

Chapter Four

The External Environment

After reading and studying this chapter, you should be able to

1. Describe the three tiers of environmental factors that affect the performance of a firm.
2. List and explain the five factors in the remote environment.
3. Give examples of the economic, social, political, technological, and ecological influences on a business.
4. Explain the five forces model of industry analysis and give examples of each force.
5. Give examples of the influences of entry barriers, supplier power, buyer power, substitute availability, and competitive rivalry on a business.
6. List and explain the five factors in the operating environment.
7. Give examples of the influences of competitors, creditors, customers, labor, and direct suppliers on a business.

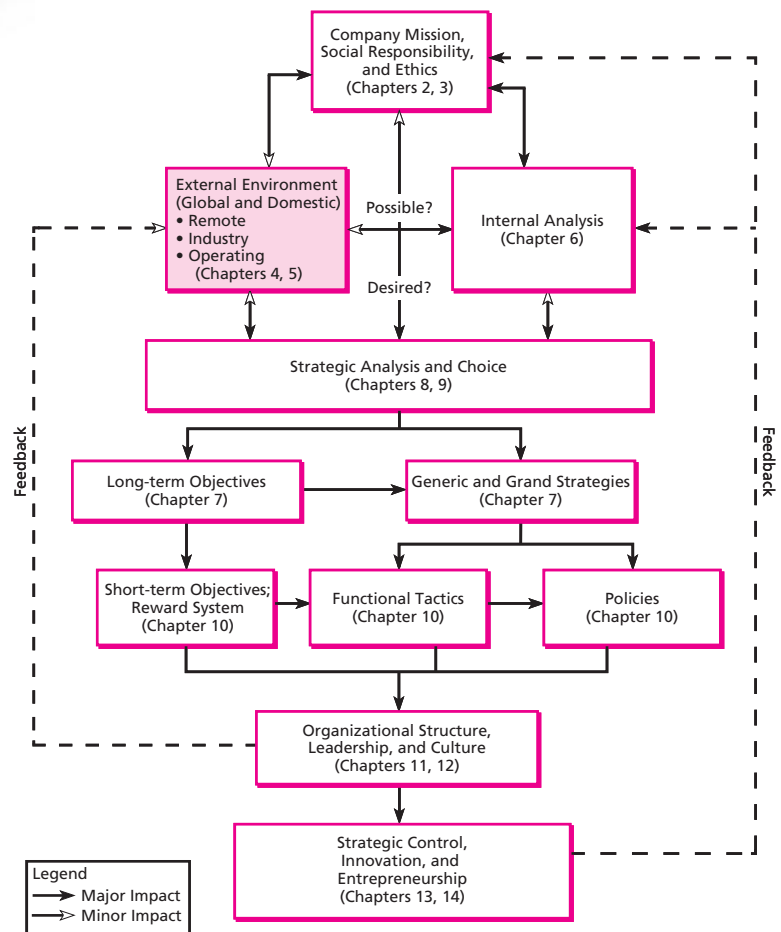
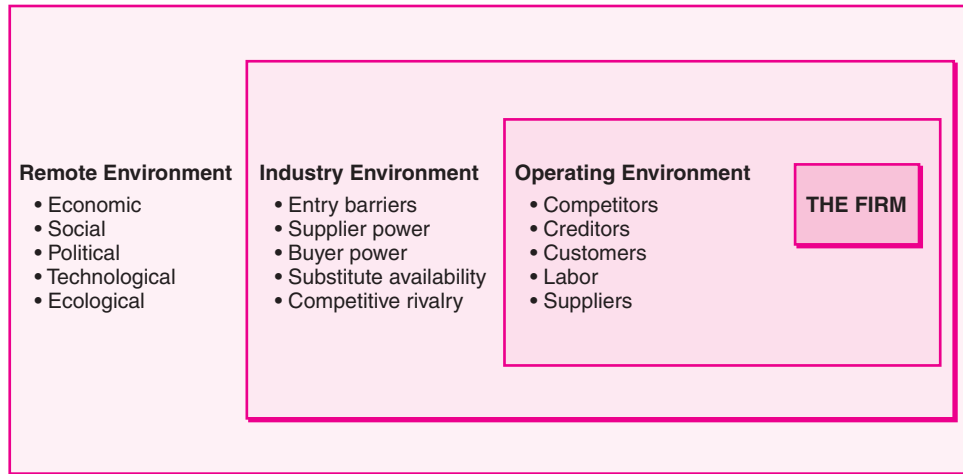


EXHIBIT 4.1 The Firm's External Environment



THE FIRM'S EXTERNAL ENVIRONMENT

external environment

The factors beyond the control of the firm that influence its choice of direction and action, organizational structure, and internal processes.

A host of external factors influence a firm's choice of direction and action and, ultimately, its organizational structure and internal processes. These factors, which constitute the **external environment**, can be divided into three interrelated subcategories: factors in the remote environment, factors in the industry environment, and factors in the operating environment. This chapter describes the complex necessities involved in formulating strategies that optimize a firm's market opportunities. Exhibit 4.1 suggests the interrelationship between the firm and its remote, its industry, and its operating environments. In combination, these factors form the basis of the opportunities and threats that a firm faces in its competitive environment.

REMOTE ENVIRONMENT

remote environment

Economic, social, political, technological, and ecological factors that originate beyond, and usually irrespective of, any single firm's operating situation.

The **remote environment** comprises factors that originate beyond, and usually irrespective of, any single firm's operating situation: (1) economic, (2) social, (3) political, (4) technological, and (5) ecological factors. That environment presents firms with opportunities, threats, and constraints, but rarely does a single firm exert any meaningful reciprocal influence. For example, when the economy slows and construction starts to decrease, an individual contractor is likely to suffer a decline in business, but that contractor's efforts in stimulating local construction activities would be unable to reverse the overall decrease in construction starts. The trade agreements that resulted from improved relations between the United States and China and the United States and Russia are examples of political factors that impact individual firms. The agreements provided individual U.S. manufacturers with opportunities to broaden their international operations.

Economic Factors

Economic factors concern the nature and direction of the economy in which a firm operates. Because consumption patterns are affected by the relative affluence of various market segments, each firm must consider economic trends in the segments that affect its industry. On both the national and international level, managers must consider the general availability of credit, the level of disposable income, and the propensity of people to spend. Prime interest rates, inflation rates, and trends in the growth of the gross national product are other economic factors they should monitor.

Top Strategist

Harold Messmer, CEO of Robert Half International

Exhibit
4.2



accountants, marketing specialists, attorneys, and programmers. Messmer excels by targeting small and midsize companies. Smaller clients are less likely to seek discounts and don't mind paying a higher

Robert Half CEO Harold Messmer has been around long enough to know how to ride a wave. And he has surfed the tightening of labor markets like an old pro. The jobless rate for professionals has been low, especially in the company's sweet spot: placing

price for top-caliber personnel. In 2006, most of its units grew 20 percent or more, and the one that places permanent accountants saw revenue jump 53 percent. Messmer also has pushed deeper into the international arena, breaking ground in both Germany and Spain, where the market for temporary staffing is less developed than in the United States. And he set up his temp business for the first time in Asia by taking advantage of existing office space in Robert Half units already operating there.

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For example, in 2003, the depressed economy hit Crown Cork & Seal Co. especially hard because it had \$2 billion in debt due in the year and no way to raise the money to pay it. The down market had caused its stock price to be too low to raise cash as it normally would. Therefore, Crown Cork managers turned to issuing bonds to refinance its debt. With the slow market, investors were taking advantage of such bonds because they could safely gain higher returns over stocks. Not only were investors getting a deal, but Crown Cork and other companies were seeing the lowest interest rates on bonds in years and by issuing bonds could reorganize their balance sheets.

Closely monitoring the economic conditions that affect growth in the financial services industry has been a key to the success of Robert Half International. Its CEO adjusts the company's business strategy to maximize opportunities that arise during changing employment cycles, as described in, Exhibit 4.2, Top Strategist.

The emergence of new international power brokers has changed the focus of economic environmental forecasting. Among the most prominent of these power brokers are the European Economic Community (EEC, or Common Market), the Organization of Petroleum Exporting Countries (OPEC), and coalitions of developing countries.

The EEC, whose members include most of the West European countries, eliminated quotas and established a tariff-free trade area for industrial products among its members. By fostering intra-European economic cooperation, it has helped its member countries compete more effectively in non-European international markets.

Social Factors

The social factors that affect a firm involve the beliefs, values, attitudes, opinions, and lifestyles of persons in the firm's external environment, as developed from cultural, ecological, demographic, religious, educational, and ethnic conditioning. As social attitudes change, so

Strategy in Action

Exhibit 4.3

Tapping a Market That Is Hot, Hot, Hot

BusinessWeek

When National City Corp. bank decided to roll out 78 new branches in Chicago two years ago, it went in knowing its market. With Hispanics expected to account for virtually all of the city's population growth over the next decade, the bank hired dozens of Spanish-speaking staffers and printed thousands of glossy pamphlets, hawking savings accounts to new immigrants and explaining the benefits of IRAs to more established Latinos. This year, the nation's 10th-largest bank will double its Hispanic marketing budget, targeting middle-class Latinos with direct mail offering mortgage financing and money-market accounts, all written *en español*.

The growing economic clout of the Hispanic community is well known. So what's driving the banking push? For starters, it's the fact that relatively few Latinos have any kind of banking accounts. Fully 56 percent of the nation's 40 million Hispanics have never held a bank account, according to market researcher Simmons Inc.

That's a rich vein for banks to tap. With Hispanics' wealth and population rising three times faster than

the U.S. average, the FDIC [Federal Deposit Insurance Corporation] predicts that they will account for more than 50 percent of U.S. retail banking growth over the next decade. That amounts to more than \$200 billion in new business, since U.S. retail banking revenues are projected to increase 44 percent, to \$963 billion over the decade, according to Economy.com.

At Bank of America, Spanish-language advertising brought in 1 million new checking accounts from Hispanics last year—fully 25 percent of the new accounts opened. And Banco Popular, a fast-growing bank based in Puerto Rico, now sends trucks that are outfitted with teller booths to U.S. construction sites so Latino laborers can deposit their checks directly into banking accounts. Wherever Latinos live and work, banks are not far behind.

Source: Reprinted with special permission from Brian Grow, "Tapping a Market That Is Hot, Hot, Hot," *BusinessWeek*, January 17, 2005. Copyright © 2005 The McGraw-Hill Companies.

too does the demand for various types of clothing, books, leisure activities, and so on. Like other forces in the remote external environment, social forces are dynamic, with constant change resulting from the efforts of individuals to satisfy their desires and needs by controlling and adapting to environmental factors. Teresa Iglesias-Soloman hopes to benefit from social changes with *Niños*, a children's catalog written in both English and Spanish. The catalog features books, videos, and Spanish cultural offerings for English-speaking children who want to learn Spanish and for Spanish-speaking children who want to learn English. *Niños'* target market includes middle- to upper-income Hispanic parents, consumers, educators, bilingual schools, libraries, and purchasing agents. Iglesias-Solomon has reason to be optimistic about the future of *Niños*, because the Hispanic population is growing five times faster than the general U.S. population and ranks as the nation's largest minority.

The increasing awareness of the market power of Hispanics in the U.S. has reached almost every business sector. Exhibit 4.3, Strategy in Action, provides a few of the details that drive many businesses' interest in attracting Hispanics as customers.

One of the most profound social changes in recent years has been the entry of large numbers of women into the labor market. This has not only affected the hiring and compensation policies and the resource capabilities of their employers; it has also created or greatly expanded the demand for a wide range of products and services necessitated by their absence from the home. Firms that anticipated or reacted quickly to this social change offered such products and services as convenience foods, microwave ovens, and day care centers.

A second profound social change has been the accelerating interest of consumers and employees in quality-of-life issues. Evidence of this change is seen in recent contract negotiations. In addition to the traditional demand for increased salaries, workers demand such benefits as sabbaticals, flexible hours or four-day workweeks, lump-sum vacation plans, and opportunities for advanced training.

A third profound social change has been the shift in the age distribution of the population. Changing social values and a growing acceptance of improved birth control methods are expected to raise the mean age of the U.S. population, which was 27.9 in 1970, and 34.9 in the year 2000. This trend will have an increasingly unfavorable effect on most producers of predominantly youth-oriented goods and will necessitate a shift in their long-range marketing strategies. Producers of hair and skin care preparations already have begun to adjust their research and development to reflect anticipated changes in demand.

A consequence of the changing age distribution of the population has been a sharp increase in the demands made by a growing number of senior citizens. Constrained by fixed incomes, these citizens have demanded that arbitrary and rigid policies on retirement age be modified and have successfully lobbied for tax exemptions and increases in Social Security benefits. Such changes have significantly altered the opportunity-risk equations of many firms—often to the benefit of firms that anticipated the changes.

Cutting across these issues is concern for individual health. The fast-food industry has been the target of a great deal of public concern. A great deal of popular press attention has been directed toward Americans' concern over the relationship between obesity and health. As documented by the hit movie *Supersize Me*, McDonald's was caught in the middle of this new social concern because its menu consisted principally of high-calorie, artery-clogging foods. Health experts blamed the fast-food industry for the rise in obesity, claiming that companies like McDonald's created an environment that encouraged overeating and discouraged physical activity. Specifically, McDonald's was charged with taking advantage of the fact that kids and adults were watching more TV, by targeting certain program slots to increase sales.

