INDUSTRY ANALYSIS

11

In Parts One and Two of this text, we explored the economics of the firm's relationships with its upstream and downstream trading partners as well as with its competitors. Because these chapters introduce so many potentially important concepts, the student could lose sight of the key insights. *Industry analysis* frameworks, such as Michael Porter's *Five Forces* and Brandenberger and Nalebuff's *Value Net*, provide a structure that enables us to systematically work through these wide ranging and often complex economic issues. An industry analysis based on such frameworks facilitates the following important tasks:

- Assessment of industry and firm performance
- Identification of key factors affecting performance
- Determination of how changes in the business environment may affect performance

Most important, industry analysis is invaluable for assessing the generic business strategies that we introduce in Part Three.

Parts One and Two are rooted in microeconomics, particularly the economics of the firm and the economics of industrial organization. Although the roots of these fields can be traced to the 1930s or earlier, they had little impact on business strategy until Michael Porter published a series of articles in the 1970s that culminated in his pathbreaking book *Competitive Strategy*. Porter presented a convenient framework for exploring the economic factors that affect the profits of an industry. Porter's main innovation is to classify these factors into five major forces that encompass the vertical chain and market competition. Although it is two decades old, the five-forces approach is flexible enough to accommodate new economic concepts as they emerge.

In their book *Coopetition*, Adam Brandenberger and Barry Nalebuff propose a significant improvement to the five-forces framework. They describe the firm's "Value Net," which includes suppliers, distributors, and competitors. Whereas

Porter describes how suppliers, distributors, and competitors might detract from a firm's profits, Brandenberger and Nalebuff's key insight is that these firms often *enhance* firm profits.

This chapter shows how to perform a five-forces industry analysis that accounts for the economic principles in Parts One and Two. It also shows how to expand Porter's ideas to accommodate the "Value Net" principles introduced by Brandenberger and Nalebuff. We illustrate these ideas by examining three industries, Hospitals, Banking, and Hawaiian Coffee.

The five-forces framework has several limitations. First, it pays limited attention to factors that might affect demand other than the availability and prices of substitute and complementary products. It ignores changes in consumer income, tastes, and firm strategies for boosting demand, such as advertising. Second, it focuses on a whole industry, rather than on that industry's individual firms. Third, the framework does not explicitly account for the role of the government, except when the government is a supplier or buyer. The government as a regulator can profoundly affect industry profitability, and could be considered a sixth force. Fourth, the five-forces analysis is qualitative. For example, an analysis of industry structure may suggest that the threat of entry is high, but the framework does not show how to estimate the probability of entry. Because it is qualitative, the framework is especially useful for assessing trends—that is, for determining whether industry profitability is likely to increase or decrease.

◆ ◆ ◆ ◆ ◆ Performing a Five-Forces Analysis

When performing a five forces analysis, you must remember that it is not a set of principles per se. The relevant principles have been developed in preceding chapters. Instead, the five-forces framework is a tool for assuring that you systematically use these principles to assess the current status and likely evolution of an industry.

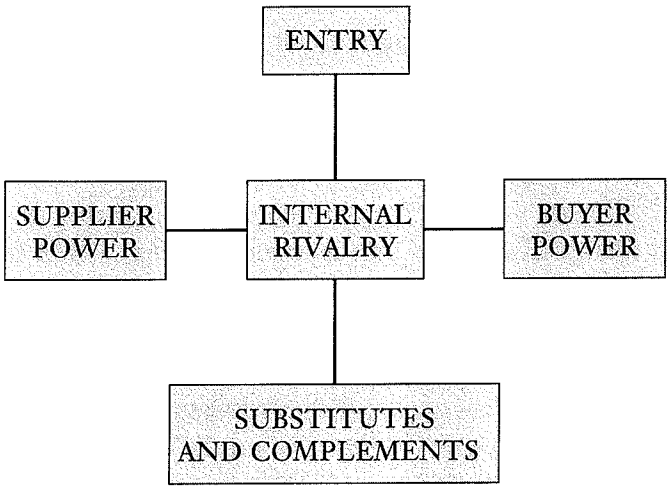
As you work through the five-forces, you should appeal to the economic principles that are relevant to each force. For example, when assessing the power of suppliers to affect industry and firm performance, you should determine if firms in the industry have made relationship-specific investments with their suppliers (or vice versa) and whether they are protected from potential holdup either by contracts or market forces. In the following discussion, we will identify those principles that are most relevant to each of the forces.

The five forces, as represented in Figure 11.1, include: Internal rivalry, Entry, Substitute and Complementary products, Supplier power, and Buyer power. Internal rivalry is in the center because it may be affected by each of the other forces. One assesses each force by asking "Is it sufficiently strong to reduce or eliminate industry profits?" To answer this question, it is essential to refer to the economic principles that apply for each force. In this section, we review these principles. The appendix offers a template for doing industry analysis.

Internal Rivalry

Internal rivalry refers to the jockeying for share by firms within a market. Thus, an analysis of internal rivalry must begin by defining the market. Be sure to include all firms that constrain each other's strategic decision making, as described in

FIGURE 11.1
THE FIVE-FORCES FRAMEWORK.



Chapter 7, and pay attention to both the product market and geographic market definitions. For example, if you are performing a five-forces assessment of hotels, note that most consumers have specific geographic preferences when selecting a hotel. This implies that competition is local, and your five-forces analysis should reflect this. If you are unsure whether to include a firm in the relevant market, remember that you can always exclude it from your consideration of internal rivalry and still consider it when you assess substitutes and complements.

As we discussed in Chapters 7 through 9, firms may compete on a number of price and nonprice dimensions. Price competition erodes profits by driving down price-cost margins. Nonprice competition erodes profits by driving up fixed costs (e.g., new product development) and marginal costs (e.g., improving product quality). To the extent that firms can pass cost increases along to consumers in the form of higher prices, nonprice competition is less likely to erode profits than is price competition.

Industry prices do not fall by themselves—one or more firms must reduce prices. A firm reduces prices if it believes it can gain market share by doing so. Hence, the incentives for a firm to reduce price are related to the degree to which it expects its market share to increase.

Each of the following conditions tends to heat up price competition:

- **There are many sellers in the market** The structure/conduct/performance paradigm introduced in Chapter 7 predicts that prices are lower when there are more firms in the market. There are several reasons for this. When there are many competitors, there is a good chance that at least one is dissatisfied with the status quo, and will want to lower price to improve its market position. At the same time, a firm with a low market share might conclude that its rivals will not respond if it lowers price.
- **The industry is stagnant or declining** Firms cannot easily expand their own output without stealing from competitors. This often elicits a competitive response that tends to intensify competition.

