Chairman) took a far different approach to determining what customers *really* wanted. Below, we discuss Jobs' distaste for sophisticated approaches to market research.



Extra Example: Steve Jobs' invaluable intuition

Steve Jobs was convinced that market research and focus groups only limited one's ability to innovate. When asked how much research was done to guide Apple when he introduced the iPad, Jobs famously quipped: "None. It isn't the consumers' job to know what they want. It's hard for (consumers) to tell you what they want when they've never seen anything remotely like it."

Jobs relied on his own intuition—his radar-like feel for emerging technologies and how they could be brought together to create, in his words "insanely great" products, ultimately made the difference. For Jobs, who died in 2011 at the age of 56, intuition was no mere gut call. It was, as he put it in his often-quoted commencement speech at Stanford, about "connecting the dots, glimpsing the relationships among wildly disparate life experiences and changes in technologies."

Source: Byrne, J. 2012. Great ideas are hard to come by. *Fortune*, April 7: 69+.



Discussion Question 13: *Would such a mindset work for other organizations? Why? Why not? (Firms in commodity industries—which experience much less uncertainty than technology industries have less need for such “intuition” since these industries face much less dramatic change in market demand and technologies. And, of course, very few firms have the visionary genius of a Steve Jobs! Also, you might point out how Ron Johnson (who was fired as CEO of J.C. Penney in early April, 2013) relied too much on his intuition and drove the firm into the ground—and almost into bankruptcy.)*

B. SWOT Analysis

We briefly address SWOT Analysis at this point. SWOT stands for strengths, weaknesses, opportunities, and threats. SWOT analysis provides a framework for analyzing these four elements of a company’s internal and external environment.

It is important to note that SWOT analysis provides the “raw material,” that is, a basic listing of conditions and factors inside and outside of a company.



Discussion Question 14: *What do you consider to be some of the major advantages and disadvantages of SWOT analysis? (This issue is addressed in more detail in Chapter 3, but you should point out that a key disadvantage is that strengths may not necessarily convert to sources of competitive advantage that are sustainable in the marketplace.)*

II. The General Environment

The general environment consists of factors that can have a dramatic effect on a firm’s strategy. Typically, a firm has little ability to predict trends and events in the general environment, and even less ability to control them.

We divide the general environment into six segments: demographic, sociocultural, political/legal, technological, economic, and global.

EXHIBIT 2.2 provides examples of key trends and events in each of the six segments of the general environment



Discussion Question 15: *How will the factors in Exhibit 2.3 affect specific industries?*

Discussion Question 16: *Which factors are more difficult to predict than others? (e.g., macroeconomic changes are typically more difficult to predict than demographic changes)*

Discussion Question 17: *How are these factors interrelated?*

Discussion Question 18: *What factors that are not listed in this exhibit do you feel are important?*

A. The Demographic Segment

Demographics are the most easily understood and quantifiable elements of the general environment. Demographics include elements such as the aging population, rising or declining affluence, changes in ethnic composition, geographic distribution of the population, and income level disparities.



Discussion Question 19: *What are the implications of ethnic diversity for the work place?*

Discussion Question 20: *What implications does the migration to the South and West in the United States have for individual businesses?*

Discussion Question 21: *How does the “graying of America” affect U. S. companies?*

Among the trends we discuss are the aging of the population and how it may differentially affect a wide variety of industries. We also discuss the increasing number of older Americans and its importance for attracting and retaining older workers.

Ask:



Discussion Question 22: *It might be interesting to ask what the implications (of the aging of the population) are for today’s organization (e.g., how can firms attract and retain older workers, changes in financial and non-financial incentives, etc.) as well as for public policy (e.g., changes in tax policies, increasing the number of immigrants, etc.).*

We also provide (pages 46–7) INSIGHTS FROM RESEARCH: New Tricks: Research Debunks Myths about Older Workers. Here, results from a meta-analysis points out some findings about older workers many people would find counterintuitive. The findings concluded older workers are NOT less motivated, more resistant to change, less trusting, less healthy, or more valuable to work-family issues. The only “myth” supported by the data was older workers are less willing to participate in training and career development.



Discussion Question 23: *What are the practical implications of these findings? (Hint: as noted in the IFR: provide more opportunities for younger and older workers to work together; promote positive attributes of older workers; and, engage employees in open discussions about stereotypes. The broader learning point would be to encourage students to always question their assumption bases—they might be wrong, at times!)*

Strong backgrounds in science, technology, engineering, and math (STEM), as well as social networks that provide a venue for the sharing of resources and ideas.

B. The Sociocultural Segment

Sociocultural forces influence the values, beliefs, and lifestyles of a society. Examples include a higher percentage of women in the workforce, dual-income families, increases in the number of temporary workers, greater concern for healthy diets and physical fitness, greater interest in the environment, and families postponing having children.



Discussion Question 24: Name two industries that have benefited from the growing awareness about health and fitness. Also name two that have been adversely affected by this trend.

Discussion Question 25: What must firms do to attract and retain women employees? Why are such efforts becoming increasingly important?

The section also addresses the increased educational attainment of women in the workplace. We discuss increases in both the number of degrees granted to women as well as the increased formation of businesses by women.

Ask:



Discussion Question 26: Can you think of any other important implications this trend has for businesses in a specific industry?

The SUPPLEMENT below provides some perspective on why the job market for women should be very attractive over the next several years.



Extra Example: A Favorable Job Market for Women for Years to Come!

The job market for women should be very good, according to British futurist Ian Pearson, founder of consultancy Futurizon and author of *You Tomorrow*. As we move further toward a service economy, skills like communication and collaboration will move to the forefront. “I call it the care economy,” he says. “A lot of women already work in those roles, and there will be more tomorrow.”

Health care and personal services are the fastest-growing sectors of the economy and are dominated by women. In the U.S. 15 million women hold health and education jobs, up from 2.5 million in 1964. They are already the majority of nurses, pharmacists, and physical therapists, and by 2020 employment in health care is projected to grow 29 percent and personal care and services by 27 percent. The trend is not limited to the U.S. Globally, women are more than two-thirds of the graduates in health care and education programs.

In the U.S. women now hold 51.6 percent of all managerial and professional jobs. A new focus on “soft skills” like mentoring, inspiring, collaboration and building relationship may benefit women. In a comprehensive study of more than 7,000 leaders, women ranked higher than men in 12 out of 16 leadership attributes.

Source: Goudreau, J. 2012. A golden age for working women. *Forbes*. December 24: 56.

C. The Political/Legal Segment

Political processes and legislation influence the regulations with which industries must comply. Some important elements of the political/legal arena include tort reform, the Americans with Disabilities Act (ADA), the repeal of the Glass-Steagall Act in 1999 (now banks may offer brokerage services), deregulation of utilities and other industries, and increases in the federally mandated minimum wage.



Discussion Question 27: *What do you see as some of the pros/cons of the Americans with Disabilities (ADA) Act?*

We close this section with a brief discussion of how legislation in the U.S. has restricted the number of H-1B visas for highly skilled professionals. We discuss the proactive step Microsoft has taken (e.g. setting up a research facility in Vancouver, Canada) to address this issue.



Discussion Question 28: *Should the U.S. Congress increase the number of H-1B visas? Why? Why not?*

Strategy Spotlight 2.3 provides some interesting figures on how immigrants to the United States have enhanced innovation and created new jobs. It provides data on the number of founder roles—including Fortune 500 firms as well as smaller firms; the quantity of patents filed; and the amount of revenues, net income, and jobs created.



Discussion Question 29: *What factors may explain the large level of innovation and job creation by immigrants?*

D. The Technological Segment

Developments in technology lead to new products and services and improve how they're produced and delivered to the end user. Innovations can create entirely new industries and alter existing industries.



Discussion Question 30: *Ask students to speculate on the impact of the following technologies on American industry: (1) the Internet, (2) manufacturing innovations (e.g., robotics), (3) genetic engineering/designer genes. (The last items may provoke some heated discussion regarding the ethical implications.)*

We discuss the key implications that the Internet, information technology, and nanotechnology has had on industry—in particular, its impact on productivity gains.