McDonald's responded aggressively and successfully. The company's strategists soon established McDonald's Corp. as an innovator in healthy food options. By 2005, the world's largest fast-food chain launched a new promotional campaign touting healthy lifestyles, including fruit and milk in Happy Meals, activity programs in schools, and a new partnership with the International Olympic Committee. At the time of the announcement, McDonald's was enjoying its longest ever period of same-store sales growth in 25 years, with 24 consecutive months of improved global sales resulting from new healthy menu options, later hours, and better customer service, such as cashless payment options. McDonald's healthy options included a fruit and walnut salad, Paul Newman's brand lowfat Italian dressing, and premium chicken sandwiches in the United States and chicken flatbread and fruit smoothies in Europe.

Translating social change into forecasts of business effects is a difficult process, at best. Nevertheless, informed estimates of the impact of such alterations as geographic shifts in populations and changing work values, ethical standards, and religious orientation can only help a strategizing firm in its attempts to prosper.

Political Factors

The direction and stability of political factors are a major consideration for managers on formulating company strategy. Political factors define the legal and regulatory parameters within which firms must operate. Political constraints are placed on firms through fair-trade decisions, antitrust laws, tax programs, minimum wage legislation, pollution and pricing policies, administrative jawboning, and many other actions aimed at protecting employees, consumers, the general public, and the environment. Because such laws and regulations are most commonly restrictive, they tend to reduce the potential profits of firms. However, some political actions are designed to benefit and protect firms. Such actions include patent laws, government subsidies, and product research grants. Thus, political factors either may limit or benefit the firms they influence. For example, in a pair of surprising decisions in 2003, the Federal Communications Commission (FCC) ruled that local phone companies had to continue to lease their lines to the long-distance carriers at what the locals said was below cost. At

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the same time, the FCC ruled that the local companies were not required to lease their broadband lines to the national carriers. These decisions were good and bad for the local companies because, although they would lose money by leasing to the long-distance carriers, they could regain some of that loss with their broadband services that did not have to be leased.

The decisions did not mean that the local carriers had to remove existing lines and replace them with broadband lines. Instead, the local carriers would have to run two networks to areas where they want to incorporate broadband because the long-distance carriers had a right to the conventional lines as ruled in the decision. These regulations caused the local carriers to alter their strategies. For example, they often chose to reduce capital investments on new broadband lines because they had to maintain old lines as well. The reduction in capital investments was used to offset the losses they incurred in subsidizing their current lines to the long-distance carriers.

The direction and stability of political factors are a major consideration when evaluating the remote environment. Consider piracy. Microsoft's performance in the Chinese market is greatly affected by the lack of legal enforcement of piracy and also by the policies of the Chinese government. Likewise, the government's actions in support of its competitor, Linux, have limited Microsoft's ability to penetrate the Chinese market.

Political activity also has a significant impact on two governmental functions that influence the remote environment of firms: the supplier function and the customer function.

Supplier Function

Government decisions regarding the accessibility of private businesses to government-owned natural resources and national stockpiles of agricultural products will affect profoundly the viability of the strategies of some firms.

Customer Function

Government demand for products and services can create, sustain, enhance, or eliminate many market opportunities. For example, the Kennedy administration's emphasis on landing a man on the moon spawned a demand for thousands of new products; the Carter administration's emphasis on developing synthetic fuels created a demand for new skills, technologies, and products; the Reagan administration's strategic defense initiative (the "Star Wars" defense) sharply accelerated the development of laser technologies; Clinton's federal block grants to the states for welfare reform led to office rental and lease opportunities; and the war against terrorism during the Bush administration created enormous investment in aviation.

Technological Factors

The fourth set of factors in the remote environment involves technological change. To avoid obsolescence and promote innovation, a firm must be aware of technological changes that might influence its industry. Creative technological adaptations can suggest possibilities for new products or for improvements in existing products or in manufacturing and marketing techniques.

A technological breakthrough can have a sudden and dramatic effect on a firm's environment. It may spawn sophisticated new markets and products or significantly shorten the anticipated life of a manufacturing facility. Thus, all firms, and most particularly those in turbulent growth industries, must strive for an understanding both of the existing technological advances and the probable future advances that can affect their products and services. This quasi-science of attempting to foresee advancements and estimate their impact on an organization's operations is known as **technological forecasting**.

Technological forecasting can help protect and improve the profitability of firms in growing industries. It alerts strategic managers to both impending challenges and promising opportunities. As examples: (1) Advances in xerography were a key to Xerox's success but caused major difficulties for carbon paper manufacturers, and (2) the perfection of

technological forecasting

The quasi-science of anticipating environmental and competitive changes and estimating their importance to an organization's operations.

transistors changed the nature of competition in the radio and television industry, helping such giants as RCA while seriously weakening smaller firms whose resource commitments required that they continue to base their products on vacuum tubes.

The key to beneficial forecasting of technological advancement lies in accurately predicting future technological capabilities and their probable impacts. A comprehensive analysis of the effect of technological change involves study of the expected effect of new technologies on the remote environment, on the competitive business situation, and on the business-society interface. In recent years, forecasting in the last area has warranted particular attention. For example, as a consequence of increased concern over the environment, firms must carefully investigate the probable effect of technological advances on quality-of-life factors, such as ecology and public safety.

For example, by combining the powers of Internet technologies with the capability of downloading music in a digital format, Bertelsmann has found a creative technological adaptation for distributing music online to millions of consumers whenever or wherever they might be. Bertelsmann, AOL Time Warner, and EMI formed a joint venture called Musicnet. The ease and wide availability of Internet technologies is increasing the marketplace for online e-tailers. Bertelsmann's response to the shifts in technological factors enables it to distribute music more rapidly through Musicnet to a growing consumer base.

Ecological Factors

The most prominent factor in the remote environment is often the reciprocal relationship between business and the ecology. The term **ecology** refers to the relationships among human beings and other living things and the air, soil, and water that support them. Threats to our life-supporting ecology caused principally by human activities in an industrial society are commonly referred to as **pollution**. Specific concerns include global warming, loss of habitat and biodiversity, as well as air, water, and land pollution.

The global climate has been changing for ages; however, it is now evident that humanity's activities are accelerating this tremendously. A change in atmospheric radiation, due in part to ozone depletion, causes global warming. Solar radiation that is normally absorbed into the atmosphere reaches the earth's surface, heating the soil, water, and air.

Another area of great importance is the loss of habitat and biodiversity. Ecologists agree that the extinction of important flora and fauna is occurring at a rapid rate and, if this pace is continued, could constitute a global extinction on the scale of those found in fossil records. The earth's life-forms depend on a well-functioning ecosystem. In addition, immeasurable advances in disease treatment can be attributed to research involving substances found in plants. As species become extinct, the life support system is irreparably harmed. The primary cause of extinction on this scale is a disturbance of natural habitat. For example, current data suggest that the earth's primary tropical forests, a prime source of oxygen and potential plant "cure," could be destroyed in only five decades.

Air pollution is created by dust particles and gaseous discharges that contaminate the air. Acid rain, or rain contaminated by sulfur dioxide, which can destroy aquatic and plant life, is believed to result from coal-burning factories in 70 percent of all cases. A health-threatening "thermal blanket" is created when the atmosphere traps carbon dioxide emitted from smokestacks in factories burning fossil fuels. This "greenhouse effect" can have disastrous consequences, making the climate unpredictable and raising temperatures.

Water pollution occurs principally when industrial toxic wastes are dumped or leak into the nation's waterways. Because fewer than 50 percent of all municipal sewer systems are in compliance with Environmental Protection Agency requirements for water safety, contaminated waters represent a substantial present threat to public welfare. Efforts to keep from contaminating the water supply are a major challenge to even the most conscientious of manufacturing firms.

ecology

The relationships among human beings and other living things and the air, soil, and water that supports them.

pollution

Threats to life-supporting ecology caused principally by human activities in an industrial society.

Land pollution is caused by the need to dispose of ever-increasing amounts of waste. Routine, everyday packaging is a major contributor to this problem. Land pollution is more dauntingly caused by the disposal of industrial toxic wastes in underground sites. With approximately 90 percent of the annual U.S. output of 500 million metric tons of hazardous industrial wastes being placed in underground dumps, it is evident that land pollution and its resulting endangerment of the ecology have become a major item on the political agenda.

As a major contributor to ecological pollution, business now is being held responsible for eliminating the toxic by-products of its current manufacturing processes and for cleaning up the environmental damage that it did previously. Increasingly, managers are being required by the government or are being expected by the public to incorporate ecological concerns into their decision making. For example, between 1975 and 1992, 3M cut its pollution in half by reformulating products, modifying processes, redesigning production equipment, and recycling by-products. Similarly, steel companies and public utilities have invested billions of dollars in costlier but cleaner-burning fuels and pollution control equipment. The automobile industry has been required to install expensive emission controls in cars. The gasoline industry has been forced to formulate new low-lead and no-lead products. And thousands of companies have found it necessary to direct their R&D resources into the search for ecologically superior products, such as Sears's phosphate-free laundry detergent and Pepsi-Cola's biodegradable plastic soft-drink bottle.

Environmental legislation impacts corporate strategies worldwide. Many companies fear the consequences of highly restrictive and costly environmental regulations. However, some manufacturers view these new controls as an opportunity, capturing markets with products that help customers satisfy their own regulatory standards. Other manufacturers contend that the costs of environmental spending inhibit the growth and productivity of their operations.

Despite cleanup efforts to date, the job of protecting the ecology will continue to be a top strategic priority—usually because corporate stockholders and executives choose it, increasingly because the public and the government require it. As evidenced by Exhibit 4.4, the government has made numerous interventions into the conduct of business for the purpose of bettering the ecology.

Benefits of Eco-Efficiency

Many of the world's largest corporations are realizing that business activities must no longer ignore environmental concerns. Every activity is linked to thousands of other transactions and their environmental impact; therefore, corporate environmental responsibility must be taken seriously and environmental policy must be implemented to ensure a comprehensive organizational strategy. Because of increases in government regulations and consumer environmental concerns, the implementation of environmental policy has become a point of competitive advantage. Therefore, the rational goal of business should be to limit its impact on the environment, thus ensuring long-run benefits to both the firm and society. To neglect this responsibility is to ensure the demise of both the firm and our ecosystem.

Responding to this need, General Electric unveiled plans in 2005 to double its research funds for technologies that reduce energy use, pollution, and emissions tied to global warming. GE said it would focus even more on solar and wind power as well as other environmental technologies it is involved with, such as diesel-electric locomotives, lower emission aircraft engines, more efficient lighting, and water purification. The company's "ecomagination" plans for 2010 include investing \$1.5 billion annually in cleaner technologies research, up from \$700 million in 2004; and doubling revenues to \$20 billion from environmentally friendly products and services.

EXHIBIT 4.4 Federal Ecological Legislation

National Environmental Policy Act, 1969 Established Environmental Protection Agency; consolidated federal environmental activities under it. Established Council on Environmental Quality to advise president on environmental policy and to review environmental impact statements.

Air Pollution:

Clean Air Act, 1963 Authorized assistance to state and local governments in formulating control programs. Authorized limited federal action in correcting specific pollution problems.

Clean Air Act, Amendments (Motor Vehicle Air Pollution Control Act), 1965 Authorized federal standards for auto exhaust emission. Standards first set for 1968 models.

Air Quality Act, 1967 Authorized federal government to establish air quality control regions and to set maximum permissible pollution levels. Required states and localities to carry out approved control programs or else give way to federal controls.

Clean Air Act Amendments, 1970 Authorized EPA to establish nationwide air pollution standards and to limit the discharge of six principal pollutants into the lower atmosphere. Authorized citizens to take legal action to require EPA to implement its standards against undiscovered offenders.

Clean Air Act Amendments, 1977 Postponed auto emission requirements. Required use of scrubbers in new coal-fired power plants. Directed EPA to establish a system to prevent deterioration of air quality in clean areas.

Solid Waste Pollution:

Solid Waste Disposal Act, 1965 Authorized research and assistance to state and local control programs.

Resource Recovery Act, 1970 Subsidized construction of pilot recycling plants; authorized development of nationwide control programs.

Resource Conservation and Recovery Act, 1976 Directed EPA to regulate hazardous waste management, from generation through disposal.

Surface Mining and Reclamation Act, 1976 Controlled strip mining and restoration of reclaimed land.

Water Pollution:

Refuse Act, 1899 Prohibited dumping of debris into navigable waters without a permit. Extended by court decision to industrial discharges.

Federal Water Pollution Control Act, 1956 Authorized grants to states for water pollution control. Gave federal government limited authority to correct specific pollution problems.

Water Quality Act, 1965 Provided for adoption of water quality standards by states, subject to federal approval.

Water Quality Improvement Act, 1970 Provided for federal cleanup of oil spills. Strengthened federal authority over water pollution control.

Federal Water Pollution Control Act Amendments, 1972 Authorized EPA to set water quality and effluent standards; provided for enforcement and research.

Safe Drinking Water Act, 1974 Set standards for drinking water quality.

Clean Water Act, 1977 Ordered control of toxic pollutants by 1984 with best available technology economically feasible.

eco-efficiency

Company actions that produce more useful goods and services while continuously reducing resource consumption and pollution.

