

Industry Analysis: The Fundamentals



When a management with a reputation for brilliance tackles a business with a reputation for poor fundamental economics, it is the reputation of the business that remains intact.

—WARREN BUFFETT, CHAIRMAN, BERKSHIRE HATHAWAY

The reinsurance business has the defect of being too attractive-looking to new entrants for its own good and will therefore always tend to be the opposite of, say, the old business of gathering and rendering dead horses that always tended to contain few and prosperous participants.

—CHARLES T. MUNGER, CHAIRMAN, WESCO FINANCIAL CORP.

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Introduction and Objectives

In this chapter and the next we explore the external environment of the firm. In Chapter 1 we observed that profound understanding of the competitive environment is a critical ingredient of a successful strategy. We further noted that business strategy is essentially a quest for profit. The primary task for this chapter is to identify the sources of profit in the external environment. The firm's proximate environment is its industry environment; hence the focus of our environmental analysis will be industry analysis.

Industry analysis is relevant both to corporate-level and business-level strategy.

- Corporate strategy is concerned with deciding which industries the firm should be engaged in and how it should allocate its resources among them. Such decisions require assessment of the attractiveness of different industries in terms of their profit potential. The main objective of this chapter is to understand how the competitive structure of an industry determines its profitability.
- Business strategy is concerned with establishing competitive advantage. By analyzing customer needs and preferences and the ways in which firms compete to serve customers, we identify the general sources of competitive advantage in an industry – what we call *key success factors*.

By the time you have completed this chapter you will be able to:

- Identify the main structural features of an industry that influence competition and profitability.
- Use industry analysis to explain why in some industries competition is more intense and profitability lower than in other industries.
- Use evidence on structural trends within industries to forecast changes in competition and profitability in the future.
- Develop strategies to influence industry structure in order to improve industry profitability.
- Analyze competition and customer requirements in order to identify opportunities for competitive advantage within an industry (*key success factors*).

From Environmental Analysis to Industry Analysis

The business environment of the firm consists of all the external influences that affect its decisions and performance. Given the vast number and range of external influences, how can managers hope to monitor, let alone analyze, environmental conditions? The starting point is some kind of system or framework for organizing information. For example, environmental influences can be classified by *source* – e.g. into political, economic, social, and technological factors (“PEST analysis”) – or by *proximity* – the “micro-environment” or “task environment” can be distinguished from the wider influences that form the “macro-environment”.¹ Though systematic, continuous scanning of the whole range of external influences might seem desirable, such extensive environmental analysis is unlikely to be cost effective and creates information overload.

The prerequisite for effective environmental analysis is to distinguish the vital from the merely important. To do this, let’s return to first principles. For the firm to make profit it must create value for customers. Hence, it must understand its customers. Second, in creating value, the firm acquires goods and services from suppliers. Hence, it must understand its suppliers and manage relationships with them. Third, the ability to generate profitability depends on the intensity of competition among firms that vie for the same value-creating opportunities. Hence, the firm must understand competition. Thus, the core of the firm’s business environment is formed by its relationships with three sets of players: customers, suppliers, and competitors. This is its industry environment.

This is not to say that macro-level factors such as general economic trends, changes in demographic structure, or social and political trends are unimportant to strategy analysis. These factors may be critical determinants of the threats and opportunities a company will face in the future. The key issue is how these more general environmental factors affect the firm’s industry environment (Figure 3.1). Consider the threat of global warming. For most companies this is not an important strategic issue (at least, not for the next hundred years). However, for the producers of automobiles, global warming is a vital issue. But, to analyze the strategic implications of global warming, the automobile manufacturers need to trace its implications for their industry environment. For example, what will be the impact on demand – will consumers switch to more fuel-efficient cars? Will they abandon their cars in favor of public transportation?

FIGURE 3.1 From environmental analysis to industry analysis



With regard to competition, will there be new entry by manufacturers of electric vehicles into the car industry? Will increased R&D costs cause the industry to consolidate?

The Determinants of Industry Profit: Demand and Competition

If the purpose of strategy is to help a company to survive and make money, the starting point for industry analysis is a simple question: what determines the level of profit in an industry?

As already noted, business is about the creation of value for the customer, either by production (transforming inputs into outputs) or commerce (arbitrage). Value is created when the price the customer is willing to pay for a product exceeds the costs incurred by the firm. But value creation does not translate directly into profit. The surplus of value over cost is distributed between customers and producers by the forces of competition. The stronger is competition among producers, the more of the surplus is received by customers in *consumer surplus* (the difference between the price they actually pay and the maximum price they would have been willing to pay) and the less is the surplus received by producers (as *producer surplus* or *economic rent*). A single supplier of bottled water at an all-night rave can charge a price that fully exploits the dancers' thirst. If there are many suppliers of bottled water, then, in the absence of collusion, competition causes the price of bottled water to fall toward the cost of supplying it.

The surplus earned by producers over and above the minimum costs of production is not entirely captured in profits. Where an industry has powerful suppliers – monopolistic suppliers of components or employees united by a strong labor union – a substantial part of the surplus may be appropriated by these suppliers (the profits of suppliers or premium wages of union members).

The profits earned by the firms in an industry are thus determined by three factors:

- The value of the product to customers.
- The intensity of competition.
- The bargaining power of the producers relative to their suppliers.

Industry analysis brings all three factors into a single analytic framework.

Analyzing Industry Attractiveness

Table 3.1 shows the profitability of different US industries. Some industries (such as tobacco and pharmaceuticals) consistently earn high rates of profit; others (airlines, paper, and food production) fail to cover their cost of capital. The basic premise that underlies industry analysis is that the level of industry profitability is neither random nor the result of entirely industry-specific influences – it is determined by the systematic influences of the industry's structure. The US pharmaceutical industry and the US food production industry not only supply very different products, they also have very different structures, which make one highly profitable and the other a nightmare of price competition and weak margins. The pharmaceutical industry produces highly