- **Firms have different costs** Low-cost firms may be unhappy with a high price, reasoning that if price falls their high-cost rivals may exit.
- **Excess capacity** Firms with excess capacity may be under pressure to boost sales, and often can rapidly expand output to steal business from rivals.
- **Products are undifferentiated/buyers have low switching costs** When products are undifferentiated and switching costs are low, firms are tempted to undercut their rivals prices because this can generate a substantial increase in market share.
- **Prices and terms of sales are unobservable/prices cannot be adjusted quickly** This increases the response time of rivals, enabling the price cutter to potentially gain substantial market share before its rivals match the price cut.
- **Large/infrequent sales orders** A firm may be tempted to undercut its rivals to secure a particularly large order, believing that the substantial gains may more than offset any losses from future rounds of price cutting. This is especially true if different managers are responsible for different bids, and each is rewarded on the basis of his or her own sales.
- **Industry does not use "facilitating practices" or have a history of cooperative pricing** In the absence of price leadership, price announcements, or other facilitating practices, firms may be unable to "agree" upon a suitable industry price, and some may lower price to gain an advantage. A history of cooperative pricing may assure industry participants that each is striving to find a price that works to everyone's collective benefit.
- **Strong exit barriers** This can prolong price wars as firms struggle to survive instead of exiting.

Entry

Entry erodes incumbents' profits in two ways. First, entrants steal incumbents' business, essentially dividing up market demand among more sellers. Second, entrants decrease market concentration, thereby heating up internal rivalry and reducing price-cost margins. Although most entry barriers are structural (i.e., they result from the technological requirements for successful competition), some are strategic (i.e., they result from strategic choices made by incumbents). Each of the following tends to affect the threat of entry:

- **Production entails significant economies of sales—minimum efficient scale is large relative to the size of the market** The entrant must achieve a substantial market share to reach minimum efficient scale, and if it does not, it may be at a significant cost disadvantage. This increases the risk of entry and the likelihood that the incumbent firms respond with price reductions if entry is successful.
- **Consumers highly value reputation/consumers are brand loyal** Entrants must invest heavily to establish a strong reputation and brand awareness. Diversifying entrants using a brand umbrella may be more successful than entirely new entrants.
- **Access of entrants to key inputs, including technological know-how, raw materials, distribution, and locations** Patents, unique locations, and so

forth can all be natural barriers to entry. Incumbent must avoid overpaying to tie up unique inputs.

- **Experience curve** A steep experience curve puts entrants at a cost disadvantage.
- **Network externalities** This gives an advantage to incumbents with a large installed base. If incumbents are slow to establish an installed base, an entrant may do so through a large-scale product launch.
- **Government protection of incumbents** Laws may favor some firms over others.
- **Expectations about postentry competition** Historical evidence is invaluable to predicting postentry competition. Does the incumbent have a reputation for predatory pricing in the face of entry? Do incumbents have a history of persevering through price wars? Do incumbents have sufficient excess capacity to flood the market, and if necessary, to drive the entrant from the market.

Substitutes and Complements

Although the five-forces analysis does not directly consider demand, it does consider two important factors that influence demand—substitutes and complements. Substitutes erode profits in the same way as entrants by stealing business and intensifying internal rivalry. Complements boost the demand for the product in question, thereby enhancing profit opportunities for the industry. Bear in mind, however, that changes in demand can affect internal rivalry, entry, and exit. Be sure to consider these indirect effects of substitutes and complements. Factors to consider when assessing substitutes and complements include:

- **Availability of close substitutes and/or complements** Consider product performance characteristics when identifying substitutes and complements.
- **Price-value characteristics of substitutes/complements** Seemingly close substitutes may pose little threat if they are priced too high. Similarly, complements may fail to boost demand if priced too high. Many new products may be weak substitutes or complements, but gain in importance as manufacturers move down the learning curve and prices fall.
- **Price elasticity of industry demand** This is a useful measure of the pressure substitutes place on an industry. When the industry-level price elasticity is large, rising industry prices tend to drive consumers to purchase substitutes products. Elasticities have been computed for many industries.[1]

Supplier Power and Buyer Power

An assessment of supplier power takes the point of view of a downstream industry and examines the ability of that industry's upstream input suppliers to negotiate prices that extract industry profits. Recall from Chapters 3 through 5 that upstream suppliers can erode industry profits if (a) they are concentrated, or (b) their customers are

[1]See, for example, Pagoulatos, E. and R. Sorenson, "What Determines the Elasticity of Industry Demand?" *International Journal of Industrial Organization*, 4, 1986: pp. 237–250.

locked into relationships with them because of relationship-specific investments. An input supplier with monopoly power can raise prices when its target industrial market is faring well, thereby extracting a share of the industry's profits. The converse also applies—a powerful supplier may lower prices when its target market is doing poorly. Consistent application of both pricing strategies will permit the supplier to extract much of its target market's profits without destroying that market. Historically, unions have used this strategy to increase workers' wages. Similarly, an input supplier with a relationship-specific investment in an industry can squeeze profits from a successful industry and ease the burden on an industry in trouble.

Supplier power should not be taken as synonymous with the "importance" of an input to a firm or an industry. For example, jet fuel is an important input in the airline industry, constituting about 20 percent of the operating costs of a typical airline. However, jet fuel is purchased in a competitive market in which suppliers act much like price takers. Jet fuel is best considered in the analysis of complements.

Buyer power is analogous to supplier power. It refers to the ability of individual customers to negotiate purchase prices that extract profits from sellers. Buyer power is obviously related to internal rivalry, but the two competitive forces are conceptually distinct. In many markets, individual buyers have little power to negotiate with sellers, but the markets are nevertheless price competitive. This is true of many retail markets and commodities spot markets. Price-cost margins are low in these markets because sellers compete for price-sensitive consumers. The willingness of consumers to shop for the best price is a source of internal rivalry, not buyer power.

The following factors must be considered when assessing supplier power and buyer power. We state each in terms of supplier power relative to the downstream industry that it sells to. An analogous factor must be assessed when considering buyer power.

- **The relative concentration of the industry in question, its upstream, and its downstream industries** Firms in the more concentrated industry may have greater bargaining power, and may be able to achieve a cooperative price that puts firms in the less concentrated industry (due to internal rivalry in that industry) at a disadvantage.
- **Purchase volume of downstream firms** Suppliers may give better service and lower prices to larger purchasers.
- **Availability of substitute inputs** The availability of substitutes limits the price that suppliers can charge.
- **Relationship-specific investments by the industry and its suppliers** The threat of hold-up may determine the allocation of rents between the industry and its suppliers.
- **Threat of forward integration by suppliers** If credible, firms in an industry may be forced to accept the high supply price or risk direct competition by forward-integrating suppliers.
- **Ability of suppliers to price discriminate** If suppliers can price discriminate, they can raise the prices they charge more profitable firms.