We also address a fascinating issue: some of the promising future applications of nanotechnology and how it will impact some industries.

We close out the section by addressing some of the “downsides” of technology. In addition to ethical issues, we discuss environmental damage, such as the emission of greenhouse gases. We discuss BP Amoco’s innovative approach to this matter.

The SUPPLEMENT below discusses how SkyMall, the inflight magazine was forced into bankruptcy by technology—smartphones and tablets.



Extra Example: It Seems That Technology Killed SkyMall

The firm behind the inflight catalog, SkyMall, filed for bankruptcy protection. It is clearly a victim of evolving rules and technology that now permit airline passengers to keep their smartphones and tablets powered up during flights.

For 25 years it sold quirky products like a Darth Vader toaster or a paper-towel holder with USB ports. However, SkyMall is now seeking a court supervised sale of its assets, according to papers filed on January 22, 2015 with the Phoenix Bankruptcy Court.

CEO Scott Wiley cited a “crowded, rapidly evolving and intensely competitive” retail environment as the reason for the firm’s recent struggles. And, he said, “With the increased use of electronic devices on planes, fewer people browsed the SkyMall inflight catalog.”

SkyMall had revenue of \$33.7 million in 2013. But, its sales sank to only 15.8 million for the nine months ending on September 28, 2014.

Source: Corrigan, T. 2015. SkyMall Succumbs to a New Jet Age. *Wall Street Journal*. January 24–25: B3.



Discussion Question 31: *Are you aware of other cases where technology is a key factor that is reshaping—or adversely affecting—an industry? What industries are most likely to be influenced by technological changes?*

E. The Economic Segment

The economy has an impact on all industries, from suppliers of raw materials to manufacturers of finished goods and services, as well as all organizations in the service, wholesale, retail, government, and nonprofit sectors of economies. Key indicators include interest rates, unemployment rates, the consumer price index (CPI), the Gross Domestic Product (GDP), and net disposable income.



Discussion Question 32: *Compare the impact of rising (or declining) interest rates on the overall demand for the following industries: (1) housing (will have a significant impact), (2) automobiles (will have a significant impact), (3) fast food (will have very little effect).*

F. The Global Segment

Globalization provides both opportunities to access larger potential markets and a broad base of factors of production such as raw materials, labor, skilled managers, and technical professionals. However, such endeavors carry many political, social, and economic risks. Examples of important elements in the global segment include currency exchange rates, increasing global trade, the economic emergence of India, China's admittance to the World Trade Organization, trade agreements among regional blocs (e.g., EC), and the GATT Agreement (lowering of tariffs).

? ***Discussion Question 33:** Provide examples of firms that have succeeded (stumbled) in their efforts to expand into international markets. What factors can explain their success (failure)?*

We also address the rising middle class in emerging countries and how it has led to increased employment in those countries by multinationals.

? ***Discussion Question 34:** What are the risks associated with accessing a larger potential market overseas as a result of the process of globalization? Do the risks of globalization outweigh its benefits?*

G. Relationships among Elements of the General Environment

In our discussion of the general environment, we have addressed many relationships among the various elements.

EXHIBIT 2.3 provides many examples of how the impact of trends or events in the general environment can vary across industries.

The SUPPLEMENT below provides some insights on how many elements of the General Environment are interrelated. It is a rather interesting context—Cairo, Egypt after the Arab Spring.



Extra Example: Entrepreneurship in Cairo after the Arab Spring

A different type of grassroots revolution has begun in the aftermath of the Arab Spring. According to Ramez Mohamed, CEO of Flat6Labs, a Cairo-based startup accelerator, entrepreneurship has thrived over the past two years. He contends that Egypt's youth feel empowered to make a difference, one venture at a time.

Here are some of his firm's most promising startups and the opportunity that they are tackling:

- **Ekshef:** With an Arabic-only platform and Yelp-like rating system, the service enables Egyptians to search, review, and recommend doctors from the directory. *Opportunity:* The country has more than 75,000 health care clinics, but it is hard for patients to find the right physician.
- **Nafham:** The service condenses the country's public school curriculum into online, crowdsourced lessons. Users can vote up or down based on quality. Its staff also produces video content. *Opportunity:* Egypt's rising population is putting a squeeze on classroom space.
- **Eshtery:** The utility lets users shop by scanning codes on signs around town and having the items delivered to them. The business was inspired by Home Plus, a supermarket that offers a similar service in South Korea. *Opportunity:* It is hard to buy groceries if you work two hours from the market.
- **Ogra:** A mobile app, a la Uber, which connects passengers with reliable drivers. *Opportunity:* With social tensions spilling onto the street, public transportation that is dependable is hard to find.

Source: Anonymous. 2013. Emerging tech scene: Cairo. *Fast Company*. March: 31.

1. Crowdsourcing: A Technology that Impacts Multiple Segments of the General Environment

We introduce the term and provide examples, including STRATEGY SPOTLIGHT 2.4—Lego's Effective Use of Crowdsourcing. In several of the other chapters of the book, we have additional detailed examples in STRATEGY SPOTLIGHTS.

Here, we define crowdsourcing as “a practice where the Internet is used to tap a broad range of individuals and groups to generate ideas and solve problems.” We list examples of the Linux operating systems, Amazon's online reviews of books, and Wikipedia (the free online encyclopedia).



Discussion Question 35: To get the students familiar with the concept, ask them what other examples of crowdsourcing they are familiar with, And, ask if they are successful. Why? Why not?

III. The Competitive Environment

Here, we draw upon a well-known analytic tool, Michael Porter's five-forces model of industry competition. We introduce this model and discuss examples of each force. We then address the impact of the Internet on the five forces and the strategic groups concept and its implications for studying rivalry and competition.

A. **Porter's Five-Forces Model of Industry Competition**

EXHIBIT 2.4 illustrates Porter's five-forces model of industry competition

When introducing this model, it is useful to show how the model provides insight into an industry's dynamics and expected profit levels. The SUPPLEMENT below provides such an analysis on the paint and allied products industry. The analysis is restricted to the trade sales (i.e., house paint) segment of the industry. The competitive forces are very different for other segments such as the specialized high-tech automobile finishes.

Note: For our purposes of illustrating the "basics" of the "five forces," the analysis has been simplified. We assume buyers to be consumers, although there are, of course, other distinct groups such as hardware stores, and large discounters such as Wal-Mart. Obviously firms' bargaining power vis-à-vis paint manufacturers vary significantly. Similarly, our analysis assumes the industry's products to be commodity products. However, there are exceptions, such as Olympic Stain, that have successfully differentiated their products on the basis of quality.



Extra Example: The Paint and Allied Products (PAP) Industry

An analysis of the Paints and Allied Products industry (SIC 2851), using the five-forces model, demonstrates why this industry has traditionally been caught in a price-cost squeeze and is unable to pass on rising raw material costs to its customers.

To illustrate the price-cost squeeze that this industry is facing, consider that between the years 1995 to 2000, the PPI (producer price index—the price for which it sells its output) of the PAP industry increased an average of only 2 percent. The PPI for petroleum refining and related products—a key supplier to this industry—increased at a rate of 6 percent over this same period of time. Hence the price of this key raw material was roughly twice the rate of inflation (about 3 percent); whereas, the PAP industry was lower than the rate of inflation. Thus, the PAP industry has been unable—due to unfavorable industry competitive forces—to pass on cost increases to their suppliers; thus eroding profitability.

Consider the PAP industry in terms of each of Porter's Five Forces:

Threats of Entry: Very High (minimal capital investment needed, little proprietary technology, regional firms can compete in local markets due to high transportation costs, little brand identification of existing competitors)

Buyer Power: Very High (low brand loyalty, relatively little product differentiation, relatively low switching costs)

Supplier Power: High (especially for petroleum derivative raw materials—a key input in industry)

Substitute Products: High (plastics, wood paneling, wallpaper coverings, etc.)