Stephen Schmidheiny, chairman of the Business Council for Sustainable Development, has coined the term **eco-efficiency** to describe corporations that produce more-useful goods and services while continuously reducing resource consumption and pollution. He cites a number of reasons for corporations to implement environmental policy: customers demand cleaner products, environmental regulations are increasingly more stringent, employees prefer to work for environmentally conscious firms, and financing is more readily available for eco-efficient firms. In addition, the government provides incentives for environmentally responsible companies.

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Setting priorities, developing corporate standards, controlling property acquisition and use to preserve habitats, implementing energy-conserving activities, and redesigning products (e.g., minimizing packaging) are a number of measures the firm can implement to enhance an eco-efficient strategy. One of the most important steps a firm can take in achieving a competitive position with regard to the eco-efficient strategy is to fully capitalize on technological developments as a method of gaining efficiency.

There are four key characteristics of eco-efficient corporations:

- Eco-efficient firms are proactive, not reactive. Policy is initiated and promoted by business because it is in their own interests and the interest of their customers, not because it is imposed by one or more external forces.
- Eco-efficiency is designed in, not added on. This characteristic implies that the optimization of eco-efficiency requires every business effort regarding the product and process to internalize the strategy.
- Flexibility is imperative for eco-efficient strategy implementation. Continuous attention must be paid to technological innovation and market evolution.
- Eco-efficiency is encompassing, not insular. In the modern global business environment, efforts must cross not only industrial sectors but national and cultural boundaries as well.

International Environment

Monitoring the international environment, perhaps better thought of as the international dimension of the global environment, involves assessing each nondomestic market on the same factors that are used in a domestic assessment. While the importance of factors will differ, the same set of considerations can be used for each country. For example, Exhibit 4.5, Global Strategy in Action, lists economic, political, legal, and social factors used to assess international environments. However, there is one complication to this process, namely, that the interplay among international markets must be considered. For example, in recent years, conflicts in the Middle East have made collaborative business strategies among firms in traditionally antagonistic countries especially difficult to implement.

INDUSTRY ENVIRONMENT

industry environment

The general conditions for competition that influence all businesses that provide similar products and services.

Harvard professor Michael E. Porter propelled the concept of **industry environment** into the foreground of strategic thought and business planning. The cornerstone of his work first appeared in the *Harvard Business Review*, in which Porter explains the five forces that shape competition in an industry. His well-defined analytic framework helps strategic managers to link remote factors to their effects on a firm's operating environment.

With the special permission of Professor Porter and the *Harvard Business Review*, we present in this section of the chapter the major portion of his seminal article on the industry environment and its impact on strategic management.¹

HOW COMPETITIVE FORCES SHAPE STRATEGY

The essence of strategy formulation is coping with competition. Yet it is easy to view competition too narrowly and too pessimistically. While we sometimes hear executives complaining to the contrary, intense competition in an industry is neither coincidence nor bad luck.

¹ M. E. Porter, "How Competitive Forces Shape Strategy," *Harvard Business Review*, March–April 1979, pp. 137–45. Copyright © 1979 by the Harvard Business School Publishing Corporation; all rights reserved.

Global Strategy in Action

Exhibit 4.5

Used to Assess the International Environment

ECONOMIC ENVIRONMENT

- Level of economic development
- Population
- Gross national product
- Per capita income
- Literacy level
- Social infrastructure
- Natural resources
- Climate
- Membership in regional economic blocs (EU, NAFTA, LAFTA)
- Monetary and fiscal policies
- Wage and salary levels
- Nature of competition
- Currency convertibility
- Inflation
- Taxation system
- Interest rates

LEGAL ENVIRONMENT

- Legal tradition
- Effectiveness of legal system
- Treaties with foreign nations

- Patent trademark laws
- Laws affecting business firms

POLITICAL SYSTEM

- Form of government
- Political ideology
- Stability of government
- Strength of opposition parties and groups
- Social unrest
- Political strife and insurgency
- Governmental attitude towards foreign firms
- Foreign policy

CULTURAL ENVIRONMENT

- Customs, norms, values, beliefs
- Language
- Attitudes
- Motivations
- Social institutions
- Status symbols
- Religious beliefs

Source: Arvind V. Phatak, *International Management* (Cincinnati, OH: South-Western College Publishing, 1997), p. 6. Reprinted with permission of the author.

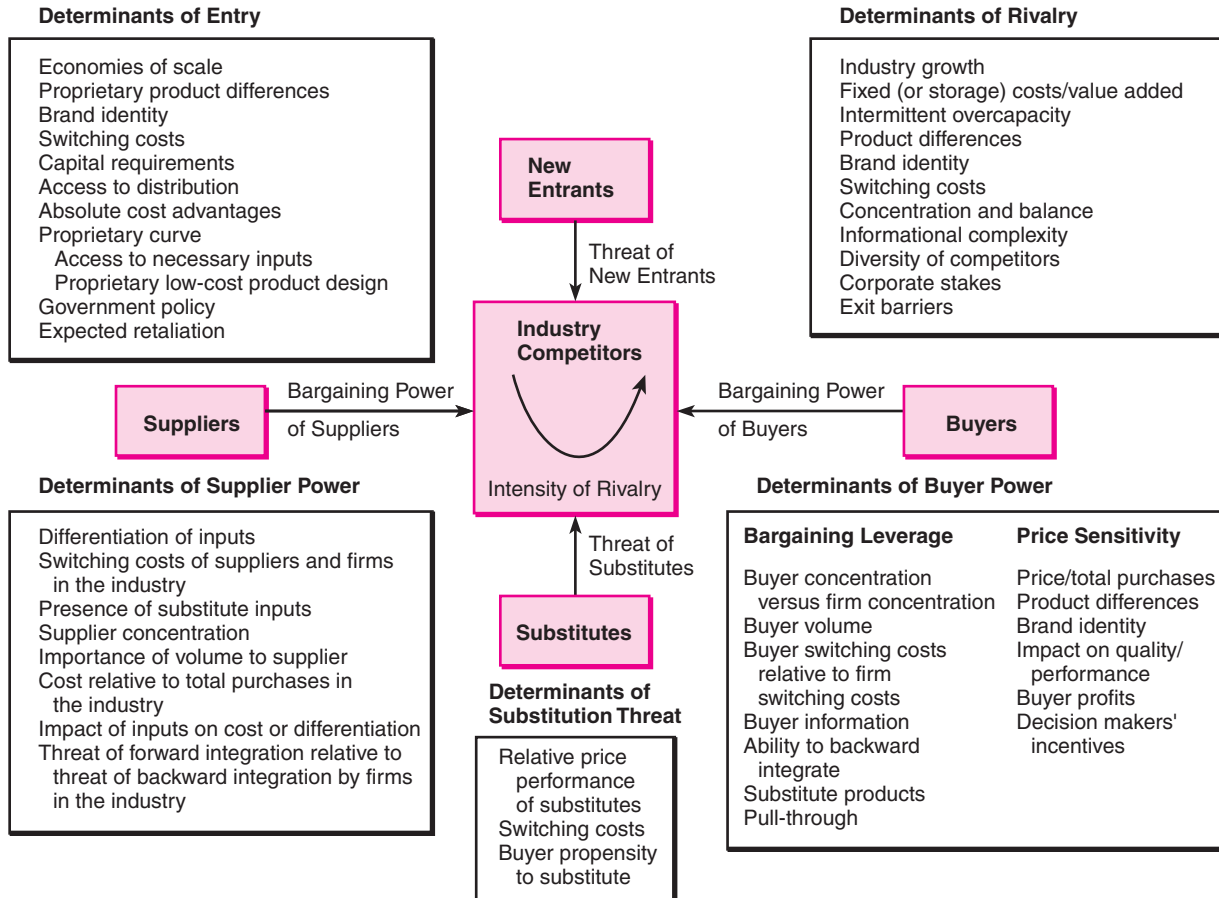
Moreover, in the fight for market share, competition is not manifested only in the other players. Rather, competition in an industry is rooted in its underlying economics, and competitive forces exist that go well beyond the established combatants in a particular industry. Customers, suppliers, potential entrants, and substitute products are all competitors that may be more or less prominent or active depending on the industry.

The state of competition in an industry depends on five basic forces, which are diagrammed in Exhibit 4.6. The collective strength of these forces determines the ultimate profit potential of an industry. It ranges from intense in industries like tires, metal cans, and steel, where no company earns spectacular returns on investment, to mild in industries like oil-field services and equipment, soft drinks, and toiletries, where there is room for quite high returns.

In the economists' "perfectly competitive" industry, jockeying for position is unbridled and entry to the industry very easy. This kind of industry structure, of course, offers the worst prospect for long-run profitability. The weaker the forces collectively, however, the greater the opportunity for superior performance.

Whatever their collective strength, the corporate strategist's goal is to find a position in the industry where his or her company can best defend itself against these forces or can influence them in its favor. The collective strength of the forces may be painfully apparent to all the antagonists; but to cope with them, the strategist must delve below the surface and analyze the sources of competition. For example, what makes the industry vulnerable to entry? What determines the bargaining power of suppliers?

EXHIBIT 4.6 Forces Driving Industry Competition



Source: Reprinted by permission of *Harvard Business Review*, Exhibit from "How Competitive Forces Shape Strategy," by M.E. Porter, March–April 1979. Copyright © 1979 by the Harvard Business School Publishing Corporation; all rights reserved.

Knowledge of these underlying sources of competitive pressure provides the groundwork for a strategic agenda of action. They highlight the critical strengths and weaknesses of the company, animate the positioning of the company in its industry, clarify the areas where strategic changes may yield the greatest payoff, and highlight the places where industry trends promise to hold the greatest significance as either opportunities or threats.

Understanding these sources also proves to be of help in considering areas for diversification.

CONTENDING FORCES

The strongest competitive force or forces determine the profitability of an industry and so are of greatest importance in strategy formulation. For example, even a company with a strong position in an industry unthreatened by potential entrants will earn low returns if it faces a superior or a lower-cost substitute product—as the leading manufacturers of vacuum tubes and coffee percolators have learned to their sorrow. In such a situation, coping with the substitute product becomes the number one strategic priority.

Different forces take on prominence, of course, in shaping competition in each industry. In the ocean-going tanker industry, the key force is probably the buyers (the major oil companies),

Global Strategy in Action

Exhibit 4.7

Kodak's Moment of Truth

BusinessWeek

Antonio M. Perez left the consumer inkjet printer business after he lost out to Carly Fiorina for the top slot at Hewlett-Packard. But it has never been far from his mind. That's why, a few weeks after he joined a struggling Eastman Kodak Co. as president, he was peering into a microscope in a lab on Kodak's sprawling Rochester (New York) campus. Ever since then, Perez and Kodak have been working on a top-secret plan, code-named Goya, to make a big entrance into the consumer inkjet printer business.

The Kodak printers are designed, first and foremost, to print high-quality photos: the ink is formulated so prints will stay vibrant for 100 years rather than 15. Most impressive of all, replacement ink cartridges will cost half of what consumers are used to paying. The new printers arrived in stores in March 2007, priced at \$149 to \$299. Black ink cartridges cost \$9.99, color \$14.99. If consumers buy Kodak's economical Photo Value Pack, which combines paper and ink, the cost per print is about 10 cents, versus 24 cents for HP's comparable package.

If Kodak pulls this off—and that's a big if, considering the forces it's up against—it could pose a huge challenge to the \$50 billion printer industry. Those companies now rely on a razor-and-blades strategy, often discounting machines and making most of their profits on replacement cartridges. In particular, Kodak's

strategy is an assault on the profit engine of industry leader HP. Printing supplied 60 percent of HP's \$6.56 billion in operating earnings in 2006.

Perez predicts the inkjet printers will become a multibillion-dollar product line. He'd better be right. Kodak has struggled for years to find a replacement for its rapidly declining photo-film business. If he doesn't show growth soon, investors could bail out.

Analysts who have seen Kodak's printers have come away impressed. "The print quality is really good. They're at least as good as everybody else," says Larry Jamieson, director of industry-watcher Lyra Research Inc.

But Perez and Kodak are challenging a giant competitor that has a 33 percent worldwide market share and a sterling reputation among PC and digital-camera users. HP not only gets prime merchandising spots for its printers and ink in stores, but also gets to display its printers in the computer sections, because it bundles printers with its PCs. "HP has a lot of customer loyalty. They build a great product. The printers don't break," says analyst Alyson Frasco of market researcher Interactive Data Corp.

Source: Reprinted with special permission from Steve Hamm, "Kodak's Moment of Truth," *BusinessWeek*, February 19, 2007. Copyright © 2007 The McGraw-Hill Companies.

while in tires it is powerful OEM buyers coupled with tough competitors. In the steel industry the key forces are foreign competitors and substitute materials.

Every industry has an underlying structure, or a set of fundamental economic and technical characteristics, that gives rise to these competitive forces. The strategist, wanting to position his or her company to cope best with its industry environment or to influence that environment in the company's favor, must learn what makes the environment tick.

This view of competition pertains equally to industries dealing in services and to those selling products. To avoid monotony, I refer to both products and services as *products*. The same general principles apply to all types of business.

A few characteristics are critical to the strength of each competitive force. They will be discussed in this section.

Threat of Entry

New entrants to an industry bring new capacity, the desire to gain market share, and often substantial resources. Kodak's entry into the consumer inkjet printer business, described in Exhibit 4.7, *Strategy in Action*, presented a classic threat to the competitive dynamics in the industry. Similarly, companies diversifying through acquisition into the industry from

other markets often leverage their resources to cause a shake-up, as Philip Morris did with Miller beer.