Strategies for Coping with the Five Forces

A five-forces analysis identifies the threats to industry profits that all firms in the industry must cope with. Firms may pursue several strategies to do this. First,

firms may position themselves to outperform their rivals, by developing a cost or differentiation advantage that somewhat insulates them from the five forces. Chapter 12 and 13 discuss positioning strategies in detail. Second, firms may identify an industry segment in which the five forces are less severe. For example, in the 1970s, Crown Cork and Seal served manufacturers of "hard-to-hold" liquids, a niche market that was far less competitive than the metal can segments served by industry leaders American Can and Continental Can. Through this and similar strategies, Crown earned significantly higher rates of return. (Chapter 13 discusses focus strategies of this kind.) Third, a firm may try to change the five forces, although this is difficult to do. Firms may try to reduce internal rivalry by creating switching costs, such as when a manufacturer requires consumers to use its parts to keep its warranty in force. This creates a cost—in the form of a voided warranty—to consumers who purchase parts from another supplier. Firms may reduce the threat of entry by pursuing entry-deterring strategies. Firms may try to reduce buyer or supplier power by tapered integration. In the examples that follow, we will see how firms in a variety of industries have attempted to cope, with varying degrees of success, with the five forces.

COOPETITION AND THE VALUE NET

Porter's five forces is an enduring framework that remains widely used for industry analysis. In their book *Coopetition*, Adam Brandenberger and Barry Nalebuff identify an important weakness of the framework. From the viewpoint of any one firm, Porter tends to view all other firms, be they competitors, suppliers, or buyers, as threats to profitability. Brandenberger and Nalebuff point out that firm interactions may be positive as well as negative, and emphasize the many positive interactions that Porter generally ignores. Examples of positive interactions include:

- Efforts by "competitors" to set technology standards that facilitate industry growth, such as when consumer electronics firms cooperated to establish a single format for high definition television, or when Sony and Toshiba formed an alliance to establish a compatible standard for digital video disks.
- Efforts by competitors to promote favorable regulations or legislation, such as when domestic U.S. automakers worked together to get the U.S. Environmental Protection Agency to relax CAFE fuel economy standards.
- Cooperation among firms and their suppliers to improve product quality to boost demand, such as when GM extracted work rule concessions from the workers at its Saturn plant.
- Cooperation among firms and their suppliers to improve productive efficiency, such as when Toshiba worked closely through the years with Frito-Lay to design hand-held computers to meet Frito-Lay's specific distribution needs. In fact, Frito-Lay has participated actively in Toshiba's new products steering committee.
- Cooperation among firms and their buyers that reduces inventory costs, such as when Baxter worked with American hospitals to develop just-in-time inventory programs that enabled them to survive cutbacks in federal reimbursements, permitting higher profit margins and greater profitability for both sets of firms.

In support of these ideas, Bradenberger and Nalebuff introduce the concept of the "Value Net" as a counterpart to Porter's five forces. The Value Net, which consists of suppliers, customers, competitors, and complementors (firms producing complementary goods and services), is similar to the five forces. Brandenberger and Nalebuff's admonition to perform a comprehensive analysis of the Value Net to prevent blind spots is also reminiscent of Porter. But whereas a five-forces analysis mainly assesses threats to profits, a Value Net analysis assesses threats and opportunities. This important addition does not nullify the five-forces approach so much as complement it. A complete five-forces analysis should, therefore, consider both the threats and opportunities each force poses.

To illustrate this point, contrast a traditional five-forces industry analysis of the DVD player market in 1997–1998 (the first two years of introduction) with an analysis that accounts for the Value Net. In a traditional analysis, DVD manufacturers would be somewhat pessimistic. Manufacturers would have concluded that the main source of differentiation was brand—the players are otherwise fairly homogeneous. This could have led to intensive internal rivalry. On the other hand, there were modest technological and physical capital requirements limiting entry. Satellite TV and high definition TV posed clear threats as substitutes. Powerful studios such as Disney and producers such as George Lucas and Stephen Spielberg could have demanded substantial payments to supply their movies in DVD format. The biggest threat would be from the alternative DIVX format.

This analysis fails to account for the Value Net, and, as a result, fails to identify opportunities for industry growth and profitability. The participants in the Value Net—manufacturers, studios, and retailers needed to recognize that their fortunes were intertwined. If they could generate sufficient interest in DVD, then demand would grow fast enough to make everyone profitable while thwarting DIVX.

Manufacturers had many options for boosting demand. The most obvious would be to set low prices. This would encourage hardware sales which would, in turn, encourage studios to release more movies in DVD, thereby further boosting demand for hardware. They could also heavily promote DVD so as to boost product awareness while blunting the threat from DIVX. In the first year, hardware makers did none of this. They kept prices high so as to profit from early adopters (players sold for $500–$1,000), rather than to stimulate mass market acceptance. They ran few advertisements or promotions, electing to "free ride" off of the product awareness generated by each other's advertising and promotional activities. As a result, manufacturers sold about 300,000 players, well short of expectations. In the second year, manufacturers lowered prices on some players to less than $300 and spent heavily on advertising and promotions. Other participants in the Value Net also pitched in. MGM released specially remastered editions of classic films such as *Gone With the Wind*, *2001: A Space Odyssey*, and *Casablanca*. Warner slashed prices on dozens of popular titles. Columbia and Universal studios accelerated the release of popular action titles such as *Godzilla*, *The Mask of Zorro*, and *Mercury Rising*. Meanwhile, electronics retailers, especially Best Buy, heavily promoted DVD hardware and software, including a much publicized half-price software sale for internet purchases.

DVD succeeded when all the players in the Value Net did their part to promote the overall success of the product. Some members of the Value Net, such as Warner and Best Buy, were even willing to take a temporary loss (by setting prices below costs) so as to contribute to the future success of the format. The DVD

market finally took off when firms worked to increase the size of the DVD "pie," rather than fight for their share of a given "pie." Through their complementary actions, the participants in the DVD Value Net secured its future and reaped the benefits.

APPLYING THE FIVE FORCES: SOME INDUSTRY ANALYSES

The best way to illustrate the five-forces framework is by example. In this section we perform three detailed industry analyses. For each industry, we present background information, proceed with market definition, and identify the most salient economic principles from each of the five forces.

Hospital Markets Then and Now

Hospitals have experienced some financial difficulties in recent years. Hospital bankruptcies were once rare. Since the mid-1980s, however, an average of 75 hospitals a year has gone bankrupt (about 1.5 percent of the nation's total each year), and many others struggle to stay solvent. At the same time, some hospitals have been very successful financially. A comparison of the five forces at two points in time, 1980 and today, demonstrates the problems that hospitals have grown accustomed to and identifies profit opportunities that some hospitals have exploited.

Market Definition

As discussed in Chapter 7, market definition requires identification of both a product market and a geographic market. We consider the product market to be acute medical services. These services include maternity and surgical care and complex diagnostic services. While other sellers offer many of these services—outpatient surgery centers are a good example—we will treat offerings of other sellers as substitutes in this analysis. This decision is not essential to our conclusions and illustrates the flexibility of the five-forces framework. (We would be remiss, of course, if we did not consider outpatient surgery at all.)

Hospital services tend to be bought and sold locally. Residents of a metropolitan area tend to visit hospitals in the same vicinity, and most of the patients in area hospitals reside in that area. Thus, each metropolitan area might be thought of as a distinct geographic market.[2] We will assess internal rivalry in the Chicago metropolitan area.