Rivalry: High (competition is based mostly on price competition, because of little brand loyalty and product differentiation; easy entry and exit from the industry gives rise to frequent price wars; little price leadership exhibited by larger firms)

Sources: www.bls.gov (Bureau of Labor Statistics); www.ita.doc.gov (International Trade Administration)

It is useful to point out that there can also be very profitable opportunities to compete in industries that have overall low profits. For example, in the paint industry, Olympic Stain has typically been a very successful and highly profitable firm because they have found an attractive niche in the market and developed a differentiated product (through product development and advertising).

1. Threat of New Entrants

After summarizing the major barriers to entry, ask students to provide examples of industries characterized by each of these entry barriers. This may help them to understand what initially may appear to be rather complex ideas.

We discuss the concept of “the era of Lego innovation.” Here, valuable advances in technology can be attained by imaginatively combining components and software available to everyone. Clearly, this serves to lower entry barriers.



Teaching Tip: *The chapter explains how economies of scale and economies of experience (learning curve) erect significant entry barriers. In the auto industry, U.S. manufacturers such as Ford and G.M. have high economies of scale (being the large producers) and all the benefits of learning curve (having been in the business for almost a century). Despite these advantages, foreign auto producers have entered the U.S. market and have increasingly gained market share over the past few decades. Ask the students why this happened? Does this prove that the concepts we discussed are wrong? Or does it point out that additional factors have to be considered? Point out that foreign producers have the benefits of lower labor costs and/or have developed better manufacturing technologies (such as Toyota’s lean manufacturing).*

2. Bargaining Power of Buyers

Briefly summarize some of the conditions under which a supplier group may become powerful. It may be interesting how things have changed (if they have) with regard to the power of buyers of talent (i.e., businesses of varying sizes and industries) and suppliers of talent (i.e., business school graduates—either undergraduate or MBA).

We also discuss how universities (during the recent recession) may take advantage of their “bargaining position” when increasing tuition and fees that they charge students. Ask: Are such actions justified or not? (Caution: This may be a “high risk” question!)

The SUPPLEMENT below explains that many huge consumer product firms are going to cut the amount of money they will spend on advertising. Clearly, this will enhance their buyer power.



Extra Example: Large Consumer Product Firms Cut Advertising Budgets

Procter & Gamble is planning to make deep cuts in its number of advertising agencies. It hopes to save up to half-a-billion dollars in fees that it now pays to outside firms to help pitch its wide variety of everyday items—from Gillette razors, to Tide detergent, to Pantene hair care, to Bounty paper towels.

Needless to say, this worries Madison Avenue. P&G is joining other companies—such as Unilever, L’Oreal SA, Coca-Cola Co, S.C. Johnson, and Visa—that are all trying to force advertisers to either lower prices or risk losing the business altogether. These firms are striving to offset slow growth with cost cuts.

P&G CFO Jon Moeller said the household-products giant plans to “significantly simplify and reduce” the number of agencies it works with on ads, media buying, public relations, package design and in-store marketing. Similarly, Unilever, which spent about \$7 billion on advertising and marketing in 2014, is currently reviewing its global media-buying business. A person familiar with the issue said the process is driven in part by the need to find “cost savings and efficiencies.”

Such pressures have prompted extensive industry consolidation. For example, giants Publicis Groupe SA and Omnicom Group Inc. tried—but failed—to merge in 2014. The agencies remain at the behest of clients that are in an increasingly frugal mood.

Source: Tadena, N. & Ng, Serena, A. S. 2015. P&G Joins the Movement to Reduce Costs. *Wall Street Journal*. April 27: B1-B2.

3. Bargaining Power of Suppliers

Briefly discuss some of the conditions under which a supplier group may become powerful. The bargaining power of suppliers can be presented as the mirror opposite of the bargaining power of suppliers. For example, the relative sizes and concentrations largely determine the bargaining power of the two parties involved in the transaction.

The section discusses how catfish farmers in Mississippi increased their buyer power by forming a cooperative—Delta Pride Catfish.

4. The Threat of Substitute Products and Services

Emphasize that the viability of a substitute product depends largely on its relative price-performance trade-off, i.e., more value for the same price or the same value for a lower price. Examples are electronic security systems versus security guards, and the use of steel versus plastic for components in the manufacture of automobiles.

We discuss substitutes and give the example of how the use of teleconferencing poses a threat to the airline industry. We also explain why hybrid cars are becoming a less attractive substitute to gasoline power cars—as the latter’s miles per gallon (MPG) has closed the gap in recent years.

5. The Intensity of Rivalry among Competitors in an Industry

After discussing the factors that lead to intense rivalry in an industry, provide an example of an industry in which competition has recently been intense. For example, most students are familiar with the recurring price wars in the U. S. airline industry. Ask them to explain this using the factors discussed (e.g., undifferentiated service, low switching costs, slow industry growth, numerous competitors, etc.) You might point out that this industry was expected to report huge losses in 2001 even before the September 11, 2001 terrorist attack. Beginning in late 2005, the airlines' problems were further aggravated by extremely high fuel costs.

In this section we discuss the intense rivalry between Uber and Lyft in the taxi industry. This provides an example that intense rivalry can take place on factors other than pricing in an industry that is highly profitable.

The SUPPLEMENT below is Michael Porter's response to a question as to whether or not he would add a "sixth force" if he were developing his framework today.



Extra Example: Should There Be a "Sixth Force?" Michael Porter's Perspective

"There have been two nominees for the sixth force. One is government. After much further work using and teaching the framework, I have reaffirmed my original conclusion that government is not a sixth force because there is no monotonic (direct linear) relationship between the strength and influence of government and profitability of an industry. You can't say that 'government is low, industry profitability is high.' It all depends on exactly what government does. Also, there are many different parts of government, each with its own distinct impacts. And, how do you assess the consequence of what government does? Well, you look at how it affects the five forces.

"The other, more recent, candidate for a sixth force involves organizations whose products and services are complementary to the primary organization's products and services. Again, there is no monotonic relationship between the extent of complements and profitability. Sometimes having many complements is consistent with high industry profitability, sometimes with low profitability. It has to do with how complements affect the five forces.... Clearly, complements have much to do with the size of the pie, but their role in the division of the pie is independent of other factors."

Source: Argyres, N. & McGahan, A. M. 2002. An interview with Michael Porter. *Academy of Management Executive*. 16 (2): 43-52.

EXHIBIT 2.5 provides a summary of key points from the discussion of industry five-forces analysis.

B. How the Internet and Digital Technologies Are Affecting the Five Competitive Forces

The changes caused by the Internet economy have made strategizing more challenging. Strategic analysis, informed formulation, and successful implementation may be even more difficult in the Internet era because of the uncertainty surrounding the new technology. In this section we address the impact of the Internet and digital technologies in terms of Porter's five-forces model of competition.

1. The Threat of New Entrants

In most industries, new entrants will be a bigger threat because the Internet lowers barriers to entry. Thus, scale economies may be less important in an Internet context, and new entrants can go to market with lower capital costs.

Businesses launched on the Internet may enjoy savings on traditional expenses such as office rent, salaries, and postage. Thus, a new entrant could use the savings to charge lower prices and compete on price despite an incumbent competitor's scale advantages. Alternatively, a new entrant may be able to serve a market more effectively, with more personalized services and greater attention to product details. Then they could build a reputation in their niche and charge premium prices.

Another potential benefit for Internet-based businesses is access to distribution channels. Manufacturers or distributors that can reach potential outlets for their products via the Internet may be encouraged to enter markets that were previously closed to them. Such access is not guaranteed, however.



Discussion Question 36: *What are some examples of industries where there have been a lot of new entrants because of the Internet? Have these new entrants been successful? How have incumbent firms reacted?*

2. The Bargaining Power of Buyers

The Internet may increase buyer power by providing consumers with more information to make buying decisions and lowering switching costs. But, by giving buyers new ways to access sellers, the Internet may also suppress the power of traditional buyer channels that have concentrated buying power in the hands of a few. In this section, we address two types of buyers: end users and buyer channel intermediaries.