The seriousness of the threat of entry depends on the barriers present and on the reaction from existing competitors that the entrant can expect. If barriers to entry are high and a newcomer can expect sharp retaliation from the entrenched competitors, he or she obviously will not pose a serious threat of entering.

There are six major sources of barriers to entry:

Economies of Scale

These economies deter entry by forcing the aspirant either to come in on a large scale or to accept a cost disadvantage. Scale economies in production, research, marketing, and service are probably the key barriers to entry in the mainframe computer industry, as Xerox and GE sadly discovered. **Economies of scale** also can act as hurdles in distribution, utilization of the sales force, financing, and nearly any other part of a business.

Economies of scale refer to the savings that companies within an industry achieve due to increased volume. Simply put, when the volume of production increases, the long-range average cost of a unit produced will decline.

Economies of scale result from technological and nontechnological sources. The technological sources of these economies are higher levels of mechanization or automation and a greater modernization of plant and facilities. The nontechnological sources include better managerial coordination of production functions and processes, long-term contractual agreements with suppliers, and enhanced employee performance arising from specialization.

Economies of scale are an important determinant of the intensity of competition in an industry. Firms that enjoy such economies can charge lower prices than their competitors. They also can create barriers to entry by reducing their prices temporarily, or permanently, to deter new firms from entering the industry.

Product Differentiation

Product differentiation, or brand identification, creates a barrier by forcing entrants to spend heavily to overcome customer loyalty. Advertising, customer service, being first in the industry, and product differences are among the factors fostering brand identification. It is perhaps the most important entry barrier in soft drinks, over-the-counter drugs, cosmetics, investment banking, and public accounting. To create high fences around their business, brewers couple brand identification with economies of scale in production, distribution, and marketing.

Capital Requirements

The need to invest large financial resources to compete creates a barrier to entry, particularly if the capital is required for unrecoverable expenditures in upfront advertising or R&D. Capital is necessary not only for fixed facilities but also for customer credit, inventories, and absorbing start-up losses. While major corporations have the financial resources to invade almost any industry, the huge capital requirements in certain fields, such as computer manufacturing and mineral extraction, limit the pool of likely entrants.

Cost Disadvantages Independent of Size

Entrenched companies may have cost advantages not available to potential rivals, no matter what their size and attainable economies of scale. These advantages can stem from the effects of the learning curve (and of its first cousin, the experience curve), proprietary technology, access to the best raw materials sources, assets purchased at preinflation prices, government subsidies, or favorable locations. Sometimes cost advantages are enforceable

economies of scale

The savings that companies achieve because of increased volume.

product differentiation

The extent to which customers perceive differences among products and services.

Strategy in Action

Exhibit 4.8

The Experience Curve as an Entry Barrier

In recent years, the experience curve has become widely discussed as a key element of industry structure. According to this concept, unit costs in many manufacturing industries (some dogmatic adherents say in all manufacturing industries) as well as in some service industries decline with “experience,” or a particular company’s cumulative volume of production. (The experience curve, which encompasses many factors, is a broader concept than the better-known learning curve, which refers to the efficiency achieved over time by workers through much repetition.)

The causes of the decline in unit costs are a combination of elements, including economies of scale, the learning curve for labor, and capital-labor substitution. The cost decline creates a barrier to entry because new competitors with no “experience” face higher costs than established ones, particularly the producer with the largest market share, and have difficulty catching up with the entrenched competitors.

Adherents of the experience curve concept stress the importance of achieving market leadership to maximize this barrier to entry, and they recommend aggressive action to achieve it, such as price cutting in anticipation of falling costs in order to build volume. For the combatant that cannot achieve a healthy market share, the prescription is usually, “Get out.”

Is the experience curve an entry barrier on which strategies should be built? The answer is, not in every industry. In fact, in some industries, building a strategy on the experience curve can be potentially disastrous.

That costs decline with experience in some industries is not news to corporate executives. The significance of the experience curve for strategy depends on what factors are causing the decline.

A new entrant may well be more efficient than the more experienced competitors: if it has built the newest plant, it will face no disadvantage in having to catch up. The strategic prescription, “You must have the largest, most efficient plant,” is a lot different from “You must produce the greatest cumulative output of the item to get your costs down.”

Whether a drop in costs with cumulative (not absolute) volume erects an entry barrier also depends on the sources of the decline. If costs go down because of technical advances known generally in the industry or because of the development of improved equipment that can be copied or purchased from equipment suppliers, the experience curve is not an entry barrier at all—in fact, new or less-experienced competitors may actually enjoy a cost advantage over the leaders. Free of the legacy of heavy past investments, the newcomer or less-experienced competitor can purchase or copy the newest and lowest cost equipment and technology.

If, however, experience can be kept proprietary, the leaders will maintain a cost advantage. But new entrants may require less experience to reduce their costs than the leaders needed. All this suggests that the experience curve can be a shaky entry barrier on which to build a strategy.

legally, as they are through patents. (For analysis of the much-discussed experience curve as a barrier to entry, see Exhibit 4.8, Strategy in Action.)

Access to Distribution Channels

The new boy or girl on the block must, of course, secure distribution of his or her product or service. A new food product, for example, must displace others from the supermarket shelf via price breaks, promotions, intense selling efforts, or some other means. The more limited the wholesale or retail channels are and the more that existing competitors have these tied up, obviously the tougher that entry into the industry will be. Sometimes this barrier is so high that, to surmount it, a new contestant must create its own distribution channels, as Timex did in the watch industry.

Government Policy

The government can limit or even foreclose entry to industries, with such controls as license requirements, limits on access to raw materials, and tax incentives. Regulated industries like trucking, liquor retailing, and freight forwarding are noticeable examples; more subtle

government restrictions operate in fields like ski-area development and coal mining. The government also can play a major indirect role by affecting entry barriers through such controls as air and water pollution standards and safety regulations.

The potential rival's expectations about the reaction of existing competitors also will influence its decision on whether to enter. The company is likely to have second thoughts if incumbents have previously lashed out at new entrants, or if

The incumbents possess substantial resources to fight back, including excess cash and unused borrowing power, productive capacity, or clout with distribution channels and customers.

The incumbents seem likely to cut prices because of a desire to keep market shares or because of industrywide excess capacity.

Industry growth is slow, affecting its ability to absorb the new arrival and probably causing the financial performance of all the parties involved to decline.

Powerful Suppliers

Suppliers can exert bargaining power on participants in an industry by raising prices or reducing the quality of purchased goods and services. Powerful suppliers, thereby, can squeeze profitability out of an industry unable to recover cost increases in its own prices. By raising their prices, soft-drink concentrate producers have contributed to the erosion of profitability of bottling companies because the bottlers—facing intense competition from powdered mixes, fruit drinks, and other beverages—have limited freedom to raise their prices accordingly.

The power of each important supplier (or buyer) group depends on a number of characteristics of its market situation and on the relative importance of its sales or purchases to the industry compared with its overall business.

A *supplier* group is powerful if

1. It is dominated by a few companies and is more concentrated than the industry it sells.
2. Its product is unique or at least differentiated, or if it has built-up switching costs. Switching costs are fixed costs that buyers face in changing suppliers. These arise because, among other things, a buyer's product specifications tie it to particular suppliers, it has invested heavily in specialized ancillary equipment or in learning how to operate a supplier's equipment (as in computer software), or its production lines are connected to the supplier's manufacturing facilities (as in some manufacturing of beverage containers).
3. It is not obliged to contend with other products for sale to the industry. For instance, the competition between the steel companies and the aluminum companies to sell to the can industry checks the power of each supplier.
4. It poses a credible threat of integrating forward into the industry's business. This provides a check against the industry's ability to improve the terms on which it purchases.
5. The industry is not an important customer of the supplier group. If the industry is an important customer, suppliers' fortunes will be tied closely to the industry, and they will want to protect the industry through reasonable pricing and assistance in activities like R&D and lobbying.

Powerful Buyers

Customers likewise can force down prices, demand higher quality or more service, and play competitors off against each other—all at the expense of industry profits.

A *buyer* group is powerful if

1. It is concentrated or purchases in large volumes. Large-volume buyers are particularly potent forces if heavy fixed costs characterize the industry—as they do in metal containers,

corn refining, and bulk chemicals, for example—which raise the stakes to keep capacity filled.

2. The products it purchases from the industry are standard or undifferentiated. The buyers, sure that they always can find alternative suppliers, may play one company against another, as they do in aluminum extrusion.

3. The products it purchases from the industry form a component of its product and represent a significant fraction of its cost. The buyers are likely to shop for a favorable price and purchase selectively. Where the product sold by the industry in question is a small fraction of buyers' costs, buyers are usually much less price sensitive.

4. It earns low profits, which create great incentive to lower its purchasing costs. Highly profitable buyers, however, are generally less price sensitive (i.e., of course, if the item does not represent a large fraction of their costs).

5. The industry's product is unimportant to the quality of the buyers' products or services. Where the quality of the buyers' products is very much affected by the industry's product, buyers are generally less price sensitive. Industries in which this situation exists include oil field equipment, where a malfunction can lead to large losses, and enclosures for electronic medical and test instruments, where the quality of the enclosure can influence the user's impression about the quality of the equipment inside.

6. The industry's product does not save the buyer money. Where the industry's product or service can pay for itself many times over, the buyer is rarely price sensitive; rather, he or she is interested in quality. This is true in services like investment banking and public accounting, where errors in judgment can be costly and embarrassing, and in businesses like the mapping of oil wells, where an accurate survey can save thousands of dollars in drilling costs.

7. The buyers pose a credible threat of integrating backward to make the industry's product. The Big Three auto producers and major buyers of cars often have used the threat of self-manufacture as a bargaining lever. But sometimes an industry so engenders a threat to buyers that its members may integrate forward.

Most of these sources of buyer power can be attributed to consumers as a group as well as to industrial and commercial buyers; only a modification of the frame of reference is necessary. Consumers tend to be more price sensitive if they are purchasing products that are undifferentiated, expensive relative to their incomes, and of a sort where quality is not particularly important.

The buying power of retailers is determined by the same rules, with one important addition. Retailers can gain significant bargaining power over manufacturers when they can influence consumers' purchasing decisions, as they do in audio components, jewelry, appliances, sporting goods, and other goods.

Substitute Products

By placing a ceiling on the prices it can charge, substitute products or services limit the potential of an industry. Unless it can upgrade the quality of the product or differentiate it somehow (as via marketing), the industry will suffer in earnings and possibly in growth.

Manifestly, the more attractive the price-performance trade-off offered by substitute products, the firmer the lid placed on the industry's profit potential. Sugar producers confronted with the large-scale commercialization of high-fructose corn syrup, a sugar substitute, learned this lesson.

Substitutes not only limit profits in normal times but also reduce the bonanza an industry can reap in boom times. The producers of fiberglass insulation enjoyed unprecedented demand as a result of high energy costs and severe winter weather. But the industry's ability to raise prices was tempered by the plethora of insulation substitutes, including cellulose,

rock wool, and Styrofoam. These substitutes are bound to become an even stronger force once the current round of plant additions by fiberglass insulation producers has boosted capacity enough to meet demand (and then some).

Substitute products that deserve the most attention strategically are those that (a) are subject to trends improving their price-performance trade-off with the industry's product or (b) are produced by industries earning high profits. Substitutes often come rapidly into play if some development increases competition in their industries and causes price reduction or performance improvement.

Jockeying for Position

Rivalry among existing competitors takes the familiar form of jockeying for position—using tactics like price competition, product introduction, and advertising slug fests. This type of intense rivalry is related to the presence of a number of factors:

1. Competitors are numerous or are roughly equal in size and power. In many U.S. industries in recent years, foreign contenders, of course, have become part of the competitive picture.
2. Industry growth is slow, precipitating fights for market share that involve expansion-minded members.
3. The product or service lacks differentiation or switching costs, which lock in buyers and protect one combatant from raids on its customers by another.
4. Fixed costs are high or the product is perishable, creating strong temptation to cut prices. Many basic materials businesses, like paper and aluminum, suffer from this problem when demand slackens.
5. Capacity normally is augmented in large increments. Such additions, as in the chlorine and vinyl chloride businesses, disrupt the industry's supply–demand balance and often lead to periods of overcapacity and price cutting.
6. Exit barriers are high. Exit barriers, like very specialized assets or management's loyalty to a particular business, keep companies competing even though they may be earning low or even negative returns on investment. Excess capacity remains functioning, and the profitability of the healthy competitors suffers as the sick ones hang on. If the entire industry suffers from overcapacity, it may seek government help—particularly if foreign competition is present.
7. The rivals are diverse in strategies, origins, and “personalities.” They have different ideas about how to compete and continually run head-on into each other in the process.

As an industry matures, its growth rate changes, resulting in declining profits and (often) a shakeout. In the booming recreational vehicle industry of the early 1970s, nearly every producer did well; but slow growth since then has eliminated the high returns, except for the strongest members, not to mention many of the weaker companies. The same profit story has been played out in industry after industry—snowmobiles, aerosol packaging, and sports equipment are just a few examples. Exhibit 4.9, *Strategy in Action*, describes some of the competitive dynamics in the flat-panel television industry and details several strategic responses of the companies involved.

An acquisition can introduce a very different personality to an industry, as has been the case with Black & Decker's takeover of McCullough, the producer of chain saws. Technological innovation can boost the level of fixed costs in the production process, as it did in the shift from batch to continuous-line photo finishing.