Internal Rivalry

There are about 70 community hospitals in the Chicago market.[3] Virtually all of them were independent in 1980, so that the market Herfindahl index was below 0.05. Today, many hospitals belong to systems. Some systems, such as Advocate,

[2]This is overly broad. A large metropolitan area might have several smaller markets, and nearby geographic areas might be part of a single, larger market. Geographic market definition for small towns and rural areas can be difficult.

[3]Community hospitals treat a variety of patients on a short-term basis. Another type of hospital not considered here is the psychiatric hospital.

own all of their member hospitals. Other systems, such as Northwestern Healthcare Network, contract with insurers in behalf of independent members. There are several systems in Chicago, but hospitals in some of the systems are free to set their own prices, even if that results in their stealing business from sister hospitals. A small number of hospitals remain independent. Thus, even if we treat each system as a single entity to compute market shares, the market Herfindahl index is still below 0.20.

If we examine the five-forces checklist in the appendix, we see that the Chicago hospital market meets several criteria for fierce internal rivalry. There are many competitors. Production costs vary across hospitals. There is substantial excess capacity; occupancy rates at many hospitals have been below 70 percent for decades. Finally, demand for admissions has been stagnant or declining for decades.

Despite these factors, internal rivalry in 1980 was benign. At that time, hospitals were selected by patients and their admitting physicians. Most patients had insurance that paid for the bulk of the hospital bill. This meant that price was not important to many patients, implying that cross-price elasticities of demand were low. Patients also tended to be loyal to particular hospitals, largely because it was costly for their physicians to switch case loads from one hospital to another. The combination of price-insensitive patients and physician-dominated admission decisions limited the incentives of hospitals to use price as a strategic weapon. As a result, internal rivalry in 1980 was low, and most hospitals in Chicago enjoyed healthy price-cost margins.

Facing a threat to their own profitability, Chicago-area health insurers in the 1980s imposed some market discipline on hospitals.[4] Through what has become known as managed care, insurers began selectively contracting with those hospitals that offered the most favorable rates. They then offered financial inducements (in the form of lower copayments) to encourage patients to select the contracting hospitals. By steering patients to the lowest priced hospitals, insurers effectively increase price elasticities of demand. Insurers are also less "brand loyal" than are individual patients. Horizontal differentiation based on the hospital's location, or the preferences of individual admitting physicians, is muted when insurers aggregate the preferences of thousands of patients. Two additional factors contribute to internal rivalry. Price negotiations between insurers and hospitals are secret, encouraging hospitals to lower prices to win contracts. Finally, "sales" are infrequent (i.e., a contract lasts one to three years) and "lumpy" (i.e., one insurer may represent 5 percent or more of a hospital's business). This intensifies the pressure on hospitals to lower prices to win each individual contract without considering future price rivalry.

Price rivalry under selective contracting is fairly intense. Hospitals have lowered prices by 20 percent or more to stay competitive in the managed-cared marketplace. Profit margins declined through the early 1990s, and many Chicago-area hospitals closed. Some have remained profitable by establishing a strong brand identity, thus enhancing their bargaining power with managed care companies. Others diversified into related products, such as skilled nursing services (for which insurers still provide generous reimbursements), and reduced costs of services for which price is regulated (such as services to Medicare patients). Even so, the Chicago hospital market remains threatened by internal rivalry, and many analysts

[4]Indeed, insurers throughout the United States also practiced selective contracting.

expect further consolidation and exit. If this occurs, internal rivalry will diminish, and prices may creep back up.

Entry

Few hospitals have been built in Chicago in the past two decades. One reason is severe state regulatory restrictions on new hospital construction. Another reason is that the market has become too risky to attract much new investment, although several investors have acquired existing facilities. But suppose the market were to rebound and regulations were relaxed. Would incumbents see their anticipated profits threatened by entrants?

There are several barriers to opening a new hospital. Hospitals are capital intensive. A new 300-bed hospital can easily cost $300 million to build. A new hospital would need to establish a brand identity, since patients may be reluctant to trust their health to an unknown entity. A new hospital would also need access to distribution "channels"—the medical staff that admits patients. It might have difficulty finding a favorable location, because it would have to battle other retail establishments for large, convenient locations.

The combination of regulatory and structural entry barriers suggests that the threat of entry was low in 1980. Although regulatory barriers are lower today, structural barriers remain, and a new hospital might face a price war if it did not choose its location wisely. This suggests that the threat of entry is largely unchanged since 1980. Technological change may further lower entry barriers. Innovations in medicine might make it possible to open smaller, cost-competitive, inpatient facilities that focus on specific treatments, such as heart surgery. This will reduce the capital and number of physicians required for successful entry.

Substitutes and Complements

In 1980, few inpatient services could be performed outside the hospital. Thus, the threat from substitutes was low. Since then, hospitals have faced a growing number of substitutes. Thanks to improvements in surgical technique, anesthetics, and antibiotics, many types of surgery can now be performed outside the hospital. Other substitutes for hospital services include outpatient diagnostic facilities, which provide state-of-the-art technologies, such as magnetic resonance imaging, and home health care, which enables nurses and physicians to monitor patients and provide some treatments at home rather than in the hospital.

At the same time that substitutes have emerged, insurers have implemented reimbursement rules that encourage patients to purchase services from outpatient providers. Thus, both the availability and price of outpatient services threaten inpatient providers.

Hospitals have turned out to be the dominant sellers of outpatient services in many markets. Hospitals already possessed the technology and manpower to offer outpatient care, and were often first to do so. Economies of scope have enabled hospitals to endure even as their core inpatient business shrinks.

New medical technologies will continue to emerge. Some, such as laparoscopic surgery, will facilitate even more outpatient treatment. But some technologies, such as advances in respiratory medicine that sustain the lives of low birthweight babies, complement and boost the demand for inpatient care. An important generation of new technologies will emerge from genetic research, and it is difficult to predict whether these will substitute for or complement inpatient care.

Supplier Power

The main suppliers to hospitals include labor (nurses, technicians, etc.), medical equipment companies, and drug houses. We consider admitting physicians to be buyers because they often determine which hospitals patients will purchase services from. Hospital-based physicians, such as radiologists, anesthesiologists, and pathologists (RAP physicians), are better regarded as suppliers. There are few substitutes for any of these professionals, both because of their specialized skills and because licensing regulations limit the flexibility of hospitals to use nonprofessionals. When the supply of specialized medical personnel is tight their wages increase, and hospitals have to bear the expense. This occurred in the nursing market during the latter 1980s, but nurses' wages have since stabilized because the higher wages attracted more people into the profession (including many who had left nursing to pursue other opportunities). Suppliers of commodity products, such as surgical gloves, have less power; there is no asset specificity. For more complex supplies or equipment, where the number of suppliers is limited because of patent protection or a single firm's specialized technical know-how, supplier power can be substantial.

Hospitals and their suppliers make few relationship-specific investments. Personnel learn to work in teams, but seem to adjust rapidly to new settings. Hospitals can usually replace them at the market wage, and some hospitals routinely use "nursing pools" to handle short-term needs. A national recruiting market usually makes RAP physicians easy to replace, although hospital bylaws and staffing policies can create exit barriers. Medical suppliers without monopoly power cannot credibly threaten to hold up hospitals to obtain higher prices.