End users are the final customers in a distribution channel. Internet sales activity that is labeled “B2C” is concerned with end users. Because a large amount of consumer information is available on the Internet, end users can easily shop for quality merchandise and bargain for price concessions. Switching costs are also potentially lower because the cost of switching may involve only a few clicks of the mouse to find and view a competing product or service online.

Buyer channel intermediaries are the wholesalers and distributors who serve as “middlemen” between manufacturers and end users. In some industries buyer channels are dominated by powerful players. The Internet, however, makes it easier and less expensive for businesses to reach customers directly. Thus, the Internet may increase the power of incumbent firms relative to these traditional buyer channels.



Discussion Question 37: *What are some other ways that end users can increase their buying power by using the Internet?*

STRATEGY SPOTLIGHT 2.5 addresses the role of the Internet in shaking up the legal services industry. It has clearly led to an increase in the power of buyers.



Discussion Question 38: *What are some examples of other companies that have used the Internet to enhance their buying power?*

3. The Bargaining Power of Suppliers

The Internet has streamlined and quickened the process of acquiring supplies. But the extent to which the Internet is a benefit or a detriment to suppliers may depend on where the supplier is positioned along the supply chain.

Suppliers provide products or services to other businesses. The term “B2B” is used to refer to businesses that supply or sell to other businesses. On the one hand, the Internet makes it possible for suppliers to access more customers at a relatively lower cost per customer. On the other hand, because buyers can comparatively shop more easily and negotiate prices faster, suppliers may not be able to hold on to them. This is especially damaging to supply chain intermediaries, such as product distributors, who may not be able to stop suppliers from directly accessing other potential business customers.



Discussion Question 39: *What can supply chain intermediaries do to strengthen their position, that is, make it worthwhile for their customers in the supply chain to continue using their services?*

Discussion Question 40: *What are some examples of companies that have abandoned their traditional method of reaching customers and are using the Internet to reach customers directly?*

One of the greatest threats to supplier power is that the Internet inhibits a supplier’s ability to offer highly differentiated products or unique services. Other factors may, in contrast, contribute to stronger supplier power:

1. The growth of Web-based business in general may create more downstream outlets for suppliers to sell to.
2. Suppliers may be able to create Web-based purchasing arrangements that make purchasing easier and discourages their customers from switching.
3. The use of proprietary software that links buyers to a supplier’s website may create a rapid, low-cost ordering capability that discourages the buyer from seeking other sources of supply.

4. Suppliers will have greater power to the extent that they can reach end users directly without intermediaries.

A process known as **disintermediation** is removing organizations or business process layers responsible for intermediary steps in the value chain in many industries. The Internet is also creating an opening for new functions. These new activities are entering the value chain by a process known as **reintermediation**, the introduction of new types of intermediaries. Electronic delivery is an example.



Discussion Question 41: *What are some examples of new companies that have emerged to offer new types of electronic intermediary functions?*

Discussion Question 42: *If you were Home Depot, what would you do if one of your major suppliers responded that they intended to sell directly to consumers online anyway?*

4. The Threat of Substitutes

In general, the threat of substitutes is heightened because the Internet introduces new ways to accomplish the same tasks.

The primary factor that leads to substitution is economic—consumers will use a product or service until a substitute that meets the same need becomes available at a lower cost. The economies created by Internet technologies have led to the development of numerous substitutes for traditional ways of doing business. An example is provided:

1. Online electronic storage by companies such as Dropbox and Amazon Web Services.



Discussion Question 43: *What are some other examples of Internet companies that are offering products or services that are viable substitutes for existing products or services?*

5. The Intensity of Competitive Rivalry

Because the Internet provides more tools and means for competing, rivalry among competitors is likely to be more intense. The Internet increases rivalry by making it difficult for firms to differentiate themselves and by shifting customers' attention to issues of price.



Discussion Question 44: *What do you think the impact of diminishing brand loyalty will be on the intensity of competitive rivalry? Explain.*

Discussion Question 45: *What are some examples of companies that still rely heavily on brand loyalty to maintain their market power and sales?*

Rivalry is more intense when switching costs are low and product or service differentiation is minimized. The Internet has “commoditized” products that might previously have been regarded as rare or unique. The Internet also eliminates the importance of location making products that were previously distant readily available online. This makes competitors more equally balanced, thus intensifying rivalry.

The problem is made worse for marketers because of shopping infomediaries that search the Web for the best prices. Such infomediary services may be good for consumers, but they increase business rivalry by consolidating the marketing messages that consumers use to make purchases to a few key pieces of information that the selling company has little control over.



Discussion Question 46: *What steps can companies take to make their online business more distinctive or unique?*

Discussion Question 47: *What are some examples of companies that have maintained the distinctiveness of their online business? What features make them distinct? Are these features sustainable?*

C. Using Industry Analyses: A Few Caveats

This section was written as a “caveat” to address some limitations of Porter’s five-forces model. First, managers should not always avoid low profit industries. We provide examples of Paychex and WellPoint Health Networks.



Teaching Tip: *Even when industry analysis shows that an industry is unattractive, there are a few firms that seem to be able to earn high returns. For example, Southwest Airlines has been consistently profitable in an otherwise unattractive industry over the past several years. Does this mean that industry analysis is misleading? You may point out that industry analysis is useful to predict an industry’s average profitability, but not necessarily, a single firm’s profitability. This is a good opportunity to introduce the role of the strategist in outperforming industry norms.*

Second is the idea that business is not always a zero-sum game— which is an assumption that is implicit in Porter’s five-forces model. We discuss how companies can collaborate with suppliers for mutually beneficial outcomes.

The SUPPLEMENT below provides a rather counterintuitive perspective on rivalry in an industry. With examples from Yoplait and McDonald's, sometimes a firm can benefit from a rival's new product.



Extra Example: Firms Can Benefit from a Rival's New Product

Conventional wisdom that a rival's launch can hurt a firm's profits is often correct. But not always. Research has shown that companies sometimes see profits increase after a rival's rollout—even when they don't aggressively seek ways to undermine the new product's sales.

The underlying mechanism is rather straightforward: When a firm extends a product line, it often raises the prices of its existing products. These hikes may be designed to make the new product look cheaper and thus more attractive by comparison or to capture the value customers place on a broader line of offerings. As the company adjusts its pricing, its competitors can follow suit without risking customer defections over price.

For example, consider what happened with Yoplait became the first major producer to market low-fat yogurt in the United States. Although Dannon took a 5 percent hit in units sold during the new product's initial year, the vast majority of its customers did not defect to Yoplait. Instead, they preferred Dannon's style of yogurt. And, since Yoplait had raised prices across its product line, Dannon raised its prices as well, by more than 10 percent. Thus, despite the 5 percent decrease in volume, Dannon's revenue increased by 5 percent.

A similar dynamic plays out in fast food. My research shows that McDonald's franchisees who open additional outlets (a type of horizontal product extension) often price the menu items in all their locations higher than before. This allows competing Burger Kings to raise their prices as well. At independent Burger Kings in Silicon Valley, this has led to increase margins more than 10 percent of the time.

Source: Thomadsen, R. 2013. You can benefit from a rival's new product. *Harvard Business Review*. 91(4): 24.

The third issue we raise is that the five-forces analysis has often been criticized for being a static, rather than a dynamic, analysis. Brandenberger and Nalebuff introduced the concept of the value net, which we include in EXHIBIT 2.6.

The concept of complementors is often considered to be the single most important contribution of value net analysis. Complements typically are products or services that have a potential impact on the value of the firms' own product and services. We provide the examples of complements (software and microprocessors) in the personal computer industry and the video game industry. (As we noted in an earlier supplement, Professor Michael Porter would not add complements to the "five forces" because they don't have a *direct linear relationship* to industry profitability. However, they clearly can have an impact on an industry's profitability.)