TABLE 3.1 The Profitability of US Industries, 1999–2005

Industry	Median ROE 1999–2005 (%)	Leading companies
Household and Personal Products	22.7	Procter & Gamble, Kimberley-Clark, Colgate-Palmolive
Pharmaceuticals	22.3	Pfizer, Johnson & Johnson, Merck
Tobacco	21.6	Altria, Reynolds American, Universal
Food Consumer Products	19.6	PepsiCo, Sara Lee, Conagra
Securities	18.9	Morgan Stanley, Merrill Lynch, Goldman Sachs
Diversified Financials	18.3	General Electric, American Express
Beverages	17.5	Coca-Cola, Anheuser-Busch
Mining, Crude Oil Production	17.8	Occidental Petroleum, Devon Energy
Petroleum Refining	17.3	ExxonMobil, Chevron, ConocoPhillips
Medical Products and Equipment	17.2	Medtronic, Baxter International
Commercial Banks	15.5	Citigroup, Bank of America
Food Services	15.3	McDonald's, Yum Brands
Scientific, Photographic, and Control Equipment	15.0	Eastman Kodak, Danaher, Aligent
Apparel	14.4	Nike, VF, Jones Apparel
Computer Software	13.9	Microsoft, Oracle, CA
Publishing, Printing	13.5	R. R. Donnelley & Sons, Gannett
IT Services	13.5	EDS, Computer Sciences, Science Applications Intl.
Healthcare	13.1	United Health Group, Wellpoint, HCA, Medco
Electronics, Electrical Equipment	13.0	Emerson Electric, Whirlpool
Specialty Retailers	13.0	Home Depot, Costco, Lowe's
Chemicals	12.9	Dow Chemical, Du Pont
Engineering, Construction	12.0	Flour, Jacobs Engineering
Trucking, Truck Leasing	11.8	YRC Worldwide, Ryder System
Aerospace and Defense	11.7	Boeing, United Technologies, Lockheed Martin
Computers, Office Equipment	11.7	IBM, Hewlett-Packard, Dell Computer
Furniture	11.6	Leggett & Platt, Steelcase
Automotive Retailing and Services	11.3	AutoNation, United Auto Group
Wholesalers: Food and Grocery	11.3	Sysco, Supervalu, CHS
General Merchandisers	11.0	Wal-Mart, Target, Sears Holdings
Pipelines	11.0	Plains All-American Pipeline, Enterprise Products
Industrial and Farm Equipment	10.8	Caterpillar, Deere, Illinois Tool Works
Oil and Gas Equipment and Services	10.7	Halliburton, Baker Hughes
Utilities: Gas and Electric	10.4	Duke Energy, Dominion Resources
Energy Production	10.6	Constellation Energy, ONEOK
Food and Drug Stores	10.0	Kroger, Walgreen, Albertson's
Motor Vehicles and Parts	9.8	GM, Ford, Johnson Controls
Hotels, Casinos, Resorts	9.7	Marriott International, Harrah's Entertainment
Insurance: Life and Health	8.6	MetLife, New York Life
Packaging and Containers	8.6	Smurfit-Stone Container. Owens-Illinois
Real Estate	8.5	Cendant, Host Marriott, Simon Property Group
Insurance: Property and Casualty	8.3	American Intl. Group, Berkshire Hathaway

TABLE 3.1 (cont'd)

Industry	Median ROE 1999–2005 (%)	Leading companies
Building Materials, Glass	8.3	Owens Corning, USG, Armstrong Holdings
Metals	8.0	Alcoa, US Steel, Nucor
Food Production	7.2	Archer Daniels Midland, Tyson Foods
Forest and Paper Products	6.6	International Paper, Weyerhaeuser
Semiconductors and Electronic Components	5.9	Intel, Texas Instruments, Sanmina-SCI
Telecommunications	4.6	Verizon, AT&T, Sprint-Nextel
Network and Communications Equipment	1.2	Motorola, Cisco Systems, Lucent
Entertainment	0.4	Time Warner, Walt Disney, News Corp.
Airlines	(22.0)	AMR, UAL, Delta Airlines

Notes:

- 1 Median ROE for each industry averaged across the 7 years 1999–2005.
- 2 Industries with five or less firms were excluded. Also omitted were industries that were substantially redefined during 1999–2005.

SOURCE: DATA FROM FORTUNE 1000 BY INDUSTRY.

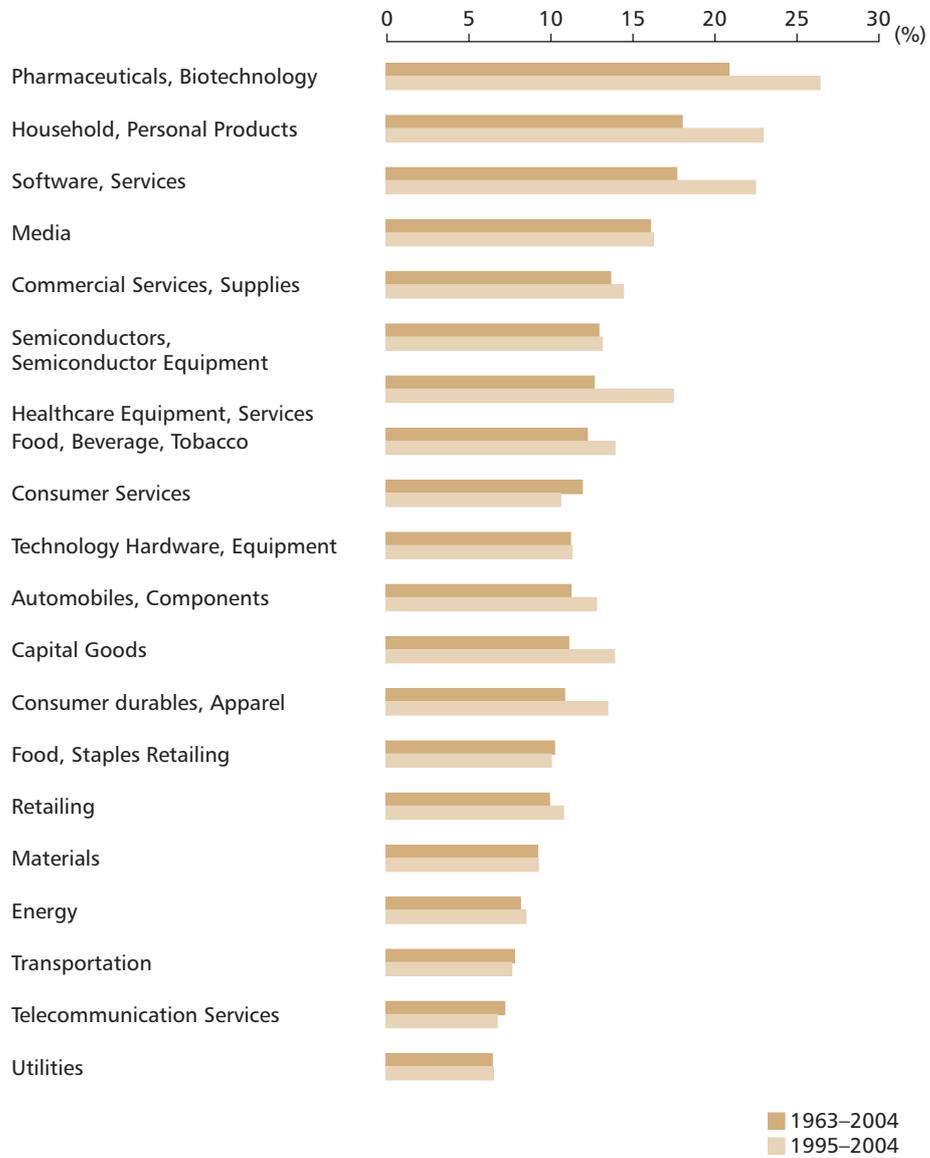
differentiated products with price-insensitive consumers and each new product receives monopoly privileges in the form of 17-year patents. The food industry produces commodity products with slow-growing demand and overcapacity, and is squeezed by powerful retail customers.

These industry patterns tend to be fairly consistent across countries. Figure 3.2 shows return on capital for a number of global industries.

Particularly high rates of profit often result from industry segments dominated by a single firm. These niche markets provide attractive havens from the rigors of fierce competition. Strategy Capsule 3.1 offers some examples.