The magnitude of supplier power has not changed much over time. A much discussed national physician union movement could greatly increase the power of RAP physicians. They could demand higher wages with little fear of being replaced (except by "scab" physicians).

Buyer Power

Buyers include patients, physicians, and insurers, who decide which hospitals will get business and how they will be paid. Patients and their physicians did not wield purchasing power in 1980, and generally do not wield it today. Insurers in 1980 were also passive. Most of them reimbursed whatever the hospital charged, and did not shop around for the best value. Indeed, state regulations generally prevented such price shopping by insurers, though large state Blue Cross plans did obtain discounts because of their size. The two major government insurers, Medicaid and Medicare, also had generous reimbursement rules. Buyer power in 1980 was low.

Today, insurers wield substantial power. Managed care is largely a response to the cost concerns of employers, who may pay 10 percent or more of their total payroll costs in the form of health insurance. While all managed care purchasers appear to be able to obtain discounts from hospitals, the largest insurers in Chicago, Blue Cross in the private sector and Medicare in the public sector, use their size to negotiate significant price discounts. Medicare, which insures the elderly and disabled, has forced all hospitals to accept fixed price contracts, so that hospitals must bear the risks of excessive treatment costs. Medicaid in Illinois may be the toughest payer of all. Medicaid negotiates a separate price with every hospital willing to accept its patients. These prices are often 25 to 50 percent less than

TABLE 11.1
FIVE-FORCES ANALYSIS OF THE CHICAGO HOSPITAL MARKET

Force	*Threat to Profits: 1980*	*Threat to Profits: Today*
Internal Rivalry	Low	High
Entry	Low	Medium
Substitutes and Complements	Medium	High
Supplier Power	Medium	Medium
Buyer Power	Low	High

those paid by other insurers for comparable services. Medicaid knows each hospital's cost-and-profit position, and can use this information to minimize what it offers to pay each hospital.

Physicians may also wield significant power, especially those charismatic and highly skilled physicians who can attract patients regardless of where they practice. A classic example is the local physician who pioneered the use of the "neural knife" surgical technique. He switched hospitals after a bidding war drove up his wages, and thereby extracted from the winning hospital a significant percentage of the profits that his services generate. To the extent that managed care payers are less likely to demonstrate loyalty to individual physicians, this power has diminished since 1980. While there are no relationship-specific investments to speak of, buyer power in the Chicago market is considerable. If managed care purchasers consolidate, as many expect, then their power will increase.

Hospitals have attempted to combat buyer power. Some have sought to differentiate their services by developing "centers of excellence" in clinical areas, such as cancer care and heart surgery. They hope that insurers will tolerate higher prices to obtain superior quality. Thus far, there is no systematic evidence that this strategy has succeeded. Others have forward integrated by offering an insurance-like product such as a "physician-hospital organization." These new structures must keep the internal payments to hospitals low to stay competitive with other insurance products, and so do not really solve the problem of buyer power.

Table 11.1 summarizes the five-forces analysis of the Chicago hospital market in 1980 and today. Virtually every factor that affects industry profitability has changed for the worse since 1980. Hospital managers face dilemmas, and many hospitals are in financial disarray.

Tobacco

Tobacco firms include some of the largest and most profitable companies in the world. Philip Morris and RJR Nabisco rank in the top 75 firms in the Fortune Global 500. Though highly diversified, these giants earn a disproportionate amount of their income from tobacco. Even though Philip Morris, for example, owns Kraft, General Foods, Miller Beer, and Oscar Mayer Foods, it obtains 40 percent of its sales and 60 percent of its profits from tobacco. RJR Nabisco is also highly diversified, selling products such as Nabisco cookies, Life Savers candy, A.1 sauce, and Milk-Bone dog biscuits. Yet it received 55 percent of its sales and 75 percent of its profits from tobacco. Tobacco sales are so critical to these firms that when a cigarette price war erupted in 1993, tobacco stocks lost

20 to 30 percent of their value. A five-forces analysis helps explain why the tobacco industry has been so profitable, and why it has recently become less stable.

Market Definition

We will assess the retail cigarette market in the United States. Many of the considerations that we raise below apply to markets in other parts of the world, although the actual competitors may vary (regional variations within the United States are minor and can be ignored). As discussed in the following section, cigarettes have few if any close substitutes. Manufacturers of substitutes, such as cigars, can be safely excluded from any discussion of internal rivalry. Product niches within the broader cigarette market (such as extra long cigarettes) are not sufficiently differentiated from other types of cigarettes to warrant special consideration.

Internal Rivalry

The cigarette is a technically simple product that can be made in large quantities at low cost. Smokers often disagree about whether there are discernible differences in the way that cigarettes taste. In the early days of the industry, so many smokers were willing to switch brands that price wars were common. In fact, Philip Morris, originally a British brand, first became prominent in the United States by selling discount brands, while the established firms were raising prices. Price competition has diminished since the 1930s, however. Elie Applebaum estimated that before the most recent price wars, the price-cost margin for the industry was .65, extremely high when compared with other industries.[5]

Several factors contribute to the historically low internal rivalry. The major producers grew out of the Tobacco Trust, which was the target of two famous antitrust cases. Thus, a history of cooperative pricing facilitates "friendly" price competition. The major players continue to dominate the industry—the industry four-firm concentration ratio has exceeded 80 percent since 1950.[6]

Beginning in the 1950s, several factors reduced cross-price elasticities of demand. First and foremost, the industry introduced marketing practices that attached an image to specific brands. One of the first efforts, and by far the most successful, was Philip Morris' promotion of Marlboro as a rugged "man's" cigarette. Image-conscious smokers became reluctant to switch brands. In addition, as Americans grew wealthier after World War II, tobacco became a less significant part of their budgets, again reducing the desire to shop around. Finally, growing tobacco taxes meant that a given price increase by a tobacco firm represented a smaller percentage increase in the retail price.

Without price competition, firms have sought to increase their share by new product introductions, innovations (e.g., the 100-millimeter cigarette), and new brand identities. These activities are relatively inexpensive, and costs have historically been passed along to consumers.

Demographic changes in the smoking population have intensified internal rivalry. Today's smoker is younger and less affluent than previously. These smokers have not established strong loyalties to particular brands and are more price con-

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[5]Miles, R. H., *Coffin Nails and Corporate Strategies*, Englewood Cliffs, NJ: Prentice-Hall, 1982, pp. 33–34; 102–103.

[6]Miles, R. H., *Coffin Nails and Corporate Strategies*, pp. 33–34.

scious. Even so, internal rivalry would not have heated up as intensely as it did were it not for entry by "off-price" brands. We discuss this below.

Entry

Although technology to manufacture cigarettes is well-known, tobacco has been an industry with traditionally high entry and exit barriers. All of the major U.S. firms today had been established in the industry by 1932. Cigarette production has significant economies of scale in production—it has been estimated that a minimum efficient scale facility could meet as much as 10 percent of the total world demand. The emphasis on brand further raises the stakes for new entrants, which must spend $10 million or more to establish a new brand. These factors make entry into the branded cigarette market a risky proposition. Established manufacturers may also have favorable access to distribution and retail channels, such as vending machines, bars, and gas stations.