STRATEGY SPOTLIGHT 2.6 addresses the importance of complementors to the success of the Apple iPod.

D. Strategic Groups within Industries

Most of your students are probably very interested in the automobile industry. EXHIBIT 2.7 provides a strategic grouping of the worldwide automobile industry. It is rather clear from the discussion in the text that the intensity of competition within strategic groups is much more intense than competition across groups.

Point out four benefits of strategic groups as an analytical tool:

1. Strategic groupings help a firm identify mobility barriers that protect a group from attacks by other groups.
2. It helps a firm to identify groups whose competitive position may be marginal or tenuous.
3. It helps chart the future directions of firms' strategies.
4. It helps in thinking through the implications of each industry trend for the strategic group as a whole.

It may be interesting to ask the students what dynamics they envision in the automobile industry, i.e., how membership in strategic groups may change and if new strategic groups may emerge.



Discussion Question 48: *What are some of the strategic groups in other industries with which you may be familiar? What are the implications? (e.g., retailing)*

We close with an example with an industry closely related to the one addressed in this section—motorcycles. The SUPPLEMENT below discusses the two major clusters in this industry and how the basis for competition is quite different.



Extra Example: The Two Key Strategic Groups in the Motorcycle Industry

In most industries, firms cluster around a relatively small number of strategic positions and within each cluster hold similar ideas about how to compete. In the motorcycle industry, there are two major clusters of firms.

The Japanese producers—Honda, Yamaha, Suzuki, and Kawasaki—compete on technical innovation and lower costs. The Harley-Davidsons and Ducatis, in contrast, view their business through a very different lens—as entertainment. Here's how Federic Minoli, the CEO and chairman of Ducati from 1996 to 2007 described his decision to build a museum celebrating the firm before he repaired a damaged factory: "Ducati is not, or not only, a motorcycle company. We sell something more: a dream, passion, a piece of history."

Analyze most industries, and you will find a similar situation: two or three groups of firms jostling for position upon the same two or three competitive mountaintops. Now consider the major U.S. airlines. They all struggled for many years in cutthroat competition around the same position until Herb Kelleher of Southwest Airlines saw a different, low-cost way to compete.

Source: Gavetti, G. 2011. The new psychology of strategic leadership. *Harvard Business Review*. 89 (7/8): 118-125.



IV. Issue for Debate

Here, we discuss Mondelez International, the snack food company recently spun off by Kraft Foods. Consistent with several other firms, Mondelez has notified suppliers it will extend the payment terms for its accounts payable. It should be interesting to discuss this case with your students because you will probably hear perspectives that are, in essence, polar opposites, e.g., “make all the money you” can versus “this is an unfair practice” and “these large firms will ‘pay’ in the long term.”



Discussion Question 49: Should Mondelez and other companies follow the practice of lengthening payment terms with their suppliers? Why? Why not?

This question should spark some interesting class discussion. Some students may argue that if other firms are engaging in this activity, Mondelez may have to follow suit in order to remain competitive. Others may claim that Mondelez may enjoy favorable “treatment” by suppliers if they treat them in a “fairer” manner. One important factor to raise to the class is that different suppliers may have stronger bargaining positions than others—and harming all suppliers equally may lead to problems for Mondelez later on if there are limits or constraints on how much of the product the supplier can provide. Clearly, the supplier would have incentive to “reward” those customers who have treated them in a more equitable manner. Also, if suppliers believe they are being harmed by their customers, they would have less incentive to invest resources in assets that are specific to those customers. (You could refer the students back to the GM—supplier example on page 62. Here, GM’s tight-fisted actions against suppliers caused suppliers to be much less willing to share technology innovations. A key learning point is that five-forces analysis implicitly assumes a zero-sum game, i.e., a transaction perspective, while ignoring the benefits of constructive long-term relationships.)



Discussion Question 50: Do you feel this practice can raise ethical issues?

It does raise some ethical issues if customers exploit their suppliers in a manner that erodes trust and confidence among their partners. For example, suppliers (drawing on the point in Question #1) could have invested in assets specific to a given customer in the expectation—and perhaps even the explicit promise—that they would be receiving consistent payment terms for an extended period of time. If a firm were to change the terms “on the spur of the moment”, this would clearly harm the relationship between the buyers and sellers, and financially damage the supplier.



Discussion Question 51: What actions can suppliers take to respond to the lengthening of the payment terms?

The supplier could take actions to enhance its bargaining power vis-à-vis the customer. For example, it could aggressively strive to attract other customers for its products—thus lessening its dependence on a given customer (that dramatically extended its payment terms). Of

course, its “supplier power” would be contingent on how valuable its product is to the customer in the first place. And, again, it could reduce its investments in resources and capabilities that are specific to the given customer.



V. Reflecting on Career Implications

Below, we provide some suggestions on how you can lead the discussion on the career implications for the material in Chapter 2.

- **Creating the Environmentally Aware Organization:** Advancing your career requires constant scanning, monitoring, and intelligence gathering to find out not only about future job opportunities but also to understand how employers’ expectations are changing. Consider using websites such as LinkedIn to find opportunities. Merely posting your resume on a site such as LinkedIn may not be enough. Instead, consider in what ways you can use such sites for scanning, monitoring, and intelligence gathering.

Students will likely be very interested in the topic of learning about new job opportunities and their associated skill requirements and compensation. Later in the course, there will be specific advice related to finding jobs through networking. Here, the point is to raise in students a general awareness of the types of career options available to them. On LinkedIn, job postings are grouped in various ways. Employers list desired skills and experience. Students should browse a number of these postings in order to identify trends concerning the types of skills that are currently in demand. To find compensation levels, students can join LinkedIn and ask experts. Compensation is a very tricky topic, though, because companies will tailor it to the specific skills of their chosen candidate. The point here is that students will gain from learning about the job market in their fields and how their specific skills and capabilities match up with what the market values. A related topic to consider is the value of experience. Ask students why employers value experience in addition to skills and training. The question does not have an obvious answer. Students should appreciate that as they progress through their careers, they will gain subtle and powerful capabilities related to, for example, leadership, handling complex situations, and stakeholder relations

- **SWOT Analysis:** As an analytical method, SWOT analysis is applicable for individuals as it is for firms. It is important for you to periodically evaluate your strengths and weaknesses as well as potential opportunities and threats to your career. Such analysis should be followed by efforts to address your weaknesses by improving your skills and capabilities.

The SWOT analysis directly pertains to individuals, and students will usually grasp how it applies to them personally. A useful exercise is to have students complete a SWOT analysis on themselves and then pair with another and share reviews. As a check, ask student volunteers to share an element from each part to ensure that students are correctly classifying the elements. The next step is to ask students to make a plan to address their weaknesses. Plans may be of two types. One is to develop weak skills to the point they are not weaknesses. Two is to make a plan to avoid the weakness. For example, if a student were weak at quantitative analysis, then he or

she could pursue a career, such as copywriting, that does not rely on that skill so much. The point here is that students should be aware of their SWOT profile and plan their careers accordingly.

- **General Environment:** The general environment consists of several segments, such as the demographic, sociocultural, political/legal, technological, economic, and global environments. It would be useful to evaluate how each of these segments can affect your career opportunities. Identify two or three specific trends (e.g., rapid technological change, aging of the population, increase in minimum wages) and their impact on your choice of careers. These also provide possibilities for you to add value to your organization.

When students choose a segment, they should identify a trend within that segment. Then they should be able to identify an industry that would benefit from that trend. This industry is therefore likely to be a growth industry that may provide good career opportunities. It also may be useful to identify some weaknesses in this logic, such as reversal of a trend, or having an industry become a magnet for workers, such as computer programming, where the labor supply may exceed demand. Within industries, there may be specific functions that will offer growth in areas that firms can exploit. An example may be e-business, where firms in many industries are revolutionizing their distribution channels in response to the increasing acceptance by consumers of e-tailing.