The underlying theory of how industry structure drives competitive behavior and determines industry profitability is provided by industrial organization (IO) economics. The two reference points are the *theory of monopoly* and the *theory of perfect competition* which form end points of the spectrum of industry structures. *Monopoly* exists where an industry comprises a single firm protected by high barriers to entry. The monopolist can appropriate in profit the full amount of the value it creates. At the other extreme, *perfect competition* exists where there are many firms supplying an identical product with no restrictions on entry or exit. Here, the rate of profit falls to a level that just covers firms' cost of capital. In the real world, industries fall between these two extremes. The US market for chewing tobacco is close to being a monopoly; the Chicago grain markets are close to being perfectly competitive. Most manufacturing industries and many service industries tend to be *oligopolies*: they are dominated by a small number of major companies. Table 3.2 identifies some key points on the spectrum. By examining the principal structural features and their interactions for any particular industry, it is possible to predict the type of competitive behavior likely to emerge and the resulting level of profitability.

FIGURE 3.2 Profitability of Global Industries



Note: Median return on invested capital, excluding goodwill (%).

SOURCE: B. JIANG AND T. M. KOLLER, "DATA FOCUS: A LONG-TERM LOOK AT ROIC," MCKINSEY QUARTERLY 1 (2006), (BASED ON DATA FOR STANDARD & POORS AND MORGAN STANLEY CAPITAL INTERNATIONAL)

STRATEGY CAPSULE 3.1

Chewing Tobacco, Sausage Skins, and Slot Machines:
The Joys of Niche Markets

UST Inc. (formerly US Tobacco) has been the most profitable company in the S&P500 over the past 10 years. During 2003–5 UST earned an ROIC (operating profit as percentage of total assets less current liabilities) of 68%. What’s the secret of UST’s success? It controls 78% of US market for “smokeless tobacco” (chewing tobacco and snuff), with brands such as Skoal, Copenhagen, Long Cut, and Red Seal. Despite its association with a bygone era of cowboys and farm workers, chewing tobacco has been a growth market over the past two decades with a surprisingly large number of young consumers. UST’s long-established brands, its distribution through tens of thousands of small retail outlets, and the unwillingness of major tobacco companies to enter this market (due to the poor image and social unacceptability of the product) have made UST’s market position unassailable. Restrictions on advertising of smokeless tobacco products have further buttressed UST’s market dominance by making it more difficult for would-be entrants to establish their brands.

Devro plc, based in the Scottish village of Moodiesburn, is the world’s leading supplier of

collagen sausage skins (“casings”). “From the British ‘Banger’ to the Chinese Lap Cheong, from the French Merguez to the South American Chourizo, Devro has a casing to suit all product types.” Its overall world market share is around 60%, rising to 94% in the UK market and 83% in Australia. In recent years its ROIC has averaged 18% and its return on equity 30%.

United Game Technology (IGT) based in Reno, Nevada, is the world’s dominant manufacturer of slot machines for casinos and other establishments that allow gambling machines. With a continuous flow of new gaming machines – 2005 saw 172 new products launched, including Megabucks, Persian Princess, and Lucky Larry’s Lobstermania – IGT has over 70% of the US market share and market leadership in several European countries, including the UK. With heavy investment in R&D, new product saturation, tight control over distribution and servicing, and a policy of leasing rather than selling machines, IGT’s market leadership appears well-entrenched. During 2004–6, IGT earned an average ROE of 25%.

Sources: www.ustinc.com, www.devro.com, www.itg.com.

Porter’s Five Forces of Competition Framework

Table 3.2 identifies four structural variables influencing competition and profitability. In practice, there are many features of an industry that determine the intensity of competition and the level of profitability. A helpful, widely used framework for classifying and analyzing these factors was developed by Michael Porter of Harvard Business School.² Porter’s Five Forces of Competition framework views the profitability of an industry (as indicated by its rate of return on capital relative to its cost of capital) as determined by five sources of competitive pressure. These five forces of competition include three sources of “horizontal” competition: competition from substitutes, competition from entrants, and competition from established rivals; and

TABLE 3.2 The Spectrum of Industry Structures

	<i>Perfect Competition</i>	<i>Oligopoly</i>	<i>Duopoly</i>	<i>Monopoly</i>
<i>Concentration</i>	Many firms	A few firms	Two firms	One firm
<i>Entry and Exit Barriers</i>	No barriers	Significant barriers		High barriers
<i>Product Differentiation</i>	Homogeneous product (Commodity)	Potential for product differentiation		
<i>Information Availability</i>	No impediments to information flow	Imperfect availability of information		

two sources of “vertical” competition: the power of suppliers and power of buyers (see Figure 3.3).

The strength of each of these competitive forces is determined by a number of key structural variables, as shown in Figure 3.4.

Competition from Substitutes

The price customers are willing to pay for a product depends, in part, on the availability of substitute products. The absence of close substitutes for a product, as in the case of gasoline or cigarettes, means that consumers are comparatively insensitive to

FIGURE 3.3 Porter’s Five Forces of Competition framework

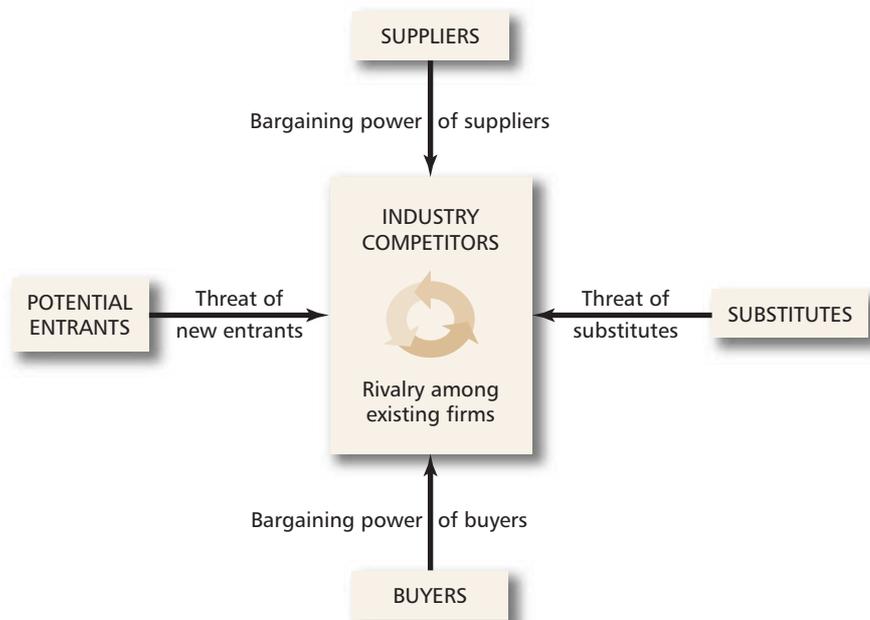
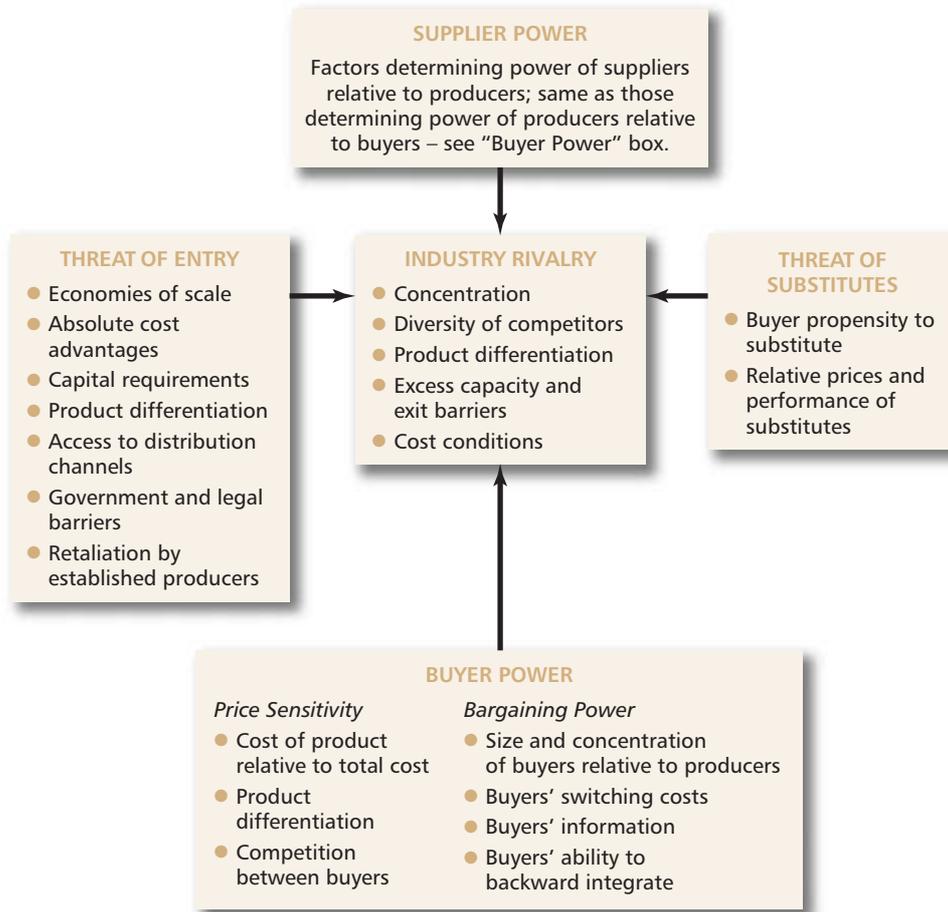