Although manufacturers of "off-price" brands have had difficulty gaining access to traditional distribution channels, they have gained access to mass merchandisers, such as Wal-Mart stores. This is an ideal combination, since Wal-Mart shoppers tend to be more price conscious than average. Many believe that the tobacco price wars of the mid-1990s were a direct response by the major manufacturers to the inroads made by off-price brands. Whether this is true or not, prices have crept back up, with little additional entry.

Substitutes and Complements

Any discussion of substitutes in the cigarette business must consider that cigarette smoking is generally habit forming (to the point of being addictive). The habit-forming nature of smoking has become one of the critical aspects of the debate about the dangers of smoking that colors consideration of advertising policies, promotional programs, and governmental regulation. It also turns the search for substitutes into a choice for the consumer of whether to change brands of cigarette or quit smoking altogether.

There are two types of plausible economic substitutes for tobacco products, especially cigarettes. Neither of these has been strong enough to challenge the high profitability of the industry. The first is some other type of product that satisfies the addiction to nicotine, such as a low-tar cigarette, chewing tobacco, or a nicotine patch. The proliferation of new brands suggests that smokers might switch to an alternative, such as a low-tar cigarette, rather than quit. The second type of substitute is some nontobacco product that is consumed in place of cigarettes, such as snack food or gum. Substitutes clearly pose a negligible threat to the industry.

Buyer and Supplier Power

Supplier power is weak. Most cigarette manufacturers purchase tobacco through tobacco brokers, who obtain it from tobacco farmers. Tobacco brokers have consolidated in recent years, so that three brokers handle 80 percent of volume for the industry. However, this consolidation has not translated into increased pricing power for brokers. Other inputs, including labor and paper, are obtained from competitive markets.

Buyer power is also low. Distributors and retailers are largely fragmented. Vending machines represent one of the only relationship-specific investments, and manufacturers are in a better position to exploit the relationship than are the vendors, owing to the manufacturers' wide choice of retail outlets.

TABLE 11.2
FIVE-FORCES ANALYSIS OF THE TOBACCO INDUSTRY

Force	*Threat to Profits*
Internal Rivalry	Low
Entry	Low
Substitutes and Complements	Low
Supplier Power	Low
Buyer Power	Low

Table 11.2 summarizes the five forces of the tobacco industry. Despite the continued profitability of the industry, it is haunted by two major issues. First, will regulations continue to limit demand, or will smokers always find somewhere to smoke? Second, will consumers continue to be brand loyal, or will off-price entrants continue to attract new customers, driving down price-cost margins?

Hawaiian Coffee

Market definition is a cornerstone of industry analysis. Often, an industry, such as the coffee industry, has submarkets with distinctive competitive features. In such cases, it is reasonable to perform a five-forces analysis of that submarket. This analysis of the Hawaiian coffee submarket, developed by seven of our students, demonstrates the value of examining a submarket.[7]

Industry Facts

Specialty coffee is strictly of the Arabica cultivar (type of bean), identified by country of origin, high in quality and price, and generally sold by growers to wholesalers or brokers.[8] Specialty coffee wholesalers and brokers purchase green beans, roast them or sell them to roasters. Roasted beans are sold to specialty coffee retailers (e.g., Starbucks and Gloria Jean's) or directly to end consumers. Hawaii specialty coffee is mild to medium in body and strength (because of agronomic conditions) and occupies the medium to upper range in quality and price within the specialty coffee market. The Kona coffees—grown on the "big island"—have been in production for more than 60 years, are in greatest demand, and command the highest prices. The other Hawaii coffees—grown on the islands of Kauai, Molokai, and Maui—have been in business for 5 to 15 years and, to some extent, have been able to achieve premium prices by leveraging off the established Kona brand equity and the general mystique of Hawaii.[9] The Kona growers are small and numerous (10 to 20 acre farms numbering over 500) and market their crops through cooperatives. The other major Hawaii growers are large, corporate-owned plantations with Kauai being the low-cost/lower-quality producer.

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[7]The students who prepared the analysis are James Carr, Nina Case, Kathleen Fabsits, Robert Musson, Chet Richardson, Andrew Schwartz, and Scott Swanson.

[8]Examples of countries of origin for specialty coffees are Hawaii, Costa Rica, Guatemala, Kenya, Jamaica, and New Guinea.

[9]For example, for a similar quality bean from Costa Rica, Hawaii growers can command 2 to 3 times the price per pound. See *Coffee Rating & Review*, April 1998.

Market Definition

Specialty coffee is distinct because it provides the appeal of fine taste and a unique, pleasurable experience (akin to drinking fine wines). While the occasions for use of specialty coffee are similar to those of low-quality, inexpensive coffees, the specialty coffee experience is substantially different. Once introduced to the fine taste of specialty coffee, the consumer often finds low-quality coffees unpalatable. Most Kona coffee is purchased in the United States, which is most familiar with it due to tourism and marketing.[10] In addition, the geographic isolation of Hawaii places its growers in the same submarket—with commonalities in agronomics, buyers, suppliers, marketing factors, shipping requirements, and government regulations.

Internal Rivalry

Most Kona growers are small-acreage, second- or third-generation farmers. They have well-established brand equity—producing the highest quality/priced coffee in Hawaii. The non-Kona growers are former sugar or pineapple plantations owners on Kauai, Molokai, and Maui. The non-Kona growers know each other well, having interacted in other businesses for most of the century. In addition, there is a strong bond among all growers because of the geographic separation of Hawaii, the closeness of the communities (where growers frequently join in legislative efforts), and the general "aloha" spirit of the people. All of the growers, including the individual Kona growers, freely share agronomic information. There are two statewide associations: the "Hawaii Growers Association" and the "Hawaii Coffee Association." The goal of both associations is to establish a "Hawaii" coffee identity worldwide.

Historically, there has been little evidence of direct price competition among the growers. The long-established Kona growers generally sell through cooperatives (out of 500 growers, no more than 10 farms sell directly to customers and those usually have negotiated long-term contracts for their entire crop) and work diligently to preserve the brand equity of "Kona" coffee. They are positioned at the high-quality/high-price segment of the market and have no incentive to cut prices because of steadily rising demand.

The non-Kona growers have also avoided direct price competition. Instead, they have filled gaps in the price/quality continuum. The Kauai plantation has secured the low-price/lower-quality position, whereas the Molokai and Maui growers have more recently filled the large gap between Kona and Kauai.

Although there are many giant coffee retailers, most wholesale brokers are small and unable to exert much price pressure on the growers. Brokers generally do not want to carry more than one or two types of "Hawaii" coffee, and this could lead to intensified price competition in the future. Coffee trees on Molokai and Maui continue to mature. As they do, output will increase. Growers may have to reduce prices to get brokers to purchase their beans.