- **Five-Forces Analysis:** Before you go for a job interview, consider the five forces affecting the industry within which the firm competes. This will help you to appear knowledgeable about the industry and increase your odds of landing the job. It also can help you to decide if you want to work for that organization. If the “forces” are unfavorable, the long-term profit potential of the industry may be unattractive, leading to fewer resources available and—all other things being equal— fewer career opportunities.

It is good advice to do due diligence of a firm and its industry prior to a job interview. It helps job candidates to appear knowledgeable about their prospective employers, which may be a differentiator. In class discussions, it is probably less important to make a general conclusion of “favorableness” vs. “unfavorableness.” Better is to identify the specific forces that are the strongest threats to the industry. Then develop an argument as to how students, the candidates, can help firms to address these threats. Later, provided that students have offers from firms in multiple industries, students may use the assessment of industry overall attractiveness in their decision as to which offer to accept. In discussions of this issue, it may be useful to remind students that firm characteristics are a stronger explanation of firm success than industry environment. It may be better to work for a strong firm in an unattractive industry than for a weak firm in an attractive industry.



VI. Summary

Managers must analyze the external environment to minimize or eliminate threats and exploit opportunities. This involves a continuous process of environmental scanning and monitoring, as well as obtaining competitive intelligence on present and potential rivals. These

activities provide valuable inputs for developing forecasts. In addition, many firms use scenario planning to anticipate and respond to volatile and disruptive environmental changes.

We identified two types of environment: the general environment and the competitive environment. The six segments of the general environment are demographic, sociocultural, political/legal, technological, economic, and global. Trends and events occurring in these segments, such as the aging of the population, higher percentages of women in the workplace, governmental legislation, and increasing (or decreasing) interest rates, can have a dramatic effect on your firm. A given trend may have a positive impact on some industries and a negative or neutral impact, or none at all on others.

The competitive environment consists of industry-related factors and has a more direct impact than the general environment. Porter's five-forces model of industry analysis includes the threat of new entrants, buyer power, supplier power, threat of substitutes, and rivalry among competitors. The intensity of these factors determines, in large part, the average expected level of profitability in an industry. A sound awareness of such factors, both individually and in combination, is beneficial not only for deciding what industries to enter but also for assessing how a firm can improve its competitive position. We also address how industry and competitive practices are being affected by Internet technologies. We also addressed some of the limitations of Porter's five-forces model, including its zero-sum perspective and its omission of the key role of complements. Although we discussed the general environment and competitive environment in separate sections, they are quite interdependent. A given environmental trend or event, such as changes in the ethnic composition of a population or a technological innovation, typically has a much greater impact on some industries than on others.

The concept of strategic groups is also very important to the external environment of a firm. No two organizations are completely different nor are they exactly the same. The question is how to group firms in an industry on the basis of similarities in their resources and strategies. The strategic groups concept is valuable for determining mobility barriers across groups, identifying groups with marginal competitive positions, charting the future directions of firm strategies, and assessing the implications of industry trends for the strategic group as a whole.

Chapter 2: Analyzing the External Environment of the Firm

Explain the profitability of an industry (of your choice) by applying the tools that you learned in this chapter (five-forces analysis). How can the five-forces zero-sum perspective be a disadvantage?

Teaching Suggestions:

You can organize the discussion on this topic around the following sub-questions:

***What are the five forces that drive the profitability in an industry?**

The five forces are:

- The threat of new entrants
- The bargaining power of suppliers

- The bargaining power of buyers
- The threat of substitute products and services
- The intensity of rivalry among competitors in an industry

*What are the barriers to entry into a particular industry? Are they high or low?
What are the implications?

Six major sources of entry barriers as outlined in the text are:

- Product differentiation
- Capital requirements
- Switching costs (one time costs that the buyer faces when switching from one supplier's product or service to another)
- Access to distribution channels
- Cost disadvantages independent of scale
(These derive from: proprietary product, favorable access to raw materials, government subsidies and, favorable government policies)

*Who are the buyers in this industry? Are they powerful? What makes the buyers powerful (not powerful)? Are the buyers likely to engage in backward integration?

*What are the implications of buyers bargaining power?

*Who are the suppliers to your industry? Do you think the suppliers are powerful?
What makes the suppliers powerful (not powerful) in your industry?
Are there any 'switching costs?' What are the implications of high bargaining power of the suppliers in the industry?

*If you are a firm in this industry, how would you define competition? Would you consider all firms operating in the industry as your competitors? Why/why not?

*What are 'strategic groups?' How would you know the 'strategic groups' in your industry? What kind of dimensions should you choose when mapping the 'strategic groups?' Why is it important to understand 'strategic groups?'
(We provide the example of the worldwide automobile industry.)

The concept of 'strategic groups' is important because competition would be more intense among firms within the same strategic group as compared to competition with other firms in the industry. Some dimensions that can be used for mapping strategic groups are: breadth of product and geographic scope, price/quality, degree of vertical integration etc.

You should emphasize that for strategic group mapping to serve any meaningful purpose, the dimensions should be chosen in a manner that they reflect the variety of strategic combinations in the industry. For example, in an industry where there is severe price-base competition, price may not be the right dimension to choose. Similarly, if all firms have

the same level of product differentiation, then choosing product differentiation as a dimension would not serve the purpose.

*What are the substitutes to your products or services? How do substitutes impact the profitability of your industry?

You might want to make a point here that identifying substitutes can be quite a difficult task sometimes. Firms in seemingly unrelated industries may be providing products or services that act as substitutes to each other. The example given in the text on the substitution between airline industry and teleconferencing would help highlight this point.

Some more interesting questions to ask would be the following:

*If two industries have the same profitability levels, can you employ a common strategy in both the industries?

Even though two industries might have the same profitability levels, the underlying industry structures can be entirely different. For example, in both the automobile industry and in the Internet-based businesses, profit margins are quite low. However, while the entry barriers into the automobile industry are very high, the barriers are very low into the Internet-based businesses. Competition is intense in both the industries, whereas supplier and buyer bargaining powers are quite low. On the other hand, threat from substitutes such as the ‘brick-and-mortar’ stores, is very high in the Internet-based businesses, whereas the threat from substitutes is low in the automobile industry. (Some students might argue that the airline industry is a strong substitute and you would have to deal with that objection.) Thus, even if a firm operates in both these industries, it needs to formulate quite different strategies to suit the particular industry situation.

*Why is the five-force analysis important?

It is important to understand these five forces because they affect a firm’s ability to compete in a given market. This analysis helps in deciding whether or not to remain in a particular industry and also in choosing industries to enter. A sound understanding of the forces operating in an industry helps in assessing how to improve the firm’s competitive position with regard to each of the five forces. You can ask students to give their own ideas on what strategies they would employ in the particular industries they have chosen for analysis.

*Is the five-force analysis “zero sum” in perspective? Is that a disadvantage?

It would often be the case that students, in the position of a company, think about counteracting the effects of each force and blunting it. This is the essence of the zero-sum perspective. You can explain the importance of thinking “win-win” and establishing collaborative partnerships with suppliers and customers. For example, establishing long-term mutually beneficial relationships with suppliers improves a firm’s ability to

implement just-in-time (JIT) inventory systems, which let it manage inventories better and respond quickly to the market demands.

*Do the competitive forces remain the same over a period of time? What impact will it have on profitability?

The key point is that in the five-force analysis, we are essentially taking a point in time and trying to understand the industry situation at that point in time. This is a static approach to understanding the competitive environment. However, these external forces and the strategies of the firms within industries change over time and thus change the structure of the industry itself. In order to understand how the profitability changes over time, game theoretic approaches are being used.

*What is “Value Net?” Who are on the vertical and horizontal dimensions? How are those on the vertical dimension different from those on the horizontal dimension? Who are “complementors?” How are complements different from substitutes? (*We provide the example of the video game industry.*)

The value net represents all players in the game and analyzes how their interactions affect a firm’s ability to generate and appropriate value.

Suppliers and customers form the vertical dimension of the value net and the firm engages in transactions with them.