While a company must live with many of these factors—because they are built into the industry economics—it may have some latitude for improving matters through strategic shifts. For example, it may try to raise buyers' switching costs or increase product

Strategy in Action

Exhibit 4.9

Flat Panels, Thin Margins

BusinessWeek

Like just about everyone else checking out the flat-panel TVs at Best Buy in Manhattan, graphic designer Roy Gantt came in coveting a Philips, Sony, or Panasonic. But after seeing the price tags, he figured a Westinghouse might be a better buy. At \$800, the Westinghouse 32-inch set seems like a steal compared with \$950 to \$1,400 for better-known brands.

Thanks to the likes of Westinghouse, which undercut the prices of premier brands by 20 percent to 40 percent, LCDs are no longer a luxury item. Nearly one-third of the 30 million TVs sold in North America in 2006 had LCDs, and in 2007 they accounted for half of all TV sales. The average 27-inch LCD set now retails for less than \$650, compared with \$1,000 in early 2006, says iSuppli, while 40-inch models have plunged to about \$1,600, down from \$3,000 during the same period.

For many in the industry, though, the competition is brutal. Prices for LCD sets are falling so rapidly that retailers who place orders too far in advance risk getting stuck with expensive inventory. Circuit City Stores Inc. cited plummeting prices in its February 8, 2007, announcement that it will shutter nearly 70 outlets. The Asian companies that make the LCD panels that go into the TVs are getting slammed, too. Korea's LG.Philips LCD Co. attributed a \$186 million loss in the fourth quarter to the 40 percent drop in display prices last year. With panel prices falling 20 percent in 2007, the world's dozen or so makers of displays are scrambling to sell at almost any price just to generate the cash to survive.

Chalk it up to the new dynamics of TV manufacturing in the age of globalization. The wide availability of standardized digital components from Asian suppliers has ushered in virtual manufacturers such as Westinghouse Digital, Vizio, and Syntax-Brilliant. With annual sales of \$650 million and just 120 employees, Westinghouse Digital typifies the model.

Westinghouse rival Vizio Inc. is even more spartan. The brand didn't exist three years ago, but now it's no. 6 overall in LCD sets, iSupply says, with 7 percent of the North American market. Vizio has a mere 55 full-time employees, but saw sales of \$700 million last year. The private company claims its overhead costs are just 0.7 percent of sales, compared with 10 to 20 percent for big, diversified electronics conglomerates, and that it gets by on profit margins of just 2 percent.

With LCD prices falling by 3 to 5 percent a month, Vizio's biggest challenge is making sure it doesn't pay too much for orders placed months in advance. The company negotiates flexible terms with suppliers and manages to keep only two weeks of inventory on hand by constantly monitoring retailers' shelves. That's a big challenge given that Vizio says it has enough orders from retailers to sell nearly 3 million TVs this year, which would triple its revenues.

Source: Reprinted with special permission from Pete Engardio, "Flat Panels, Thin Margins: Rugged Competition from Smaller Brands Has Made the TV Sets Cheaper Than Ever," *BusinessWeek*, February 26, 2007. Copyright © 2007 The McGraw-Hill Companies.

differentiation. A focus on selling efforts in the fastest growing segments of the industry or on market areas with the lowest fixed costs can reduce the impact of industry rivalry. If it is feasible, a company can try to avoid confrontation with competitors having high exit barriers and, thus, can sidestep involvement in bitter price cutting.

INDUSTRY ANALYSIS AND COMPETITIVE ANALYSIS

Designing viable strategies for a firm requires a thorough understanding of the firm's industry and competition. The firm's executives need to address four questions: (1) What are the boundaries of the industry? (2) What is the structure of the industry? (3) Which firms are our competitors? (4) What are the major determinants of competition? The answers to these questions provide a basis for thinking about the appropriate strategies that are open to the firm.

industry

A group of companies that provide similar products and services.

Industry Boundaries

An **industry** is a collection of firms that offer similar products or services. By “similar products,” we mean products that customers perceive to be substitutable for one another. Consider, for example, the brands of personal computers (PCs) that are now being marketed. The firms that produce these PCs, such as Hewlett-Packard, IBM, Apple, and Dell, form the nucleus of the microcomputer industry.

Suppose a firm competes in the microcomputer industry. Where do the boundaries of this industry begin and end? Does the industry include desktops? Laptops? These are the kinds of questions that executives face in defining industry boundaries.

Why is a definition of industry boundaries important? First, it helps executives determine the arena in which their firm is competing. A firm competing in the microcomputer industry participates in an environment very different from that of the broader electronics business. The microcomputer industry comprises several related product families, including personal computers, inexpensive computers for home use, and workstations. The unifying characteristic of these product families is the use of a central processing unit (CPU) in a microchip. On the other hand, the electronics industry is far more extensive; it includes computers, radios, supercomputers, superconductors, and many other products.

The microcomputer and electronics industries differ in their volume of sales, their scope (some would consider microcomputers a segment of the electronics industry), their rate of growth, and their competitive makeup. The dominant issues faced by the two industries also are different. Witness, for example, the raging public debate being waged on the future of the “high-definition TV.” U.S. policy makers are attempting to ensure domestic control of that segment of the electronics industry. They also are considering ways to stimulate “cutting-edge” research in superconductivity. These efforts are likely to spur innovation and stimulate progress in the electronics industry.

Second, a definition of industry boundaries focuses attention on the firm’s competitors. Defining industry boundaries enables the firm to identify its competitors and producers of substitute products. This is critically important to the firm’s design of its competitive strategy.

Third, a definition of industry boundaries helps executives determine key factors for success. Survival in the premier segment of the microcomputer industry requires skills that are considerably different from those required in the lower end of the industry. Firms that compete in the premier segment need to be on the cutting edge of technological development and to provide extensive customer support and education. On the other hand, firms that compete in the lower end need to excel in imitating the products introduced by the premier segment, to focus on customer convenience, and to maintain operational efficiency that permits them to charge the lowest market price. Defining industry boundaries enables executives to ask these questions: Do we have the skills it takes to succeed here? If not, what must we do to develop these skills?

Finally, a definition of industry boundaries gives executives another basis on which to evaluate their firm’s goals. Executives use that definition to forecast demand for their firm’s products and services. Armed with that forecast, they can determine whether those goals are realistic.

Problems in Defining Industry Boundaries

Defining industry boundaries requires both caution and imagination. Caution is necessary because there are no precise rules for this task and because a poor definition will lead to poor planning. Imagination is necessary because industries are dynamic—in every industry, important changes are under way in such key factors as competition, technology, and consumer demand.

Defining industry boundaries is a very difficult task. The difficulty stems from three sources:

1. The evolution of industries over time creates new opportunities and threats. Compare the financial services industry as we know it today with that of the 1990s, and then try to imagine how different the industry will be in the year 2020.
2. Industrial evolution creates industries within industries. The electronics industry of the 1960s has been transformed into many “industries”—TV sets, transistor radios, micro and macrocomputers, supercomputers, superconductors, and so on. Such transformation allows some firms to specialize and others to compete in different, related industries.
3. Industries are becoming global in scope. Consider the civilian aircraft manufacturing industry. For nearly three decades, U.S. firms dominated world production in that industry. But small and large competitors were challenging their dominance by 1990. At that time, Airbus Industries (a consortium of European firms) and Brazilian, Korean, and Japanese firms were actively competing in the industry.

Developing a Realistic Industry Definition

Given the difficulties just outlined, how do executives draw accurate boundaries for an industry? The starting point is a definition of the industry in global terms; that is, in terms that consider the industry’s international components as well as its domestic components.

Having developed a preliminary concept of the industry (e.g., computers), executives flesh out its current components. This can be done by defining its product segments. Executives need to select the scope of their firm’s potential market from among these related but distinct areas.

To understand the makeup of the industry, executives adopt a longitudinal perspective. They examine the emergence and evolution of product families. Why did these product families arise? How and why did they change? The answers to such questions provide executives with clues about the factors that drive competition in the industry.

Executives also examine the companies that offer different product families, the overlapping or distinctiveness of customer segments, and the rate of substitutability among product families.

To realistically define their industry, executives need to examine five issues:

1. Which part of the industry corresponds to our firm’s goals?
2. What are the key ingredients of success in that part of the industry?
3. Does our firm have the skills needed to compete in that part of the industry? If not, can we build those skills?
4. Will the skills enable us to seize emerging opportunities and deal with future threats?
5. Is our definition of the industry flexible enough to allow necessary adjustments to our business concept as the industry grows?

Industry Structure

Defining an industry’s boundaries is incomplete without an understanding of its structural attributes. **Structural attributes** are the enduring characteristics that give an industry its distinctive character. Consider the cable television and financial services industries. Both industries are competitive, and both are important for our quality of life. But these industries have very different requirements for success. To succeed in the cable television industry, firms require vertical integration, which helps them lower their operating costs and ensures their access to quality programs; technological innovation, to enlarge the scope of their services and deliver them in new ways; and extensive marketing, using appropriate

structural attributes

The enduring characteristics that give an industry its distinctive character.

segmentation techniques to locate potentially viable niches. To succeed in the financial services industry, firms need to meet very different requirements, among which are extensive orientation of customers and an extensive capital base.

How can we explain such variations among industries? The answer lies in examining the four variables that industry comprises: (1) concentration, (2) economies of scale (discussed earlier), (3) product differentiation, and (4) barriers to entry.

Concentration

concentration

The extent to which industry sales are dominated by a few firms.

Concentration refers to the extent to which industry sales are dominated by only a few firms. In a highly concentrated industry (i.e., an industry whose sales are dominated by a handful of companies), the intensity of competition declines over time. High concentration serves as a barrier to entry into an industry because it enables the firms that hold large market shares to achieve significant economies of scale (e.g., savings in production costs due to increased production quantities) and, thus, to lower their prices to stymie attempts of new firms to enter the market.

The U.S. aircraft manufacturing industry is highly concentrated. Its concentration ratio—the percent of market share held by the top four firms in the industry—is 67 percent. Competition in the industry has not been vigorous. Firms in the industry have been able to deter entry through proprietary technologies and the formation of strategic alliances (e.g., joint ventures).

Product Differentiation

This variable refers to the extent to which customers perceive products or services offered by firms in the industry as different.

The differentiation of products can be real or perceived. The differentiation between Apple's Macintosh and IBM's PS/2 Personal Computer was a prime example of real differentiation. These products differed significantly in their technology and performance. Similarly, the civilian aircraft models produced by Boeing differed markedly from those produced by Airbus. The differences resulted from the use of different design principles and different construction technologies. For example, the newer Airbus planes followed the principle of "fly by wire," whereas Boeing planes utilized the laws of hydraulics. Thus, in Boeing planes, wings were activated by mechanical handling of different parts of the plane, whereas in the Airbus planes, this was done almost automatically.

Perceived differentiation results from the way in which firms position their products and from their success in persuading customers that their products differ significantly from competing products. Marketing strategies provide the vehicles through which this is done. Witness, for example, the extensive advertising campaigns of the automakers, each of which attempts to convey an image of distinctiveness. BMW ads highlight the excellent engineering of the BMW and its symbolic value as a sign of achievement. Some automakers focus on roominess and durability, which are desirable attributes for the family segment of the automobile market.

Real and perceived differentiations often intensify competition among existing firms. On the other hand, successful differentiation poses a competitive disadvantage for firms that attempt to enter an industry.

Barriers to Entry

barriers to entry

The conditions that a firm must satisfy to enter an industry.

Barriers to entry are the obstacles that a firm must overcome to enter an industry. The barriers can be tangible or intangible. The tangible barriers include capital requirements, technological know-how, resources, and the laws regulating entry into an industry. The intangible barriers include the reputation of existing firms, the loyalty of consumers to existing brands, and access to the managerial skills required for successful operation in an industry.

Entry barriers both increase and reflect the level of concentration, economies of scale, and product differentiation in an industry, and such increases make it more difficult for new firms to enter the industry. Therefore, when high barriers exist in an industry, competition in that industry declines over time.

In summary, analysis of concentration, economies of scale, product differentiation, and barriers to entry in an industry enable a firm's executives to understand the forces that determine competition in an industry and set the stage for identifying the firm's competitors and how they position themselves in the marketplace.

Industry regulations are a key element of industry structure and can constitute a significant barrier to entry for corporations. Escalating regulatory standards costs have been a serious concern for corporations for years. As legislative bodies continue their stronghold on corporate activities, businesses feel the impact on their bottom line. In-house counsel departments have been perhaps the most significant additions to corporate structure in the past decade. Legal fees have skyrocketed and managers have learned the hard way about the importance of adhering to regulatory standards.

Competitive Analysis

How to Identify Competitors

In identifying their firm's current and potential competitors, executives consider several important variables:

1. How do other firms define the scope of their market? The more similar the definitions of firms, the more likely the firms will view each other as competitors.
2. How similar are the benefits the customers derive from the products and services that other firms offer? The more similar the benefits of products or services, the higher the level of substitutability between them. High substitutability levels force firms to compete fiercely for customers.
3. How committed are other firms to the industry? Although this question may appear to be far removed from the identification of competitors, it is in fact one of the most important questions that competitive analysis must address, because it sheds light on the long-term intentions and goals. To size up the commitment of potential competitors to the industry, reliable intelligence data are needed. Such data may relate to potential resource commitments (e.g., planned facility expansions).