FIGURE 3.4 The structural determinants of the five forces of competition



price (i.e., demand is inelastic with respect to price). The existence of close substitutes means that customers will switch to substitutes in response to price increases for the product (i.e., demand is elastic with respect to price). The internet has provided a new source of substitute competition that has proved devastating for a number of established industries. Travel agencies, newspapers, and telecommunication providers have all suffered devastating competition from internet-based substitutes.

The extent to which substitutes depress prices and profits depends on the propensity of buyers to substitute between alternatives. This, in turn, is dependent on their price–performance characteristics. If city-center to city-center travel between Washington and New York is 50 minutes quicker by air than by train and the average traveler values time at \$30 an hour, the implication is that the train will be competitive at fares of \$25 below those charged by the airlines. The more complex the product and the more difficult it is to discern performance differences, the lower the extent of substitution by customers on the basis of price differences. The failure of low-priced imitations of leading perfumes to establish significant market share reflects consumers’ difficulty in recognizing the performance characteristics of different fragrances.



Threat of Entry

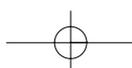
If an industry earns a return on capital in excess of its cost of capital, it will act as a magnet to firms outside the industry. If the entry of new firms is unrestricted, the rate of profit will fall toward its competitive level. The US bagel industry faced a flood of new entrants in the late 1990s that caused a sharp decline in profitability.³ Why is it that my wife, a psychotherapist, earns much less than our niece, a recently qualified medical doctor? Barriers to entry are one factor. In psychotherapy there are multiple accrediting bodies and limited state licensing, hence the entry barriers to psychotherapy are much lower than in medicine.

Threat of entry rather than actual entry may be sufficient to ensure that established firms constrain their prices to the competitive level. Only American Airlines offers a direct service between Dallas-Fort Worth and Santa Barbara, California, for example. Yet, American may be unwilling to exploit its monopoly power to the full if Southwest or another airline can easily extend its routes to cover the same two cities. An industry where no barriers to entry or exit exist is *contestable*: prices and profits tend towards the competitive level, regardless of the number of firms within the industry.⁴ Contestability depends on the absence of sunk costs – investments whose value cannot be recovered on exit. An absence of sunk costs makes an industry vulnerable to “hit-and-run” entry whenever established firms raise their prices above the competitive level.

In most industries, however, new entrants cannot enter on equal terms with those of established firms. A barrier to entry is any advantage that established firms have over entrants. The height of a barrier to entry is usually measured as the unit cost disadvantage faced by would-be entrants. The principal sources of barriers to entry are discussed below.

Capital Requirements The capital costs of getting established in an industry can be so large as to discourage all but the largest companies. The duopoly of Boeing and Airbus in large passenger jets is protected by the huge capital costs of establishing R&D, production, and service facilities for supplying these planes. Similarly with the business of launching commercial satellites: the costs of developing rockets and launch facilities make new entry highly unlikely. In other industries, entry costs can be modest. One reason why the e-commerce boom of the late 1990s ended in financial disaster for most participants is that the initial setup costs of new internet-based ventures were typically very low. Across the service sector more generally, startup costs tend to be low. For example, startup costs for a franchised pizza outlet begin at \$141,000 for a Domino's, \$250,000 for a Papa John's, and \$1.1 million for a Pizza Hut.⁵

Economies of Scale In industries that are capital or research or advertising intensive, efficiency requires large-scale operation. The problem for new entrants is that they are faced with the choice of either entering on a small scale and accepting high unit costs, or entering on a large scale and bearing the costs of underutilized capacity. In automobiles, cost efficiency means producing at least three million vehicles a year. As a result, the only recent entrants into volume car production have been state-supported companies (e.g., Proton of Malaysia and Maruti of India). The main source of scale economies is new product development costs. Thus, developing and launching a new model of car typically costs over \$1.5 billion. Airbus's A380 superjumbo cost about \$15 billion to develop and must sell over 300 planes to break even. Once



Airbus had committed to the project, then Boeing was effectively excluded from the superjumbo segment of the market.

Absolute Cost Advantages Established firms may have a unit cost advantage over entrants irrespective of scale. Absolute cost advantages often result from the acquisition of low-cost sources of raw materials. Saudi Aramco's access to the world's biggest and most accessible oil reserves give it an unassailable cost advantage over Shell, ExxonMobil, and BP, whose costs per barrel are at least three times those of Saudi Aramco. Absolute cost advantages may also result from economies of learning. Sharp's cost advantage in LCD flat screen TVs results from its early entry into LCDs and its speed in moving down the learning curve.