Hawaii growers should also expect increased price rivalry from specialty coffee growers in other countries. Knowledgeable coffee brokers, who can capably judge quality of beans, question why they should pay two or three times as much for Hawaii beans than for similar quality beans from other countries. Fortunately for the Hawaii growers, consumers are captivated by the romance of Hawaii. Fine

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[10]Asia and Europe are developing markets for Hawaii coffee, especially Kona, but are dwarfed in comparison to the U.S. market.

Hawaii coffees have distinct tastes and should be able to sustain higher prices. Consumers desiring Hawaii coffees are largely price insensitive, very brand loyal, and usually have some "Hawaii experience" to which they relate their coffee purchases. With the growth potential for specialty coffee, there should be a healthy-size niche for Hawaii coffees well into the foreseeable future.

Entry

The right soil, altitude, water, and sun are all essential for coffee trees. Due to the unique history of Hawaii land ownership, large corporations or nonprofit organizations (e.g., Bishop Estate) own most of the agricultural land. Except for Kona, most Hawaii coffee is grown on former sugar or pineapple lands, where the companies have owned the land for a century and have historical access rights to water. Little high altitude land and even less water are available to newcomers. In Kona, most of the desirable land is already under cultivation and the small farms tend to be family owned. The Kona farmers generally rely solely on rainfall for water, and droughts can be harmful. New entrants in the Kona region would more likely buy out an incumbent than find new land to cultivate.[11]

Overall, the structural barriers of land and water—along with the required fixed investment in planting, harvesting, and processing equipment—lead to the conclusion that entry is unlikely (except on a very small scale).[12] Because of the time and expense to develop mature trees, exit of major growers is not likely either. If any growers were to exit, it is likely that someone else would acquire the planted acres so that production levels would not vary much.

Substitutes and Complements

Brokers and roasters use only specialty coffee in their "straight" lines (i.e., pure country of origin coffees such as Kenyan, Guatemalan, etc.), but many purchase the cheaper commodity coffees to put in "blends" along with small quantities of specialty coffees (e.g., "Kona Blend"). In addition, the three major commodity coffee producers have all expanded their regular lines of coffee to include new "specialty blends" for sale in grocery stores. Producers may vary the mix of specialty and commodity coffee beans as prices vary.

Complements to specialty coffee include breakfast pastries in the morning and desserts in the evening. The proliferation of coffee carts and coffee stores, such as Starbucks, exposes many consumers to specialty coffee. Also, people tend to eat out more often and, after an expensive meal, they do not want to ruin the evening with mediocre coffee. They expect and demand more. Another fad that may last and provide a new niche of customers is the home roaster. As consumers discover the joys of great-tasting coffee, more are home roasting coffee beans. If the home roaster remains popular, it will create a new market for *retail* specialty green (unroasted) beans.

Hawaiian vacations, which are growing in popularity, are another complement. When in Hawaii, many tourists drink the local coffee for the first time. Even those on tight budgets can purchase small bags of Hawaii coffee to bring

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[11]Hawaii growers are relatively open and friendly, and would not explicitly act to deter entry unless the newcomer was perceived as trying to lower the quality level of coffee or impugn the Kona brand.

[12]A new entrant on the island of Oahu has begun on former sugarcane land; however, the 200 acres planted are low altitude and will not likely yield high-quality coffee.

home as luxury gifts for friends. Once exposed, tourists and their friends may become loyal customers.

Supplier Power

The key marketable inputs are land, labor, and water. For the large, non-Kona growers, ownership of land and access to water sources are not problems. The local government encourages large landowners to keep land in agriculture use by turning down other (higher use) development plans. Labor for the large landowners is unionized, consisting mostly of former sugar workers. While the unions could strike and demand higher wages, this will probably not happen for two reasons. First, their members are already the highest paid agricultural workers in the world. Second, the unions are so beaten down by many sugar plantation closures that they are grateful for any operation that can dutifully employ their members and, to date, have been agreeable to keep labor rates constant.

In Kona, all of the farms are small and many family-run, so the workers are not unionized. However, the supplier of land wields a big stick. Bishop Estate is the largest landowner in the state and leases much of its land to tenants of all types (agricultural, commercial, and residential). Many Kona farmers are on Bishop-leased land and periodically face mandatory rent renegotiations, which recently resulted in six-fold increases in rent. Few farmers have choices other than to pay the rent, because of their investment in trees and equipment and their desire to maintain rural lifestyles.

Buyer Power

Coffees are sold primarily wholesale green to brokers, roasters, or roaster-retailers. For newer growers trying to establish a brand identity, the wholesalers, brokers, and roasters can force some price breaks. The buyers do not run roughshod over the growers, because they want to maintain relationships for access to quality Hawaii beans when demand is high and supply low. This is especially true with Kona growers. Sold through cooperatives, the Kona beans are highly desired and full production sells out regularly. Coffee brokers try to tie up the Kona supply whenever possible.

Not all specialty coffee buyers desire Hawaii coffee. Starbucks, the nation's largest retailer-roaster, generally buys few Hawaii beans. They favor stronger varieties grown in Africa and certain Latin American countries. The Hawaii industry would have difficulty meeting the supply requirements for a large buyer like Starbucks, in any case.

The real danger to the Hawaii growers is that some buyers may try to steer consumers to less expensive specialty coffees (where they can earn larger margins). As long as the consumer is enraptured with Hawaii, however, there will always remain a niche for high-quality Hawaii coffee. Moreover, the Hawaii growers' efforts to enter the retail roasted market (through plantation tours, retail stores, and direct mail order) may lessen some of their dependence on the middlemen buyers.

Conclusion

Table 11.3 summarizes the five forces in the Hawaii coffee submarket. The key to profitability for Hawaii specialty coffee begins and ends with consistency and quality—without which premium prices cannot be sustained. The supply of Hawaii coffee continues to increase, and there is pressure from growers in other countries. However, specialty coffee is a growing market and competition is likely to remain benign for several years.

TABLE 11.3
FIVE-FORCES ANALYSIS OF THE HAWAIIAN COFFEE SUBMARKET

Force	*Threat to Profits*
Internal Rivalry	Low to Medium
Entry	Low
Substitutes/Complements	Medium
Buyer Power	Medium
Supplier Power	Low

Hawaii growers might consider creating an appellation system for Hawaii coffees (similar to the French wine appellation system) and, developing retail methods to take advantage of annual tourist flows through Hawaii. However, once an appellation system was in place, it would be self-policing among the consortium of Hawaii growers. An appellation system will grade coffees based on agronomic practices, growing conditions, and processing techniques. Such a system, together with origin certification, will provide greater assurance of bean consistency and quality, and will educate the consumer on the fine points of specialty coffee.

In addition, growers might tap into Hawaii tourism. Through plantation tours, coffee retail stores, and partnerships with restaurants, hotels, and airlines, Hawaii growers can introduce their products to receptive end users. Educating tourists, particularly with a well-planned appellation system, can only lead to greater profits. Satisfied customers will agreeably spend their dollars if they believe "Hawaii coffee no ka oi!"