Substitutes and complements are on the horizontal dimension of the value net. These are the players with who the firm interacts but does not necessarily transact.

Substitute products or services serve the same purpose that the products and services from a chosen industry serve. Substitutes accentuate competition.

Complements are typically products or services that have a potential impact on the value of a firm’s own products or services. The firms that produce complements are referred to as “complementors.” For example, very sophisticated cameras may be useless if we do not have high-quality film to produce quality pictures. Powerful hardware might prove useless without software to make it work and highly sophisticated software may be useless if there is no hardware to support its working. Thus complements in essence help to increase the performance and efficiency of products or services of a particular industry and thus improve their competitive situation vis-à-vis other products and substitutes.

End-of-Chapter Teaching Notes

Chapter 2: Analyzing the External Environment of the Firm

Summary Review Questions

1. Why must managers be aware of a firm's external environment? (pages 37–38)

Response:

Being responsive to the external environment enables firms to avoid strategic mistakes. It is possible for firms to become internally focused, efficient producers of obsolete goods and services (e.g. buggy whips, carbon paper). Rather, managers need to respond to opportunities and threats from the external environment in order to develop the most successful products and services.

2. What is gathering and analyzing competitive intelligence and why is it important for firms to engage in it? (pages 39–40)

Response:

Competitive intelligence is a firm's activities of collecting and interpreting data on competitors, defining and understanding the industry, and identifying competitors' strengths and weaknesses. It is not spying, fortune-telling, simple data collection, or an isolated activity within a firm. The purpose of competitive intelligence is to increase management's awareness of developments in the external environment, thereby increasing the quality of strategic decisions.

3. Discuss and describe the six elements of the external environment. (pages 43–49)

Response:

The six elements of the general environment are the demographic segment, the sociocultural segment, the political/ legal segment, the technological segment, the economic segment, and the global segment. The demographic segment refers to the statistics of a population, such as age, income characteristics, ethnic groups, and geographic distribution. The sociocultural segment refers to the values, beliefs, and lifestyles of a country. The political/legal segment refers to the creation and use of power within a country, including the effect of various regulations, including the areas of environmental protection, employment discrimination protection, and taxes.

The technological segment refers to new products and services derived from advances in engineering, applied science, and/or pure science. These new products and services can change manufacturing processes, create new industries, and alter the boundaries between industries. The economic segment refers to the level and change in monetary and macroeconomic factors such as unemployment, inflation, interest rates, and economic growth. The global segment refers to effects on a country's business environment from abroad, and include factors such as foreign competition, foreign market opportunities, foreign supply opportunities, legal changes due to international treaties, and regional economic integration.

4. Select one of these elements and describe some changes relating to it in an industry that interests you. (pages 43–49)

Response:

The answer will vary according to segment and industry chosen. Exhibit 2.5 may summarize some of the possible findings. The purpose of this question is to get students to classify various environmental changes into the segments and articulate why a change belongs in a particular segment. It might be useful to add a major change, the Internet, to the discussion. The Internet, from the technological segment, has wide-reaching impacts (see Strategy Spotlight 2.5).

5. Describe how the five forces can be used to determine the average expected profitability in an industry. (pages 52–61)

Response:

The five-forces model consists of the threat of new entrants, the bargaining power of buyers, the bargaining power of suppliers, the threat of substitute products and services, and the intensity of rivalry among competitors in an industry. Each force can be looked at as a way that the industry environment limits a firm's ability to earn profits through either raising prices or lowering costs.

The threat of new entrants limits a firm's ability to raise prices because then a new entrant may decide to enter the industry and offer a lower price. The bargaining power of buyers directly limits a firm's ability to raise prices. The bargaining power of suppliers directly limits a firm's ability to lower costs. The threat of substitute products and services limits a firm's ability to raise prices because customers would then buy the substitutes. The intensity of rivalry among competitors in an industry limits a firm's ability to raise prices because then customers would buy from a competitor.

6. What are some of the limitations (or caveats) in using five-forces analysis? (pages 61–64)

Response:

Three limitations of the five-forces analysis are 1) the implication that low-profitability industries should be avoided may not be optimal. Low-profitability industries may be profitable opportunities for firms with innovative business models that change the competitive landscape. 2) The five-forces model assumes a zero-sum game, with a firm's loss of profitability associated with another firm's gain. However, through strategic alliances or other forms of collaboration with suppliers, buyers, or other industry players, firms can gain both profitability and competitiveness. 3) The five-forces model is static and does not account for constant changes in competitive position that characterize many industries. Included in the dynamic analyses is the effect of complements, or other products and services that affect the value of a firm's own products and services. For example, software is a complement to hardware. Dynamic interactions between firms and complements can affect the profitability prospects for a firm outside of the five-forces model.

7. Explain how the general environment and industry environment are highly related. How can such interrelationships affect the profitability of a firm or industry? (pages 49–50)

Response:

The general environment can affect all of the five forces in various ways. A growing economy can reduce the intensity of rivalry within the industry because firms will be scrambling to meet growing demand. There is a detailed explanation of how the Internet, a development in the technological segment, affects each of the five forces.

8. Explain the concept of strategic groups. What are the performance implications? (pages 64–67)

Response:

Strategic groups are groups of firms, usually within an industry, that share similar strategies. The performance implications are that firms can group themselves with close competitors and 1) identify barriers between groups, 2) identify positions within the industry that are marginal or tenuous, and 3) chart directions for future strategic development. Strategic group analysis is a more fine-grained way to conduct competitor analysis, as the competitive environment of an industry may differ from the competitive environment of the strategic group.

Experiential Exercise

Select one of the following industries: personal computers, airlines, or automobiles. For this industry, evaluate the strength of each of Porter's five forces as well as complementors.

Response:

This exercise is very useful for helping students understand the value of the five-forces model. For undergraduate and even graduate classes, it might be useful to work with only one force at a time. In general, students may identify a number of firms and organizations for each of the five forces. To evaluate the strength of each force, it is important to refer to relevant characteristics. The list below shows these:

- Threat of new entrants—you can look at the barriers to entry for the industry, as indicated by economies of scale, product differentiation, capital requirements, and switching costs, as well as other types of cost disadvantages to new entrants, such as proprietary products, favorable access to raw materials, government subsidies, and favorable government policies.
- Bargaining power of buyers—identify buyers who are large or in concentrated buyer industries, standard or undifferentiated products, few buyer switching costs, buyer with low profits, buyer has a credible threat of backwards integration, or the buyer views the firm's products or services as undifferentiated.
- Bargaining power of suppliers—it is often a challenge to find suppliers, but to the extent you can, look for suppliers that are large and concentrated (few in number), suppliers with few substitutes, suppliers that view the firm's industry as a minor proportion of its sales, suppliers that provide an important input, suppliers with differentiated products, and suppliers that pose a credible threat of forward integration.
- Threat of substitute products and services—identify substitutes that are a) outside the industry, and b) that are an economical and feasible alternative for buyers.
- Intensity of rivalry—identify rivals within the industry and evaluate each rival's product offerings for being lower priced or of higher quality than the firm's offerings.

Then have students put them all together and provide a summary evaluation of the overall ability of the firm to set prices and control costs.

Application Questions and Exercises

1. Imagine yourself as the CEO of a large firm in an industry in which you are interested. Please (1) identify major trends in the general environment, (2) analyze their impact on the firm, and (3) identify major sources of information to monitor these trends. (Use Internet and library resources.)

Response:

Students should respond with a variety of industries and approaches. It may be useful to have students justify their classification of trends into segments of the general environment. It may also be useful to have students justify why the trends they have identified are major trends and not minor trends. And you can ask students to classify their chosen trends as threats or opportunities. If students have focused on one, say, opportunity, then ask them to consider threats.

As for sources of information, there are many good sources from the government. Try the census department, the Bureau of Economic Analysis, Department of Commerce, Department of Labor, and the Central Intelligence Agency. Many of these sources are freely available directly from the government or through libraries. Some libraries of institutions of higher education subscribe to industry analysts reports, which often include analyses of the business environment. In addition, company websites often include information about potential market size and trends, although note that company websites are inherently a biased source of information.