Product Differentiation In an industry where products are differentiated, established firms possess the advantages of brand recognition and customer loyalty. The percentage of US consumers loyal to a single brand varies from under 30% in batteries, canned vegetables, and garbage bags, up to 61% in toothpaste, 65% in mayonnaise, and 71% in cigarettes.⁶ New entrants to such markets must spend disproportionately heavily on advertising and promotion to gain levels of brand awareness and brand goodwill similar to that of established companies. One study found that, compared to early entrants, late entrants into consumer goods markets incurred additional advertising and promotional costs amounting to 2.12% of sales revenue.⁷

Access to Channels of Distribution For many new suppliers of consumer goods, the principal barrier to entry is likely to be gaining distribution. Limited capacity within distribution channels (e.g., shelf space), risk aversion by retailers, and the fixed costs associated with carrying an additional product result in retailers being reluctant to carry a new manufacturer's product. The battle for supermarket shelf space between the major food processors (typically involving "slotting fees" to reserve shelf space) further disadvantages new entrants. One of the most important economic impacts of the internet has been allowing new businesses to circumvent barriers to distribution.

Governmental and Legal Barriers Economists from the Chicago School claim that the only effective barriers to entry are those created by government. In taxicabs, banking, telecommunications, and broadcasting, entry usually requires the granting of a license by a public authority. From medieval times to the present day, companies and favored individuals have benefited from governments granting them an exclusive right to ply a particular trade or offer a particular service. In knowledge-intensive industries, patents, copyrights, and other legally protected forms of intellectual property are major barriers to entry. Xerox Corporation's monopolization of the plain-paper copier industry until the late 1970s was protected by a wall of over 2,000 patents relating to its xerography process. Regulatory requirements and environmental and safety standards often put new entrants at a disadvantage to established firms because compliance costs tend to weigh more heavily on newcomers.

Retaliation Barriers to entry also depend on the entrants' expectations as to possible retaliation by established firms. Retaliation against a new entrant may take the form of aggressive price-cutting, increased advertising, sales promotion, or litigation. The major airlines have a long history of retaliation against low-cost entrants.



Southwest and other budget airlines have alleged that selective price cuts by American and other major airlines amounted to predatory pricing designed to prevent its entry into new routes.⁸ To avoid retaliation by incumbents, new entrants may seek initial small-scale entry into less visible market segments. When Toyota, Nissan, and Honda first entered the US auto market, they targeted the small car segments, partly because this was a segment that had been written off by the Detroit Big Three as inherently unprofitable.⁹

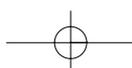
The Effectiveness of Barriers to Entry Empirical research shows industries protected by high entry barriers tend to earn above average rates of profit.¹⁰ Capital requirements and advertising appear to be particularly effective impediments to entry.¹¹

The effectiveness of barriers to entry depends on the resources and capabilities that potential entrants possess. Barriers that are effective against new companies may be ineffective against established firms that are diversifying from other industries. George Yip found no evidence that entry barriers deterred new entry.¹² Some entrants possessed resources that allowed them to surmount barriers and compete against incumbent firms using similar strategies. Thus, Mars used its strong position in confectionery to enter the ice cream market, while Virgin has used its brand name to enter a wide range of industries from airlines to telecommunications.

Rivalry Between Established Competitors

For most industries, the major determinant of the overall state of competition and the general level of profitability is competition among the firms within the industry. In some industries, firms compete aggressively – sometimes to the extent that prices are pushed below the level of costs and industry-wide losses are incurred. In other industries, price competition is muted and rivalry focuses on advertising, innovation, and other nonprice dimensions. The intensity of competition between established firms is the result of interactions between six factors. Let us look at each of them.

Concentration Seller concentration refers to the number and size distribution of firms competing within a market. It is most commonly measured by the *concentration ratio*: the combined market share of the leading producers. For example, the four-firm concentration ratio (*CR4*) is the market share of the four largest producers. In markets dominated by a single firm (e.g., Microsoft in PC operating systems, or UST in the US smokeless tobacco market), the dominant firm can exercise considerable discretion over the prices it charges. Where a market is dominated by a small group of leading companies (an oligopoly), price competition may also be restrained, either by outright collusion, or more commonly through “parallelism” of pricing decisions.¹³ Thus, in markets dominated by two companies, such as alkaline batteries (Duracell and Energizer), color film (Kodak and Fuji), and soft drinks (Coke and Pepsi), prices tend to be similar and competition focuses on advertising, promotion, and product development. As the number of firms supplying a market increases, coordination of prices becomes more difficult, and the likelihood that one firm will initiate price-cutting increases. However, despite the common observation that the elimination of a competitor reduces price competition, while the entry of a new competitor stimulates it, systematic evidence of the impact of seller concentration on profitability is surprisingly weak. Richard Schmalensee concluded that: “The relation, if any, between seller concentration and profitability is weak statistically and the estimated effect is usually small.”¹⁴



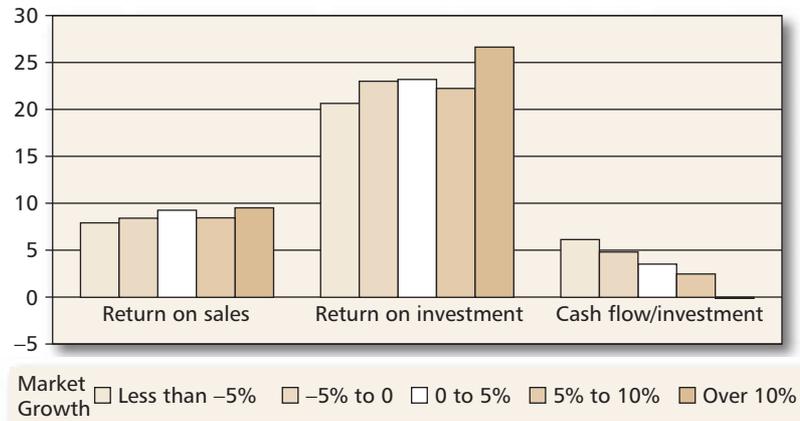
Diversity of Competitors The extent to which a group of firms can avoid price competition in favor of collusive pricing practices depends on how similar they are in their origins, objectives, costs, and strategies. The cozy atmosphere of the US auto industry prior to the advent of import competition was greatly assisted by the similarities of the companies in terms of cost structures, strategies, and top management mindsets. The intense competition that affects the car markets of Europe and North America today is partly due to the different national origins, costs, strategies, and management styles of the competing firms. Similarly, the key challenge faced by OPEC is agreeing and enforcing output quotas among member countries that are sharply different in terms of objectives, production costs, politics, and religion.

Product Differentiation The more similar the offerings among rival firms, the more willing customers are to substitute and the greater the incentive for firms to cut prices to increase sales. Where the products of rival firms are virtually indistinguishable, the product is a commodity and price is the sole basis for competition. Commodity industries such as agriculture, mining, and petrochemicals tend to be plagued by price wars and low profits. By contrast, in industries where products are highly differentiated (perfumes, pharmaceuticals, restaurants, management consulting services), price competition tends to be weak, even though there may be many firms competing.

Excess Capacity and Exit Barriers Why does industry profitability tend to fall so drastically during periods of recession? The key is the balance between demand and capacity. Unused capacity encourages firms to offer price cuts to attract new business in order to spread fixed costs over a greater sales volume. Excess capacity may be cyclical (e.g. the boom–bust cycle in the semiconductor industry); it may also be part of a structural problem resulting from overinvestment and declining demand. In these latter situations, the key issue is whether excess capacity will leave the industry. *Barriers to exit* are costs associated with capacity leaving an industry. Where resources are durable and specialized, and where employees are entitled to job protection, barriers to exit may be substantial.¹⁵ In the European and North American auto industry excess capacity together with high exit barriers have devastated industry profitability. Conversely, rapid demand growth creates capacity shortages that boost margins. Between 2001 and 2005, bulk cargo shipping rates increased sevenfold as a result of increased world demand for commodities.¹⁶ On average, companies in growing industries earn higher profits than companies in slow growing or declining industries (see Figure 3.5).