Common Mistakes in Identifying Competitors

Identifying competitors is a milestone in the development of strategy. But it is a process laden with uncertainty and risk, a process in which executives sometimes make costly mistakes. Examples of these mistakes are:

1. Overemphasizing current and known competitors while giving inadequate attention to potential entrants.
2. Overemphasizing large competitors while ignoring small competitors.
3. Overlooking potential international competitors.
4. Assuming that competitors will continue to behave in the same way they have behaved in the past.
5. Misreading signals that may indicate a shift in the focus of competitors or a refinement of their present strategies or tactics.
6. Overemphasizing competitors' financial resources, market position, and strategies while ignoring their intangible assets, such as a top management team.

7. Assuming that all of the firms in the industry are subject to the same constraints or are open to the same opportunities.

8. Believing that the purpose of strategy is to outsmart the competition, rather than to satisfy customer needs and expectations.

OPERATING ENVIRONMENT

operating environment

Factors in the immediate competitive situation that affect a firm's success in acquiring needed resources.

The **operating environment**, also called the *competitive* or *task environment*, comprises factors in the competitive situation that affect a firm's success in acquiring needed resources or in profitably marketing its goods and services. Among the most important of these factors are the firm's competitive position, the composition of its customers, its reputation among suppliers and creditors, and its ability to attract capable employees. The operating environment is typically much more subject to the firm's influence or control than the remote environment. Thus, firms can be much more proactive (as opposed to reactive) in dealing with the operating environment than in dealing with the remote environment.

Competitive Position

Assessing its competitive position improves a firm's chances of designing strategies that optimize its environmental opportunities. Development of competitor profiles enables a firm to more accurately forecast both its short- and long-term growth and its profit potentials. Although the exact criteria used in constructing a competitor's profile are largely determined by situational factors, the following criteria are often included:

1. Market share.
2. Breadth of product line.
3. Effectiveness of sales distribution.
4. Proprietary and key account advantages.
5. Price competitiveness.
6. Advertising and promotion effectiveness.
7. Location and age of facility.
8. Capacity and productivity.
9. Experience.
10. Raw materials costs.
11. Financial position.
12. Relative product quality.
13. R&D advantages position.
14. Caliber of personnel.
15. General images.
16. Customer profile.
17. Patents and copyrights.
18. Union relations.
19. Technological position.
20. Community reputation.

Once appropriate criteria have been selected, they are weighted to reflect their importance to a firm's success. Then the competitor being evaluated is rated on the criteria, the ratings are multiplied by the weight, and the weighted scores are summed to yield a numerical profile of the competitor, as shown in Exhibit 4.10.

This type of competitor profile is limited by the subjectivity of its criteria selection, weighting, and evaluation approaches. Nevertheless, the process of developing such profiles is of considerable help to a firm in defining its perception of its competitive position. Moreover, comparing the firm's profile with those of its competitors can aid its managers in identifying factors that might make the competitors vulnerable to the strategies the firm might choose to implement.

Customer Profiles

Perhaps the most vulnerable result of analyzing the operating environment is the understanding of a firm's customers that this provides. Developing a profile of a firm's present and prospective customers improves the ability of its managers to plan strategic operations,

EXHIBIT 4.10
Competitor Profile

Key Success Factors	Weight	Rating*	Weighted Score
Market share	0.30	4	1.20
Price competitiveness	0.20	3	0.60
Facilities location	0.20	5	1.00
Raw materials costs	0.10	3	0.30
Caliber of personnel	<u>0.20</u>	1	<u>0.20</u>
	1.00 [†]		3.30

*The rating scale suggested is as follows: very strong competitive position (5 points), strong (4), average (3), weak (2), very weak (1).

†The total of the weights must always equal 1.00.

to anticipate changes in the size of markets, and to reallocate resources so as to support forecast shifts in demand patterns. The traditional approach to segmenting customers is based on customer profiles constructed from geographic, demographic, psychographic, and buyer behavior information.

Enterprising companies have quickly learned the importance of identifying target segments. In recent years, market research has increased tremendously as companies realize the benefits of demographic and psychographic segmentation. Research by American Express (AMEX) showed that competitors were stealing a prime segment of the company's business, affluent business travelers. AMEX's competing companies, including Visa and Mastercard, began offering high-spending business travelers frequent flier programs and other rewards including discounts on new cars. In turn, AMEX began to invest heavily in rewards programs, while also focusing on its strongest capabilities, assets, and competitive advantage. Unlike most credit card companies, AMEX cannot rely on charging interest to make money because its customers pay in full each month. Therefore, the company charges higher transaction fees to its merchants. In this way, increases in spending by AMEX customers who pay off their balances each month are more profitable to AMEX than to competing credit card companies.

Assessing consumer behavior is a key element in the process of satisfying your target market needs. Many firms lose market share as a result of assumptions made about target segments. Market research and industry surveys can help to reduce a firm's chances of relying on illusive assumptions. Firms most vulnerable are those that have had success with one or more products in the marketplace and as a result try to base consumer behavior on past data and trends.

Geographic

It is important to define the geographic area from which customers do or could come. Almost every product or service has some quality that makes it variably attractive to buyers from different locations. Obviously, a Wisconsin manufacturer of snow skis should think twice about investing in a wholesale distribution center in South Carolina. On the other hand, advertising in the *Milwaukee Journal-Sentinel* could significantly expand the geographically defined customer market of a major Myrtle Beach hotel in South Carolina.

Demographic

Demographic variables most commonly are used to differentiate groups of present or potential customers. Demographic information (e.g., information on sex, age, marital status, income, and occupation) is comparatively easy to collect, quantify, and use in strategic forecasting, and such information is the minimum basis for a customer profile.

Psychographic

Personality and lifestyle variables often are better predictors of customer purchasing behavior than geographic or demographic variables. In such situations, a psychographic

study is an important component of the customer profile. Advertising campaigns by soft-drink producers—Pepsi-Cola (“the Pepsi generation”), Coca-Cola (“the real thing”), and 7UP (“America’s turning 7UP”)—reflect strategic management’s attention to the psychographic characteristics of their largest customer segment—physically active, group-oriented non-professionals.

Buyer Behavior

Buyer behavior data also can be a component of the customer profile. Such data are used to explain or predict some aspect of customer behavior with regard to a product or service. Information on buyer behavior (e.g., usage rate, benefits sought, and brand loyalty) can provide significant aid in the design of more accurate and profitable strategies.

Suppliers

Dependable relationships between a firm and its suppliers are essential to the firm’s long-term survival and growth. A firm regularly relies on its suppliers for financial support, services, materials, and equipment. In addition, it occasionally is forced to make special requests for such favors as quick delivery, liberal credit terms, or broken-lot orders. Particularly at such times, it is essential for a firm to have had an ongoing relationship with its suppliers.

In the assessment of a firm’s relationships with its suppliers, several factors, other than the strength of that relationship, should be considered. With regard to its competitive position with its suppliers, the firm should address the following questions:

- Are the suppliers’ prices competitive? Do the suppliers offer attractive quantity discounts?
- How costly are their shipping charges? Are the suppliers competitive in terms of production standards?
- In terms of deficiency rates, are the suppliers’ abilities, reputations, and services competitive?
- Are the suppliers reciprocally dependent on the firm?

Creditors

Because the quantity, quality, price, and accessibility of financial, human, and material resources are rarely ideal, assessment of suppliers and creditors is critical to an accurate evaluation of a firm’s operating environment. With regard to its competitive position with its creditors, among the most important questions that the firm should address are the following:

- Do the creditors fairly value and willingly accept the firm’s stock as collateral?
- Do the creditors perceive the firm as having an acceptable record of past payment?
- A strong working capital position? Little or no leverage?
- Are the creditors’ loan terms compatible with the firm’s profitability objectives?
- Are the creditors able to extend the necessary lines of credit?

The answers to these and related questions help a firm forecast the availability of the resources it will need to implement and sustain its competitive strategies.

Human Resources: Nature of the Labor Market

A firm’s ability to attract and hold capable employees is essential to its success. However, a firm’s personnel recruitment and selection alternatives often are influenced by the nature of its operating environment. A firm’s access to needed personnel is affected primarily by four

factors: the firm's reputation as an employer, local employment rates, the ready availability of people with the needed skills, and its relationship with labor unions.

Reputation

A firm's reputation within its operating environment is a major element of its ability to satisfy its personnel needs. A firm is more likely to attract and retain valuable employees if it is seen as permanent in the community, competitive in its compensation package, and concerned with the welfare of its employees, and if it is respected for its product or service and appreciated for its overall contribution to the general welfare.

Employment Rates

The readily available supply of skilled and experienced personnel may vary considerably with the stage of a community's growth. A new manufacturing firm would find it far more difficult to obtain skilled employees in a vigorous industrialized community than in an economically depressed community in which similar firms had recently cut back operations.

Availability

The skills of some people are so specialized that relocation may be necessary to secure the jobs and the compensation that those skills commonly command. People with such skills include oil drillers, chefs, technical specialists, and industry executives. A firm that seeks to hire such a person is said to have broad labor market boundaries; that is, the geographic area within which the firm might reasonably expect to attract qualified candidates is quite large. On the other hand, people with more common skills are less likely to relocate from a considerable distance to achieve modest economic or career advancements. Thus, the labor market boundaries are fairly limited for such occupational groups as unskilled laborers, clerical personnel, and retail clerks.

Many manufacturers in the United States attempt to minimize the labor cost disadvantage they face in competing with overseas producers by outsourcing to lower-cost foreign locations or by hiring immigrant workers. Similarly, companies in construction and other labor-intensive industries try to provide themselves with a cost advantage by hiring temporary, often migrant, workers. An example of the sophistication of such worker location efforts is described in Exhibit 4.11, *Strategy in Action*.

Labor Unions

Approximately 12 percent of all workers in the United States belong to a labor union; the percentages are higher in Japan and western Europe at about 25 and 40 percent, respectively, and extremely low in developing nations. Unions represent the workers in their negotiations with employers through the process of collective bargaining. When managers' relationships with their employees are complicated by the involvement of a union, the company's ability to manage and motivate the people that it needs can be compromised.

EMPHASIS ON ENVIRONMENTAL FACTORS

This chapter has described the remote, industry, and operating environments as encompassing five components each. While that description is generally accurate, it may give the false impression that the components are easily identified, mutually exclusive, and equally applicable in all situations. In fact, the forces in the external environment are so dynamic and interactive that the impact of any single element cannot be wholly disassociated from the effect of other elements. For example, are increases in OPEC oil prices the result of economic, political, social, or technological changes? Or are a manufacturer's surprisingly good relations with suppliers a result of competitors', customers', or creditors' activities or

Strategy in Action

Exhibit 4.11

Click for Foreign Labor: Companies Are Using Online Middlemen to Find Legal Workers

BusinessWeek

When she could not find enough workers for the construction firm owned by her son Thomas, Ann Carroll decided to go online. After typing in such search terms as “construction laborer” and “Mexican workers,” she landed on the Web site for Labormex Foreign Labor Solutions. Within days she had a quote: \$100 each for 11 Mexican workers and \$1,340 to cover the visas. In October, Carroll Construction Co.’s recruits began laying sewer pipes in Ocean Springs, Mississippi, where the company is located. “I don’t know what we would’ve done if we didn’t go this route,” says Carroll. “We’re very happy with the workers.”

Amid a federal crackdown on illegal immigration—including the December 2006 arrest of 1,282 Swift & Co. meatpacking workers—and a roiling political debate over expanding guest-worker programs, companies are turning to online middlemen to find legitimate foreign laborers. Job sites such as Monster.com and CareerBuilder.com have been helping companies scour the globe for white-collar talent since the late 1990s. Now unskilled workers, too, are a few clicks away, a boon for such chronically labor-starved industries as construction, agriculture, and catering.

Labormex was founded in 2002 by Seymour Taylor, an entrepreneur descended from a family of American settlers in Mexico. Business took off when he set up a Web site about a year ago and began advertising on Yahoo! and Google. The site boasts of “hardworking people acclimated to tough physical labor and who

have worked under severe warm-weather conditions”—guys like Andreas Alcala Martinez, 29, who works for Carroll Construction. “Little money, but not hard work,” says Martinez. He makes \$9 an hour and arrived on an H-2B visa, of which the United States issues 66,000 annually for low-skilled work. He can work for Carroll for 10 months, with the option of renewal.

Next to the big job sites, Labormex is a minnow. Taylor says he placed about 200 people in 2006 and expects to triple that in 2007. But the company, which has offices in New York and Monterrey, Mexico, has reeled in big clients, including Super 8 Motels and the Sonic Drive-Ins fast-food chain.

The U.S. Department of Labor lists hundreds of officially sanctioned recruiting agencies on its Web site. The online recruiters are already providing ammunition for immigration critics. “They’re getting employers addicted to a supply of cheap labor and lowering incentives for them to look for domestic workers,” says Jessica M. Vaughn, a senior policy analyst at the Center for Immigration Studies, which opposes expanding guest-worker programs. But with many Americans unwilling to mow lawns, build houses, and wait tables, many companies see online recruiters as a necessary way to tap a labor pool that is increasingly global.

Source: Reprinted with special permission from Moira Herbst, “Click for Foreign Labor,” *BusinessWeek*, January 15, 2007. Copyright © 2007 The McGraw-Hill Companies.

of the supplier’s own activities? The answer to both questions is probably that a number of forces in the external environment have combined to create the situation. Such is the case in most studies of the environment.