2. Analyze movements across the strategic groups in the U.S. retail industry. How do these movements within this industry change the nature of competition?

Response:

We suggest following these five steps. First, develop a list of retailers. The list may include only local retailers that the students are familiar with, or the stores within a local mall or shopping area, or even a comprehensive list of all retailers in the region.

Second, choose two dimensions for mapping the firms. Depending on the type of stores chosen, we suggest breadth of product line, degree of vertical integration, average store size, pricing strategy, or target market (broad versus niche).

Third, for each store assign a value for each dimension and plot it on the strategic group space. For example, Wal-Mart would have a broad product line, high vertical integration (it often buys directly from suppliers, not wholesalers), large size, low pricing, and broad target market. These assessments will determine its location on the two chosen dimensions. In addition, for at least one firm get a sense of how it has changed in the past year or so.

Fourth, after putting your firms on the strategic group space, look for clusters and spaces between clusters. Evaluate each cluster. Ask students which clusters would be more profitable and which less so. And most important, ask why. Students should be able to articulate the desirability of each cluster, and link their reasoning to the dimensions used for mapping the firms. For the spaces, ask students if any of the spaces would be desirable places. Often, the groupings do not make sense. If that were the case, then challenge students to come up with dimensions that do make sense. You should help students to understand that they have control over how the strategic space is defined.

Fifth, for the firm that has changed in the past year, chart that movement on the strategic group space. No matter what dimensions you use, this firm will be moving away from some competitors and toward others. Ask students how this movement affects the competition between this firm and others. The purpose of the discussion is to get students to appreciate that increasing distance associates with less competition and decreasing distance between firms represents a threat.

3. What are the major trends in the general environment that have impacted the U.S. pharmaceutical industry?

Response:

The U.S. pharmaceutical industry consists of firms that manufacture and market medicines for people. All segments impact this industry. The demographic segment affects demand, as the aging baby-boomers require age-specific medicines and marketing approaches. Also, older people tend to require more medicines than younger people, so market demand in the U.S. is growing. The sociocultural segment affects medicinal preferences. People value their health and trust their doctors rather than use traditional medicines.

The political/legal segment is extremely important due to the regulatory approval process for new medicines, intellectual property right protection, government insurance programs, and price controls. Regulatory approval of new medicines is extremely rigorous and costly. To recoup the costs of obtaining approval, pharmaceutical firms exploit their monopoly power that stems from the patents and trademarks on the medicines. And this monopoly power enables pharmaceutical companies to charge high prices. The recent trend in government support for prescription drugs through Medicare, and the recent and ongoing implementation of near-universal health care and prescription programs has two impacts: 1) more patients will be getting prescriptions, which increases revenues, and 2) more patients will be covered by insurance, which will increase buyer power and decrease revenue to pharmaceutical companies.

The technological segment affects the new product development process. Biotechnology involves the use of living organisms to develop new drugs and has created an explosion in potential new medicines. Other technologies developed by these companies are the ability to test thousands of substances at a time and to map the human genome, which helps us to understand the causes and potential cures of many ailments.

The economic segment affects the industry, as general economic growth affects market potential. The recent recession has therefore hurt the industry. In addition, expected interest rates affect the financial prospects of many biotech firms. These firms often take decades to develop new drugs and bring them to the market. Lower interest rates enable them to make their investors' capital last longer. The global segment affects the industry in a number of ways. Foreign markets offer sales opportunities. Foreign labs are effective partners for collaboration. However, foreign countries often put price controls on medicines, which limit profit potential from foreign sales. And foreign competitors often do not respect the intellectual property of U.S. firms, giving rise to loss through piracy.

4. Go to the Internet and look up www.kroger.com. What are some of the five forces driving industry competition that are affecting the profitability of this firm?

Response:

A couple of clicks first to the “about the Kroger company” at the bottom of the home page, then to the Kroger Fact Books on the right side of the page will get you to the fact books. These include information on the following topics.

The first step is to define Kroger’s industry. While Kroger does have jewelry stores and houseware stores, its primary activity is in supermarkets. We will focus on supermarkets.

For the threat of new entrants, this force is weak. Kroger notes that the industry is consolidating. There are very large barriers to entry due to capital requirements and economies of scale. The bargaining power of buyers is weak. The buyers are the general public, which is an aggregation of very small customers. No customer is a very large part of the market, and customers will not have an information advantage over Kroger. The primary source of buyer power is the ability of customers to shop at the competition. The bargaining power of suppliers is moderate. Some of Kroger’s stated competitive advantages stem from the brand equity of suppliers’ products, such as Kitchen Aid, Levis, Dockers, and Nikon. However, Kroger counters supplier power by developing a series of corporate brands, and by backwards integrating into the suppliers’ industries. The threat of substitute products and services is limited, as customers have developed a habit of doing most of their food shopping at supermarkets as opposed to farmers’ markets, convenience stores, or general stores (although students may note the growing food offerings at retailers such as Wal-Mart or Target). And note that Kroger includes a number of other types of store formats, like marketplace stores and convenience stores, to compete in substitute industries. Alternatives do not have a very high market share. The intensity of rivalry among competitors in the industry is very strong. Kroger competes with Wal-Mart, Meijer, and other chains of supermarkets in every part of the country. These competitors are large, successful, and aggressive. Kroger limits rivalry by acquiring smaller stores and chains where possible. One of Kroger’s strategies for dealing with rivalry is to encourage customer loyalty through various programs such as shopper cards and a customer relations management system in conjunction with London-based dunnhumby.

Ethic Questions

1. What are some of the legal and ethical issues involved in collecting competitor intelligence in the following situations?

a. Hotel A sends an employee posing as a potential client to Hotel B to find out who Hotel B's major corporate customers are.

Response:

The scheme risks exposure. Hotel B might find out who the employee is and find out that he or she represents Hotel A. Hotel B's list of major corporate customers is likely to be a trade secret, and Hotel A's use of fraud to gain the trade secret is, depending on state law and the specific circumstances, likely to be a crime.

It is likely that Hotel B will share this information with the press, trade publications, or other media. It is also possible that Hotel B will use this information to tarnish Hotel A's reputation. Hotel A's business could be affected and shareholders embarrassed. The cost to Hotel A of overcoming these shortcomings is likely to exceed whatever gain was possible.

b. A firm hires an MBA student to collect information directly from a competitor while claiming the information is for a course project.

Response:

It is possible that this action would be a crime, although doubtful. The competitor is not likely to share trade secrets, because the course project is not likely to be kept confidential, but that depends on the circumstances.

However, the scheme is certainly fraudulent and therefore unethical. The firm is using the MBA student as a spy, which is abusive to the MBA student. The student's college or university, though perhaps not directly involved, will have its name associated with the scheme.

In addition, the competitor can use the scheme to discredit the firm and embarrass its shareholders.

c. A firm advertises a nonexistent position and interviews a rival's employees with the intention of obtaining competitor information.

Response:

The scheme is fraudulent. Advertising a position without an intention of hiring is unethical. If the scheme succeeds in obtaining trade secrets, then it is probably a violation of law. And the coercive treatment of the rival's employees is a problem.

The possibility of criminal violations occurs within the purview of many states' trade secret laws. If any individual suffers any harm, then civil damages are possible.

But the unethical nature of this scheme is likely to be the largest problem. The rival can use the firm's actions to discredit the firm and embarrass its shareholders.

2. What are some of the ethical implications that arise when a firm tries to exploit its power over a supplier?

Response:

A monopsonist, or a firm that is the only buyer in a market, has great power over suppliers. It might try to exploit this power by forcing the supplier to reduce prices or provide extra services. In the extreme, suppliers will be forced to cut costs, lay off employees, cut salaries, and forego investments in new technologies or capabilities. The downside of these actions is that the supplier is less capable of contributing to industry development by infusing it with innovations.