Cost Conditions: Scale Economies and the Ratio of Fixed to Variable Costs When excess capacity causes price competition, how low will prices go? The key factor is cost structure. Where fixed costs are high relative to variable costs, firms will take on marginal business at any price that covers variable costs. The consequences for profitability can be disastrous. Between 2001 and 2003, the total losses of the US airline industry exceeded the cumulative profits earned during the entire previous history of the industry. The willingness of airlines to offer heavily discounted tickets on flights with low bookings reflects the very low variable costs of filling empty seats. Similarly, the devastating impact of excess capacity on profitability in tires, hotels, and semiconductors is a result of high fixed costs in these businesses and the willingness of firms to accept additional business at any price that covers variable costs.

Scale economies may also encourage companies to compete aggressively on price in order to gain the cost benefits of greater volume. If scale efficiency in the auto

FIGURE 3.5 The impact of growth on profitabilitySOURCE: R. D. BUZZELL AND B. T. GALE, *THE PIMS PRINCIPLES* (NEW YORK: FREE PRESS, 1987), 56–7.

industry means producing four million cars a year, a level that is achieved by only six of the nineteen international auto companies, the outcome is a battle for market share as each firm tries to achieve critical mass.

Bargaining Power of Buyers

The firms in an industry operate in two types of markets: in the markets for inputs and the markets for outputs. In input markets firms purchase raw materials, components, and financial and labor services. In the markets for outputs firms sell their goods and services to customers (who may be distributors, consumers, or other manufacturers). In both markets the transactions create value for both buyers and sellers. How this value is shared between them in terms of profitability depends on their relative economic power. Let us deal first with output markets. The strength of buying power that firms face from their customers depends on two sets of factors: buyers' price sensitivity and relative bargaining power.

Buyers' Price Sensitivity The extent to which buyers are sensitive to the prices charged by the firms in an industry depends on four main factors:

- The greater the importance of an item as a proportion of total cost, the more sensitive buyers will be about the price they pay. Beverage manufacturers are highly sensitive to the costs of aluminum cans because this is one of their largest single cost items. Conversely, most companies are not sensitive to the fees charged by their auditors, since auditing costs are such a small proportion of overall company expenses.
- The less differentiated the products of the supplying industry, the more willing the buyer is to switch suppliers on the basis of price. The manufacturers of T-shirts and light bulbs have much more to fear from Wal-Mart's buying power than have the suppliers of perfumes.
- The more intense the competition among buyers, the greater their eagerness for price reductions from their sellers. As competition in the world automobile industry has intensified, so component suppliers face greater pressures for lower prices.

- The more critical an industry's product to the quality of the buyer's product or service, the less sensitive are buyers to the prices they are charged. The buying power of personal computer manufacturers relative to the manufacturers of microprocessors (Intel and AMD) is limited by the vital importance of these components to the functionality of PCs.

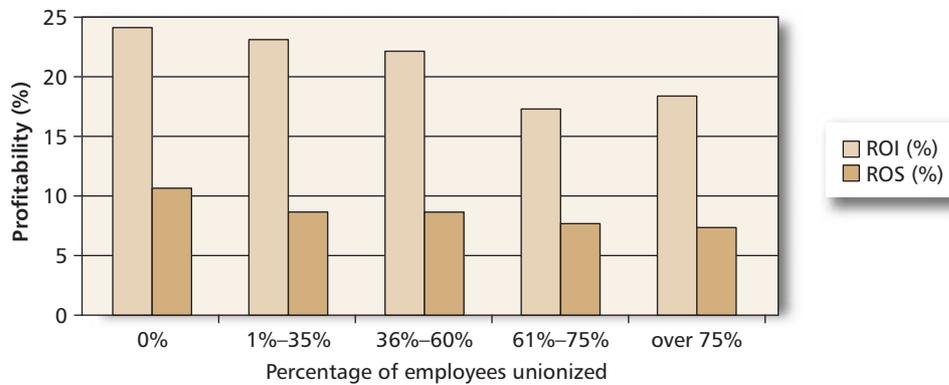
Relative Bargaining Power Bargaining power rests, ultimately, on refusal to deal with the other party. The balance of power between the two parties to a transaction depends on the credibility and effectiveness with which each makes this threat. The key issue is the relative cost that each party sustains as a result of the transaction not being consummated. A second issue is each party's expertise in managing its position. Several factors influence the bargaining power of buyers relative to that of sellers:

- *Size and concentration of buyers relative to suppliers.* The smaller the number of buyers and the bigger their purchases, the greater the cost of losing one. Because of their size, health maintenance organizations (HMOs) can purchase health care from hospitals and doctors at much lower cost than can individual patients. Several empirical studies show that buyer concentration lowers prices and profits in the supplying industry.¹⁷
- *Buyers' information.* The better informed buyers are about suppliers and their prices and costs, the better they are able to bargain. Doctors and lawyers do not normally display the prices they charge, nor do traders in the bazaars of Tangier and Istanbul. Keeping customers ignorant of relative prices is an effective constraint on their buying power. But knowing prices is of little value if the quality of the product is unknown. In the markets for haircuts, interior design, and management consulting, the ability of buyers to bargain over price is limited by uncertainty over the precise attributes of the product they are buying.
- *Ability to integrate vertically.* In refusing to deal with the other party, the alternative to finding another supplier or buyer is to do it yourself. Large food-processing companies such as Heinz and Campbell Soup have reduced their dependence on the manufacturers of metal cans by manufacturing their own. The leading retail chains have increasingly displaced their suppliers' brands with their own-brand products. Backward integration need not necessarily occur – a credible threat may suffice.

Bargaining Power of Suppliers

Analysis of the determinants of relative power between the producers in an industry and their suppliers is precisely analogous to analysis of the relationship between producers and their buyers. The only difference is that it is now the firms in the industry that are the buyers and the producers of inputs that are the suppliers. The key issues are the ease with which the firms in the industry can switch between different input suppliers and the relative bargaining power of each party.

Because raw materials, semi-finished products, and components are often commodities supplied by small companies to large manufacturing companies, their suppliers usually lack bargaining power. Hence, commodity suppliers often seek to boost their bargaining power through cartelization (e.g., OPEC, the International Coffee Organization, and farmers' marketing cooperatives). A similar logic explains labor unions. Conversely, the suppliers of complex, technically sophisticated components may be able to exert considerable bargaining power. The dismal profitability of the

FIGURE 3.6 The impact of unionization on profitability

SOURCE: R. D. BUZZELL AND B. T. GALE, *THE PIMS PRINCIPLES: LINKING STRATEGY TO PERFORMANCE* (NEW YORK: FREE PRESS, 1987), 67

personal computer industry may be attributed to the power exercised by the suppliers of key components (processors, disk drives, LCD screens) and the dominant supplier of operating systems (Microsoft).