CHAPTER SUMMARY

- An industry analysis provides an overview of the potential profitability of the average firm in an industry.
- A comprehensive analysis examines the five forces: internal rivalry, entry, substitutes, buyer power, and supplier power. The latter four operate independently and may also intensify internal rivalry.
- Internal rivalry is fierce if competition drives prices toward costs. This is more likely when there are many firms, products are perceived to be homogeneous, consumers are motivated and able to shop around, prices may be set secretly, sales orders are large and received infrequently, and the industry has excess capacity.
- The threat of entry is high if firms can easily enter an industry and capture market share from profitable incumbents while intensifying price competition.
- Substitutes also capture sales and intensify price rivalry.
- Buyers and suppliers exert power directly by renegotiating the terms of contracts to extract profits from profitable industries, and indirectly by shopping around for the best prices.
- The government can affect profitability, and should be considered either as part of the five forces or as a separate force.
- Profits may be threatened by any or all of the five forces. Although it is useful to construct a "five-forces scorecard" on which the forces can be rated, the exercise of assessing

the five forces is more important than the actual scores. Through this exercise the analyst develops deep knowledge of key strategic issues affecting the industry in question.

- A sound five-forces analysis should be based on economic principles. The tools for analyzing internal rivalry, entry, and substitutes are derived from industrial organization and game theory, which are discussed in Chapters 8 through 11. The tools for analyzing buyer and supplier power are derived from the economics of vertical relationships, which were discussed in Chapters 2 through 4.

QUESTIONS

1. It has been said that Porter's five-forces analysis turns antitrust law—law intended to protect consumers from monopolies—on its head. What do you think this means?
2. Comment on the following: All of Porter's wisdom regarding the five forces is reflected in the economic identity:

   $$\text{Profit} = (\text{Price} - \text{Average Cost}) \times \text{Quantity}.$$

3. How does the magnitude of scale economies affect the intensity of each of the five forces?
4. How does the magnitude of consumer switching costs affect the intensity of internal rivalry? Of entry?
5. Advances in computer-aided design have allowed small manufacturing plants to nearly match the cost advantages of larger plants. How will this affect the supplier power of the aforementioned firms in the downstream industries that they supply?
6. Consider an industry whose demand fluctuates over time. Suppose that this industry faces high supplier power. Briefly state how this high supplier power will affect the variability of profits over time.
7. What does the concept of "coopetition" add to the five-forces approach to industry analysis?
8. The following table reports the distribution of profits (on a per disc basis) for different steps in the vertical chain for music compact discs:

Artist:	$.60
Record Company:	$1.80
Retailer:	$.60

   Use the five forces to explain this pattern. (Note: There are about half a dozen major record companies, including Warner, Sony, and Polygram. They are responsible for signing up artists, handling technical aspects of recording, securing distribution, and promoting the recordings.)

Appendix 11.1
Template for Doing a Five-Forces Analysis

Factors Affecting Rivalry Among Existing Competitors

To what extent does pricing rivalry or nonprice competition (e.g., advertising) erode the profitability of a typical firm in this industry?

	Characterization (Current)	*Future trend*
Degree of seller concentration?		
Rate of industry growth?		
Significant cost differences among firms?		
Excess capacity?		
Cost structure of firms: sensitivity of costs to capacity utilization?		
Degree of product differentiation among sellers? Brand loyalty to existing sellers? Cross-price elasticities of demand among competitors in industry?		
Buyers' costs of switching from one competitor to another?		
Are prices and terms of sales transactions observable?		
Can firms adjust prices quickly?		
Large and/or infrequent sales orders?		
Use of "facilitating practices" (price leadership, advance announcement of price changes)?		
History of "cooperative" pricing?		
Strength of exit barriers?		

Factors Affecting the Threat of Entry

To what extent does the threat or incidence of entry work to erode the profitability of a typical firm in this industry?

	Characterization (Current)	*Future trend*
Significant economies of scale?		
Importance of reputation or established brand loyalties in purchase decision?		
Entrants' access to distribution channels?		
Entrants' access to raw materials?		
Entrants' access to technology/know-how?		
Entrants' access to favorable locations?		
Experience-based advantages of incumbents?		

market finally took off when firms worked to increase the size of the DVD "pie," rather than fight for their share of a given "pie." Through their complementary actions, the participants in the DVD Value Net secured its future and reaped the benefits.

FIVE-FORCES ANALYSIS OF THE CHICAGO HOSPITAL MARKET

Force	*Threat to Profits: 1980*	*Threat to Profits: Today*
Internal Rivalry	Low	High
Entry	Low	Medium
Substitutes and Complements	Medium	High
Supplier Power	Medium	Medium
Buyer Power	Low	High

	Characterization (Current)	*Future trend*
"Network externalities": demand-side advantages to incumbents from large installed base?		
Government protection of incumbents?		
Perceptions of entrants about expected retaliation of incumbents/reputations of incumbents for "toughness"?		

FACTORS AFFECTING OR REFLECTING PRESSURE FROM SUBSTITUTE PRODUCTS AND SUPPORT FROM COMPLEMENTS

To what extent does competition from substitute products outside the industry erode the profitability of a typical firm in the industry?

	Characterization (Current)	*Future trend*
Availability of close substitutes?		
Price-value characteristics of substitutes?		
Price elasticity of industry demand?		
Availability of close complements		
Price-value characteristics of complements?		

FACTORS AFFECTING OR REFLECTING POWER OF INPUT SUPPLIERS

To what extent do individual *suppliers have the ability to negotiate high input prices with typical firms in this industry? To what extent do input prices deviate from those that would prevail in a perfectly competitive input market in which input suppliers act as price takers?*

	Characterization (Current)	*Future trend*
Is supplier industry more concentrated than industry it sells to?		
Do firms in industry purchase relatively small volumes relative to other customers of supplier? Is typical firm's purchase volume small relative to sales of typical supplier?		
Few substitutes for suppliers' input?		
Do firms in industry make relationship-specific investments to support transactions with specific suppliers?		
Do suppliers pose credible threat of forward integration into the product market?		
Are suppliers able to price discriminate among prospective customers according to ability/willingness to pay for input?		

Factors Affecting or Reflecting Power of Buyers

To what extent do individual *buyers have the ability to negotiate low purchase prices with typical firms in this industry? To what extent do purchase prices differ from those that would prevail in a market with a large number of fragmented buyers in which buyers act as price takers?*

	Characterization (Current)	*Future trend*
Is buyers' industry more concentrated than industry it purchases from?		
Do buyers purchase in large volumes? Does a buyer's purchase volume represent large fraction of typical seller's sales revenue?		
Can buyers can find substitutes for industry's product?		
Do firms in industry make relationship-specific investments to support transactions with specific buyers?		
Is price elasticity of demand of buyer's product high or low?		
Do buyers pose credible threat of backward integration?		
Does product represent significant fraction of cost in buyer's business?		
Are prices in the market negotiated between buyers and sellers on each individual transaction or do sellers "post" a "take-it-or-leave it price" that applies to all transactions?		