Strategic managers are frequently frustrated in their attempts to anticipate the environment’s changing influences. Different external elements affect different strategies at different times and with varying strengths. The only certainty is that the effect of the remote and operating environments will be uncertain until a strategy is implemented. This leads many managers, particularly in less powerful or smaller firms to minimize long-term planning, which requires a commitment of resources. Instead, they favor allowing managers to adapt to new pressures from the environment. While such a decision has considerable merit for many firms, there is an associated trade-off, namely that absence of a strong resource and psychological commitment to a proactive strategy effectively bars a firm from assuming a leadership role in its competitive environment.

There is yet another difficulty in assessing the probable impact of remote, industry, and operating environments on the effectiveness of alternative strategies. Assessment of this kind involves collecting information that can be analyzed to disclose predictable effects.

EXHIBIT 4.12
Strategic Forecasting
Issues

Key Issues in the Remote Environment Economy

What are the probable future directions of the economies in the firm's regional, national, and international market? What changes in economic growth, inflation, interest rates, capital availability, credit availability, and consumer purchasing power can be expected? What income differences can be expected between the wealthy upper middle class, the working class, and the underclass in various regions? What shifts in relative demand for different categories of goods and services can be expected?

Society and demographics

What effects will changes in social values and attitudes regarding childbearing, marriage, lifestyle, work, ethics, sex roles, racial equality, education, retirement, pollution, and energy have on the firm's development? What effects will population changes have on major social and political expectations—at home and abroad? What constraints or opportunities will develop? What pressure groups will increase in power?

Ecology

What natural or pollution-caused disasters threaten the firm's employees, customers, or facilities? How rigorously will existing environment legislature be enforced? What new federal, state, and local laws will affect the firm, and in what ways?

Politics

What changes in government policy can be expected with regard to industry cooperation, antitrust activities, foreign trade, taxation, depreciation, environmental protection, deregulation, defense, foreign trade barriers, and other important parameters? What success will a new administration have in achieving its stated goals? What effect will that success have on the firm? Will specific international climates be hostile or favorable? Is there a tendency toward instability, corruption, or violence? What is the level of political risk in each foreign market? What other political or legal constraints or supports can be expected in international business (e.g., trade barriers, equity requirements, nationalism, patent protection)?

Technology

What is the current state of the art? How will it change? What pertinent new products or services are likely to become technically feasible in the foreseeable future? What future impact can be expected from technological breakthroughs in related product areas? How will those breakthroughs interface with the other remote considerations, such as economic issues, social values, public safety, regulations, and court interpretations?

Key Issues in the Industry Environment

New entrants

Will new technologies or market demands enable competitors to minimize the impact of traditional economies of scale in the industry? Will consumers accept our claims of product or service differentiation? Will potential new entrants be able to match the capital requirements that currently exist? How permanent are the cost disadvantages (independent of size) in our industry? Will conditions change so that all competitors have equal access to marketing channels? Is government policy toward competition in our industry likely to change?

Bargaining power of suppliers

How stable are the size and composition of our supplier group? Are any suppliers likely to attempt forward integration into our business level? How dependent will our suppliers be in the future? Are substitute suppliers likely to become available? Could we become our own supplier?

EXHIBIT 4.12
(continued)

Substitute products or services

Are new substitutes likely? Will they be price competitive? Could we fight off substitutes by price competition? By advertising to sharpen product differentiation? What actions could we take to reduce the potential for having alternative products seen as legitimate substitutes?

Bargaining power of buyers

Can we break free of overcommitment to a few large buyers? How would our buyers react to attempts by us to differentiate our products? What possibilities exist that our buyers might vertically integrate backward? Should we consider forward integration? How can we make the value of our components greater in the products of our buyers?

Rivalry among existing firms

Are major competitors likely to undo the established balance of power in our industry? Is growth in our industry slowing such that competition will become fiercer? What excess capacity exists in our industry? How capable are our major competitors of withstanding intensified price competition? How unique are the objectives and strategies of our major competitors?

Key Issues in the Operating Environment

Competitive position

What strategic moves are expected by existing rivals—inside and outside the United States? What competitive advantage is necessary in selected foreign markets? What will be our competitors' priorities and ability to change? Is the behavior of our competitors predictable?

Customer profiles and market changes

What will our customer regard as needed value? Is marketing research done, or do managers talk to each other to discover what the customer wants? Which customer needs are not being met by existing products? Why? Are R&D activities under way to develop means for fulfilling these needs? What is the status of these activities? What marketing and distribution channels should we use? What do demographic and population changes portend for the size and sales potential of our market? What new market segments or products might develop as a result of these changes? What will be the buying power of our customer groups?

Supplier relationships

What is the likelihood of major cost increases because of dwindling supplies of a needed natural resource? Will sources of supply, especially of energy, be reliable? Are there reasons to expect major changes in the cost or availability of inputs as a result of money, people, or subassembly problems? Which suppliers can be expected to respond to emergency requests?

Creditors

What lines of credit are available to help finance our growth? What changes may occur in our creditworthiness? Are creditors likely to feel comfortable with our strategic plan and performance? What is the stock market likely to feel about our firm? What flexibility would our creditors show toward us during a downturn? Do we have sufficient cash reserves to protect our creditors and our credit rating?

Labor market

Are potential employees with desired skills and abilities available in the geographic areas in which our facilities are located? Are colleges and vocational/technical schools that can aid in meeting our training needs located near our plant or store sites? Are labor relations in our industry conducive to meeting our expanding needs for employees? Are workers whose skills we need shifting toward or away from the geographic location of our facilities?

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Except in rare instances, however, it is virtually impossible for any single firm to anticipate the consequences of a change in the environment; for example, what is the precise effect on alternative strategies of a 2 percent increase in the national inflation rate, a 1 percent decrease in statewide unemployment, or the entry of a new competitor in a regional market?

Still, assessing the potential impact of changes in the external environment offers a real advantage. It enables decision makers to narrow the range of the available options and to eliminate options that are clearly inconsistent with the forecast opportunities. Environmental assessment seldom identifies the best strategy, but it generally leads to the elimination of all but the most promising options.

Exhibit 4.12 provides a set of key strategic forecasting issues for each level of environmental assessment—remote, industry, and operating. While the issues that are presented are not inclusive of all of the questions that are important, they provide an excellent set of questions with which to begin. Chapter 4 Appendix, Sources for Environmental Forecasting, is provided to help identify valuable sources of data and information from which answers and subsequent forecasts can be constructed. It lists governmental and private marketplace intelligence that can be used by a firm to gain a foothold in undertaking a strategic assessment of any level of the competitive environment.

Summary

A firm's external environment consists of three interrelated sets of factors that play a principal role in determining the opportunities, threats, and constraints that the firm faces. The remote environment comprises factors originating beyond, and usually irrespective of, any single firm's operating situation—economic, social, political, technological, and ecological factors. Factors that more directly influence a firm's prospects originate in the environment of its industry, including entry barriers, competitor rivalry, the availability of substitutes, and the bargaining power of buyers and suppliers. The operating environment comprises factors that influence a firm's immediate competitive situation—competitive position, customer profiles, suppliers, creditors, and the labor market. These three sets of factors provide many of the challenges that a particular firm faces in its attempts to attract or acquire needed resources and to profitably market its goods and services. Environmental assessment is more complicated for multinational corporations (MNCs) than for domestic firms because multinationals must evaluate several environments simultaneously.

Thus, the design of business strategies is based on the conviction that a firm able to anticipate future business conditions will improve its performance and profitability. Despite the uncertainty and dynamic nature of the business environment, an assessment process that narrows, even if it does not precisely define, future expectations is of substantial value to strategic managers.

Key Terms

barriers to entry, *p. 114*
concentration, *p. 114*
eco-efficiency, *p. 101*
ecology, *p. 99*
economies of scale, *p. 106*

external environment, *p. 94*
industry, *p. 112*
industry environment, *p. 102*
operating environment, *p. 116*
pollution, *p. 99*

product differentiation, *p. 106*
remote environment, *p. 94*
structural attributes, *p. 113*
technological
forecasting, *p. 98*

Questions for Discussion

- Briefly describe two important recent changes in the remote environment of U.S. business in each of the following areas:
 - Economic.
 - Social.
 - Political.
 - Technological.
 - Ecological.

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2. Describe two major environmental changes that you expect to have a major impact on the whole-sale food industry in the next 10 years.
3. Develop a competitor profile for your college and for the college geographically closest to yours. Next, prepare a brief strategic plan to improve the competitive position of the weaker of the two colleges.
4. Assume the invention of a competitively priced synthetic fuel that could supply 25 percent of U.S. energy needs within 20 years. In what major ways might this change the external environment of U.S. business?
5. With your instructor's help, identify a local firm that has enjoyed great growth in recent years. To what degree and in what ways do you think this firm's success resulted from taking advantage of favorable conditions in its remote, industry, and operating environments?
6. Choose a specific industry and, relying solely on your impressions, evaluate the impact of the five forces that drive competition in that industry.
7. Choose an industry in which you would like to compete. Use the five-forces method of analysis to explain why you find that industry attractive.
8. Many firms neglect industry analysis. When does this hurt them? When does it not?
9. The model below depicts industry analysis as a funnel that focuses on remote-factor analysis to better understand the impact of factors in the operating environment. Do you find this model satisfactory? If not, how would you improve it?



10. Who in a firm should be responsible for industry analysis? Assume that the firm does not have a strategic planning department.

Chapter 4 Discussion Case

BusinessWeek

Siemens' Culture Clash

- 1 If things had turned out a little differently, Siemens Chief Executive Klaus Kleinfeld might already be on his way to executive stardom, like his role model Jack Welch. Just two years after Kleinfeld took over the Munich electronics and engineering behemoth, Siemens is on track to hit its aggressive internal earnings targets for the first time since 2000. In fact, it is expanding both sales and profits faster than Welch's former fiefdom, General Electric Co. What's more, the company has a larger presence than GE in rapid-growth markets such as India.
- 2 But instead of literary agents breaking down his door in pursuit of a tome of management wisdom, Kleinfeld has angry employees demonstrating outside his window. He has gotten little applause for boosting 2006 sales by 16 percent and profits by 35 percent, and he faces questions about a bribery scandal that has sapped his authority even though he is not personally implicated.

Transforming Siemens was never going to be easy. With branches in 190 countries and \$114 billion in sales last year, the company has long been respected for its engineering prowess but derided for its sluggishness. And Germany Inc., with its long-standing tradition of labor harmony and powerful workers' councils, is highly resistant to the kind of change Kleinfeld has tried to implement. That's one reason Siemens lags seriously in overall profits, with a margin of 3.5 percent compared with 12.6 percent for GE. Kleinfeld concedes that some people doubt Siemens can change its ways, but he counters: "It took less time than we originally planned to get that growth momentum started."

Against the odds, in just two years Kleinfeld has managed a mighty restructuring. He has quoted the management precepts of Welch and has drawn on the GE playbook to realign Siemens as the world's leading provider of such infrastructure as airports, power plants, and medical equipment. He has

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pushed Siemens' 475,000 employees to make decisions faster and focus as much on customers as on technology. He spun off underperforming telecommunications-gear businesses and simplified the company's structure. And when one group of managers failed to deliver, he broke up an entire division.

RESPECT AND RESENTMENT

- 5 Although restructuring has dominated his tenure, Kleinfeld isn't just a cost-cutter. If you want to make his eyes light up, say "megatrends." The 49-year-old believes Siemens is perfectly positioned to profit from huge global shifts in population and wealth, and he spent \$8.6 billion last year on acquisitions in areas such as medical diagnostics and wind power. As people in the developing world get richer, he says, Siemens will supply CT and MRI scanners to diagnose their ills. It will build switching systems and engines for their trains and subways. And it will sell them water-purification equipment, power plants, and machines to run mines and factories. Barely a day goes by without Siemens announcing orders to modernize a steel mill in Russia, build a cement plant in Yemen, or set up a desalination operation in Pakistan. Says Kleinfeld: "This company is solving the biggest issues this planet has."
- 6 Investors have warmed to Kleinfeld's vision. Siemens shares have risen 26 percent in the two years since he took over versus 6 percent for GE. But his tactics have made him a target for German resentment of globalization and the perceived heartlessness of U.S.-style management methods. When, in an attempt at openness, Kleinfeld invited workers to respond to his blog, they did—in spades. "I used to feel good in the Siemens family," one employee wrote. "But there's not much of that feeling left."
- 7 More alarming, Siemens is the target of an expanding investigation by Munich prosecutors. In the probe of alleged bribes to foreign officials to win telecommunications contracts, authorities briefly jailed a former member of Siemens' executive board and many lower-ranking managers. Siemens admits that as much as \$546 million may have been misused. Kleinfeld, who was stationed in the United States during much of the time the alleged misconduct took place, has not been identified as a target of the investigation and has taken measures to prevent future scandals. He has hired a former senior German prosecutor to serve as compliance officer and retained an outside law firm to conduct an independent inquiry. Munich prosecutors say Siemens is cooperating in the bribery probe. That hasn't stopped some shareholder activists from criticizing Kleinfeld's handling of the crisis, and he is sure to come under fire when the company holds its annual meeting in Munich on January 25, 2007. Shareholder groups have already filed motions to withhold approval of the Siemens management board, normally a formality in Germany.
- 8 The pressure is apt to grow. Siemens says it expects the U.S. Securities & Exchange Commission to investigate,

potentially exposing the company to hundreds of millions of dollars in fines. But unless new and far more damaging revelations arise, Kleinfeld is unlikely to be forced out. Still, the crisis has become a distraction. "Yes, it is taking part of my time," says Kleinfeld, who has offloaded some responsibilities to other members of the management board as a result.