Labor unions are important sources of supplier power. Where an industry has a high percentage of its employees unionized – as in steel, airlines and automobiles – profitability is reduced (see Figure 3.6).

Applying Industry Analysis

Once we understand how industry structure drives competition, which, in turn, determines industry profitability, we can apply this analysis, first to forecasting industry profitability in the future, and second to devising strategies for changing industry structure.

Describing Industry Structure

The first stage of industry analysis is to identify the key elements of the industry's structure. In principle, this is a simple task. It requires identifying who are the main players – the producers, the customers, the suppliers, and the producers of substitute goods – then examining some of the key structural characteristics of each of these groups that will determine competition and bargaining power.

In most manufacturing industries the identity of the different groups of players is usually straightforward, in other industries – particularly in service industries – building a picture of the industry may be more difficult. Consider the television industry. There are a number of different types of player and establishing which are buyers, which are sellers, and where the industry boundaries lie is not simple. In terms of industry definition, do we consider all forms of TV distribution or identify separate industries for broadcast TV, cable TV, and satellite TV? In terms of identifying buyers and sellers, we see that there the industry has quite a complex value chain with the producers of the individual shows, networks that put together program schedules, and local broadcasting and cable companies that undertake final distribution. For the distribution companies there are two buyers – viewers and advertisers. Some

companies are vertically integrated across several stages of the value chain – thus, networks such as Fox and NBC not only create and distribute program schedules, they are also backward integrated into producing some TV shows and they are forward integrated into local distribution through ownership of local TV stations.

Sorting out the different players and their relationships therefore involves some critical issues of industry definition. Which activities within the value chain do we include the industry? What are the horizontal boundaries of the industry in terms of both products and geographical scope? We shall return to some of these issues of industry definition in a subsequent section.

Forecasting Industry Profitability

We can use industry analysis to understand why profitability has been low in some industries and high in others but, ultimately, our interest in industry analysis is not to explain the past, but to *predict the future*. Investment decisions made today will commit resources to an industry for a decade or more – hence, it is critical that we are able to predict what industry profitability is likely to be in the future. Current profitability tends to be a poor indicator of future profitability. However, if an industry’s profitability is determined by its structure of an industry, then we can use observations of the structural trends in an industry to forecast the likely changes in competition and profitability. Given that changes in industry structure tend to be long term and are the result of fundamental shifts in customer buying behavior, technology, and firm strategies, we can use our current observations to identify emerging structural trends.

To predict the future profitability of an industry, our analysis proceeds in three stages:

- 1 Examine how the industry’s current and recent levels of competition and profitability are a consequence of the industry’s present structure.
- 2 Identify the trends that are changing the industry’s structure. Is the industry consolidating? Are new players seeking to enter? Are the industry’s products becoming more differentiated or more commoditized? Does it look as though additions to industry capacity will outstrip the industry’s growth of demand?
- 3 Identify how these structural changes will affect the five forces of competition and resulting profitability of the industry. Compared with the present, does it seem as though the changes in industry structure will cause competition to intensify or to weaken? Rarely do all the structural changes move competition in a consistent direction – typically, some factors will cause competition to increase; others will cause competition to moderate. Hence, determining the overall impact on profitability is likely to be a matter of judgment.

Strategy Capsule 3.2 discusses the profitability prediction in relation to the US casino industry.

During the past 20 years industry profitability has been undermined by two major forces: increasing international competition and accelerating technological change. Despite widespread optimism that the “TMT” (technology, media, and telecommunication) boom of the late 1990s would usher in a new era of profitability, the reality was very different. Digital technologies and the internet both increased competitive pressures through lowering entry barriers and causing industries to converge. (See Strategy Capsule 3.3.)

STRATEGY CAPSULE 3.2**Prospects for the US Casino Industry**

The early years of the 21st century saw a continuation of the US casino boom that had begun during the mid-1990s. Between 1991 and 2005, the installed base of gaming machines increased from 184,000 to 829,000 machines, while US expenditure on gambling revenues rose from \$304 billion to \$850 billion over the same period. Despite the costs of expansion, the two industry leaders continued to earn good profits. Harrah's Entertainment (Grand Casino, Caesar's, Bally's, Paris) earned an average ROE of 14.8% during 2003–5, while MGM Mirage (Bellagio, New York New York, Luxor, Excalibur, MGM Grand) earned an average ROE of 12.6%. However, the bankruptcy of Trump Hotels and Casinos at end of 2004 had raised a question mark over the industry. Was Trump's entry into Chapter 11 an isolated case of bad management, or did it point to an industry future of intensifying competition and declining margins?

The most visible sign of expansion was the race to build the "biggest and best" hotel-casino complexes in Las Vegas. Between 1996 and 2000, the number of hotel rooms in Las Vegas casinos more than doubled. New "mega-casinos" in Vegas included the MGM Grand, the Bellagio, New York New York, and the Venetian. Competition between the casinos involved ever more ambitious differentiation in terms of spectacle, entertainment, theming, and sheer scale. Price competition was also evident in terms of subsidized travel packages, free rooms and other perks for "high rollers."

However, by far the greater part of industry expansion was outside the traditional centers in Las Vegas and Atlantic City, NJ. The municipalities and state governments saw gambling as a new source of tax revenue and a stimulus

to economic development. The result was the introduction of riverboat casinos and the licensing of casinos in Mississippi and seven other states. Most important was the opening of new casinos on Indian reservations. By 2006 there were some 120 casinos on Indian reservations across 17 states. One of the biggest was Foxwood's, owned by the Mashantucket Pequot tribe in Ledyard, CT. At the end of 2005, there were 287,000 gaming machines in casinos located on tribal lands compared with 459,000 in "traditional" casinos (including riverboats and cruise ships).

During 2006–7, geographical expansion of gambling seemed set to continue with several new casinos in Indian reservations in California and more permissive approaches to gambling in California, Washington State, Florida, and Oklahoma.

A further source of new competition was the internet. Although illegal in the US, internet gambling (especially poker) through non-US internet gambling companies grew massively during 2000–5.

With the growth of casino capacity and new gambling opportunities far outstripping growth in demand, what would the implications be for competition and profitability? Much would depend on the how the leading casino companies responded to the deteriorating competitive situation. During 2005, the industry had experienced another merger wave. Former industry leader, Park Place was acquired by Harrah's, while MGM Mirage acquired the number 4 in the industry, Mandalay Resorts. As a result, two companies, Harrah's and MGM Mirage, dominated the industry with the reconstituted Trump Entertainment Resorts a distant third.