If Kleinfeld is worried, though, he isn't showing it. A few weeks after Munich prosecutors seized documents from 30 Siemens locations—including his office—Kleinfeld seems relaxed and self-assured. Never mind that in a waiting room a few feet from his door, headlines on a stack of newspapers arrayed neatly on a table blare the latest news on the scandal. He yawns occasionally, the only sign of fatigue.

Provided Kleinfeld weathers all the turbulence, he still has the potential to emerge as one of Europe's most dynamic chief executives. With an eye to his German critics, Kleinfeld these days deflects comparisons to Welch. But it's hard not to see some of the former GE chief's energy and competitive spirit—not to mention impatience—in Kleinfeld. He rises before dawn to jog and often barrages subordinates with phone calls and e-mails late into the night. "If you turn off your phone, he calls your wife," says one manager who counts himself a Kleinfeld admirer. Siemens executives know that an e-mail ending with the word *bitte* ("please") means get it done now—or else. "I wonder when that guy sleeps," says Hermann Requardt, Siemens' chief of research and development.

HAPPY IN THE HEARTLAND

Kleinfeld downplays the influence of his three years in the United States, a stint ordinary Germans view as a blot on his résumé. There's no question, though, that he counts those years among his best. "I liked it over there," says Kleinfeld, who served as CEO of Siemens' U.S. operations in 2002 and 2003. "Wherever I went, I made friends." And to this day, Kleinfeld's style is decidedly less German-centric than that of his predecessor, Heinrich von Pierer. Von Pierer played tennis with the Chancellor. Kleinfeld runs the New York Marathon. Von Pierer served on a half-dozen boards of German companies. Kleinfeld does so for Citigroup, Alcoa, and the New York Metropolitan Opera. Von Pierer speaks English well but prefers German. Kleinfeld is totally fluent in English.

His affection for the United States comes naturally, perhaps because Kleinfeld personifies the American ideal of the self-made man. He was 10 when his father died, and by the age of 12 he was working in a supermarket and taking on other part-time jobs to help make ends meet. Later, while working full-time at Siemens, he completed his doctoral work on corporate communications strategy, which was published as a book.

Today, Kleinfeld is as comfortable hobnobbing with global leaders as he is chatting with entry-level employees.

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September 2006 found him speaking about climate change at the Clinton Global Initiative in New York, then meeting workers in a nearby suburb.

- 14 He also knows how to enjoy himself. In December 2006, Kleinfeld danced the night away at a Christmas party for U.S. employees at New York's B.B. King Blues Club. He even plays a decent blues harmonica, though never in public.
- 15 One of Kleinfeld's problems is that few inside Siemens can match his energy. The Old Guard tend to grumble that Kleinfeld is too impatient and demanding. Soon after taking office in January 2005, he vowed that Siemens would finally achieve ambitious profit-margin goals established in 2000 for each unit. The targets range from 6 percent for auto parts to 13 percent for the top-performing medical-equipment division. Kleinfeld staked his job on the company hitting those numbers by April 2007—which now looks likely, analysts say. His message: everyone, including the boss, is accountable. "We commit to something, and we deliver," Kleinfeld says. "That is the culture we want to form."
- 16 Communicating that culture change across such a sprawling enterprise is a massive challenge. The company's 11 main business units operate almost as separate entities, with their own boards and distinct corporate cultures, making it hard for directives from the top to filter down to the troops. One executive says Kleinfeld's biggest impact so far has been increased pressure to speak English throughout the company—hardly an earth-shattering reform. And while Siemens excels at technological breakthroughs, such as mobile phones with built-in music players, they have often failed because of poor marketing and a lack of focus on the consumers who use the products. So how do you persuade Siemens' vaunted engineers to pay more attention to customers? Kleinfeld declared that he would personally visit Siemens' 100 biggest clients in his first 100 days in office. He wound up meeting more than 300 of them.
- 17 Kleinfeld isn't shy about administering harsh medicine when he feels it's needed. That's something new at the 159-year-old company. At the end of 2005, it became clear that the Logistics & Assembly Systems Division, which made products such as sorting equipment used by the U.S. Postal Service, would deliver only a 2 percent profit margin. Most unpardonable in Kleinfeld's eyes was that the unit's managers waited too long to alert him to the problem. So Kleinfeld transferred the most profitable parts of the division, such as baggage-handling systems for airports, to other parts of Siemens. The rest was sold. Within weeks, an entire Siemens division with \$1.9 billion in annual sales was vaporized. Around Siemens, there was a collective gasp.

TOSSING OUT TELECOM

He has been equally tough on some sacred pieces of the Siemens empire. Founder Werner von Siemens made his name laying intercontinental telegraph lines in the mid-1800s, but that didn't stop Kleinfeld from getting rid of communications businesses. He paid Taiwan's BenQ Corp. to take the money-losing mobile-phone division off his hands at a total cost to Siemens of \$1.4 billion. And he put most of Siemens' telecommunications-equipment business into a joint venture run by Finland's Nokia Corp. But the Nokia deal has been delayed until questions about the bribery scandal are cleared up. In September 2006, BenQ declared the German handset unit insolvent. Although Kleinfeld insists he thought it had a future under BenQ, workers have charged that he should have foreseen the disaster. In the face of pressure from labor leaders and German politicians, Siemens ultimately coughed up \$46 million to aid workers who lost their jobs.

Some Siemens watchers say Kleinfeld has become more cautious following the bribery investigation and the uproar over his restructuring moves. Those controversies clearly rob him of political capital, and plenty of people both inside and outside Siemens would surely love to see Kleinfeld fail. Says a consultant who has worked closely with Siemens: "Some people are betting that he doesn't survive and that they can go on in the normal way."

Kleinfeld, though, has no plans to give up, and he is pressing to reshape the "normal" ways in which the giant company operates even as the investigations continue. Says Kleinfeld: "We are fitter than ever."

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DISCUSSION QUESTIONS

1. What are the industry forces that dominate Siemens' industries?
2. What are the different types of responsibility that Kleinfeld shoulders in his job as CEO? Do you consider them to be strategic responsibilities?
3. Do you think that the level of strategic turbulence and restructuring that Kleinfeld faces is common in business? Do you believe that Kleinfeld helps to create this turmoil?
4. How do you see the U.S. and German business environments as different?
5. To what degree do you believe Kleinfeld must simply react to his environments as opposed to "creating" them?

Chapter 4 Appendix

Sources for Environmental Forecasting

Remote and Industry Environments

A. Economic considerations:

1. *Predicasts* (most complete and up-to-date review of forecasts)
2. National Bureau of Economic Research
3. *Handbook of Basic Economic Statistics*
4. *Statistical Abstract of the United States* (also includes industrial, social, and political statistics)
5. Publications by Department of Commerce agencies:
 - a. Office of Business Economics (e.g., *Survey of Business*)
 - b. Bureau of Economic Analysis (e.g., *Business Conditions Digest*)
 - c. Bureau of the Census (e.g., *Survey of Manufacturers* and various reports on population, housing, and industries)
 - d. Business and Defense Services Administration (e.g., *United States Industrial Outlook*)
6. Securities and Exchange Commission (various quarterly reports on plant and equipment, financial reports, working capital of corporations)
7. The Conference Board
8. *Survey of Buying Power*
9. *Marketing Economic Guide*
10. *Industrial Arts Index*
11. U.S. and national chambers of commerce
12. American Manufacturers Association
13. *Federal Reserve Bulletin*
14. *Economic Indicators*, annual report
15. *Kiplinger Newsletter*
16. International economic sources:
 - a. *Worldcasts*
 - b. Master key index for business international publications
 - c. Department of Commerce
 - (1) Overseas business reports
 - (2) Industry and Trade Administration
 - (3) Bureau of the Census—*Guide to Foreign Trade Statistics*
17. *Business Periodicals Index*

B. Social considerations:

1. Public opinion polls
2. Surveys such as *Social Indicators and Social Reporting*, the annals of the American Academy of Political and Social Sciences
3. Current controls: Social and behavioral sciences
4. Abstract services and indexes for articles in sociological, psychological, and political journals

5. Indexes for *The Wall Street Journal*, *New York Times*, and other newspapers
6. Bureau of the Census reports on population, housing, manufacturers, selected services, construction, retail trade, wholesale trade, and enterprise statistics
7. Various reports from such groups as the Brookings Institution and the Ford Foundation
8. World Bank Atlas (population growth and GNP data)
9. World Bank–World Development Report

C. Political considerations:

1. *Public Affairs Information Services Bulletin*
2. CIS Index (Congressional Information Index)
3. Business periodicals
4. Funk & Scott (regulations by product breakdown)
5. Weekly compilation of presidential documents
6. *Monthly Catalog of Government Publications*
7. *Federal Register* (daily announcements of pending regulations)
8. *Code of Federal Regulations* (final listing of regulations)
9. Business International Master Key Index (regulations, tariffs)
10. Various state publications
11. Various information services (Bureau of National Affairs, Commerce Clearing House, Prentice Hall)

D. Technological considerations:

1. *Applied Science and Technology Index*
2. *Statistical Abstract of the United States*
3. Scientific and Technical Information Service
4. University reports, congressional reports
5. Department of Defense and military purchasing publishers
6. Trade journals and industrial reports
7. Industry contacts, professional meetings
8. Computer-assisted information searches
9. National Science Foundation annual report
10. *Research and Development Directory* patent records

E. Industry considerations:

1. *Concentration Ratios in Manufacturing* (Bureau of the Census)
2. *Input-Output Survey* (productivity ratios)
3. *Monthly Labor Review* (productivity ratios)
4. *Quarterly Failure Report* (Dun & Bradstreet)
5. *Federal Reserve Bulletin* (capacity utilization)

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6. *Report on Industrial Concentration and Product Diversification in the 1,000 Largest Manufacturing Companies* (Federal Trade Commission)
7. Industry trade publications
8. Bureau of Economic Analysis, Department of Commerce (specialization ratios)

Industry and Operating Environments

A. Competition and supplier considerations:

1. Target Group Index
2. U.S. Industrial Outlook
3. Robert Morris annual statement studies
4. Troy, Leo *Almanac of Business & Industrial Financial Ratios*
5. *Census of Enterprise Statistics*
6. Securities and Exchange Commission (10-K reports)
7. Annual reports of specific companies
8. *Fortune 500 Directory*, *The Wall Street Journal*, *Baron's*, *Forbes*, *Dun's Review*
9. Investment services and directories: Moody's, Dun & Bradstreet, Standard & Poor's, Starch Marketing, Funk & Scott Index
10. Trade association surveys
11. Industry surveys
12. Market research surveys
13. *Country Business Patterns*
14. *Country and City Data Book*
15. Industry contacts, professional meetings, salespeople
16. *NFIB Quarterly Economic Report for Small Business*

B. Customer profile:

1. *Statistical Abstract of the United States*, first source of statistics
2. *Statistical Sources* by Paul Wasserman (a subject guide to data—both domestic and international)
3. *American Statistics Index* (Congressional Information Service Guide to statistical publications of U.S. government—monthly)
4. Office of the Department of Commerce:
 - a. Bureau of the Census reports on population, housing, and industries
 - b. *U.S. Census of Manufacturers* (statistics by industry, area, and products)
 - c. *Survey of Current Business* (analysis of business trends, especially February and July issues)

5. Market research studies (*A Basic Bibliography on Market Review*; compiled by Robert Ferber et al., American Marketing Association)
6. *Current Sources of Marketing Information: A Bibliography of Primary Marketing Data* by Gunther & Goldstein, AMA
7. *Guide to Consumer Markets*, The Conference Board (provides statistical information with demographic, social, and economic data—annual)
8. *Survey of Buying Power*
9. *Predicasts* (abstracts of publishing forecasts of all industries, detailed products, and end-use data)
10. *Predicasts Basebook* (historical data from 1960 to present, covering subjects ranging from population and GNP to specific products and services; series are coded by Standard Industrial Classifications)
11. *Market Guide* (individual market surveys of over 1,500 U.S. and Canadian cities; includes population, location, trade areas, banks, principal industries, colleges and universities, department and chain stores, newspapers, retail outlets, and sales)
12. *Country and City Data Book* (includes bank deposits, birth and death rates, business firms, education, employment, income of families, manufacturers, population, savings, and wholesale and retail trade)
13. *Yearbook of International Trade Statistics* (UN)
14. *Yearbook of National Accounts Statistics* (UN)
15. *Statistical Yearbook* (UN—covers population, national income, agricultural and industrial production, energy, external trade, and transport)
16. *Statistics of (Continents): Sources for Market Research* (includes separate books on Africa, America, Europe)

C. Key natural resources:

1. *Minerals Yearbook*, *Geological Survey* (Bureau of Mines, Department of the Interior)
2. *Agricultural Abstract* (Department of Agriculture)
3. Statistics of electric utilities and gas pipeline companies (Federal Power Commission)
4. Publications of various institutions: American Petroleum Institute, Atomic Energy Commission, Coal Mining Institute of America, American Steel Institute, and Brookings Institution