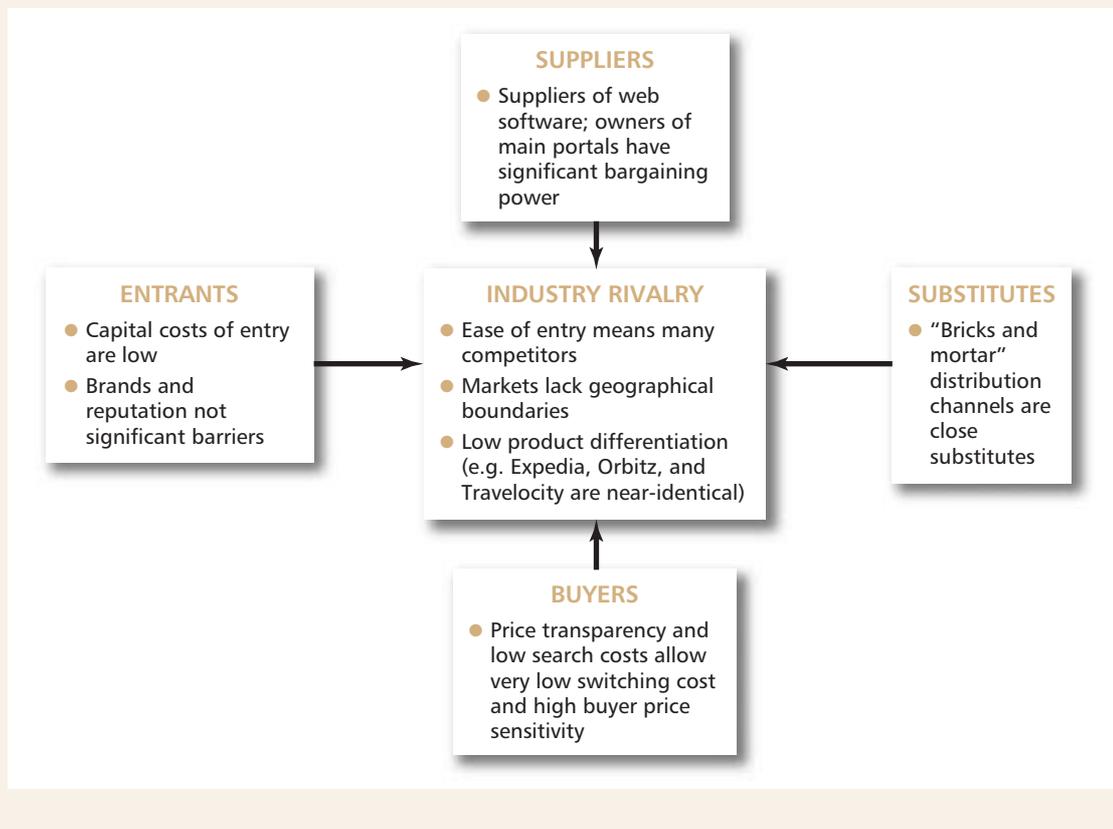
STRATEGY CAPSULE 3.3

The Internet: Value Creator or Value Destroyer?

The diffusion of the internet during the late 1990s and the creation of a host of businesses that sought to exploit its economic potential resulted in one of the most spectacular stock market booms in history. Pets.com, Webvan.com, Kozmo.com and Boo.com all burned through hundreds of millions of dollars of venture capital and, in several cases, achieved stock market values over \$1 billion before descending into bankruptcy.

So what are the true industrial economics of e-business? What can Porter’s five forces analysis tell us about the likely profit potential of new internet-based businesses?

The first thing to note is that most new electronic businesses were not fundamentally new businesses. For the most part they used a new distribution channel for existing goods and services: books (Amazon), airline tickets (Expedia), groceries (Peapod), and securities (E-trade). As such, the main features of these markets are: strong substitute competition from traditional retail distribution, low entry barriers (setting up a website costs little), and weak product differentiation. The principal structural features of these “e-tailing” businesses are shown below:



The implication is that most “e-tailing” markets – whether for books, securities, household goods, or hotel accommodation – will tend to be highly competitive and, on average, will generate low margins and low rates of return on capital. Will any e-businesses offer high profitability? The key is the potential to reduce rivalry and raise barriers to entry through strategies that exploit network effects, economies of scale, or product differentiation.

For example, eBay exploits network effects to dominate the person-to-person auction business; in books, Amazon relies on scale economies and product differentiation through its range of customer services; Google exploits scale economies and differentiation based on rapid innovation to dominate web search.

Sources: M. E. Porter, “Strategy and the Internet” *Harvard Business Review* (March 2001): 63–77; “The E-Commerce Winners,” *Business Week* (August 3, 2001).

Strategies to Alter Industry Structure

Understanding how the structural characteristics of an industry determine the intensity of competition and the level of profitability provides a basis for identifying opportunities for changing industry structure to alleviate competitive pressures. The first issue is to identify the key structural features of an industry that are responsible for depressing profitability. The second is to consider which of these structural features are amenable to change through appropriate strategic initiatives. For example:

- The remarkable profit revival in the world steel industry since 2002 owes much to the rapid consolidation of the industry, led by Mittal Steel.¹⁸
- Excess capacity was also a major problem in the European petrochemicals industry. Through a series of bilateral plant exchanges, each company sought to build a leading position within a particular product area.¹⁹
- In the US airline industry, the major airlines have struggled to change an unfavorable industry structure. In the absence of significant product differentiation, the airlines have used frequent-flier schemes to build customer loyalty. Through hub-and-spoke route systems, the companies have achieved dominance of particular airports: American at Dallas-Fort Worth, US Airways at Charlotte NC, and Northwest at Detroit and Memphis. Mergers and alliances have reduced the numbers of competitors on many routes.²⁰
- Building entry barriers is a vital strategy for preserving high profitability in the long run. A primary goal of the American Medical Association has been to maintain the incomes of its members by controlling the numbers of doctors trained in the United States and imposing barriers to the entry of doctors from overseas.

Defining Industries: Where to Draw the Boundaries

In our earlier discussion of the structure of the television broadcasting industry, I noted that a key challenge in industry analysis is defining the relevant industry. The Standard Industrial Classification (SIC) offers an official guide, but this provides limited practical assistance. Suppose Jaguar, a subsidiary of Ford Motor Company, is

assessing its future prospects. In forecasting the profitability of its industry, should Jaguar consider itself part of the “motor vehicles and equipment” industry (SIC 371), the automobile industry (SIC 3712), or the luxury car industry? Should it view its industry as national (UK), regional (Europe), or global?

Industries and Markets

The first issue is clarifying what we mean by the term “industry.” Economists define an industry as a group of firms that supplies a market. Hence, a close correspondence exists between markets and industries. So, what’s the difference between analyzing industry structure and analyzing market structure? The principal difference is that industry analysis – notably five forces analysis – looks at industry profitability being determined by competition in two markets: product markets and input markets.

Everyday usage makes a bigger distinction between industries and markets. Typically, industry is identified with relatively broad sectors, while markets refer to specific products. Thus, the firms within the packaging industry compete in many distinct product markets – glass containers, steel cans, aluminum cans, paper cartons, plastic containers, and so on.

Similar issues arise in relation to geographical boundaries. From an economist’s viewpoint, the US automobile industry would denote all companies supplying the US auto market – irrespective of their location. In everyday usage, the term “US auto industry” typically refers to auto manufacturers located within the US, and is often restricted to US-owned automakers (which now includes primarily Ford and General Motors).

For the purposes of industry analysis, we need to adopt the economist’s approach to identifying and defining industries. Thus, our starting point is the market – which are the groups of firms that compete to supply a particular service? The result may be that, for the purposes of industry analysis, we may wish to disregard conventional concepts of industry. For example, if we are examining competition within the banking industry, it is likely that we would want to regard banking as comprising a number of industries – banks supply a number of distinct services and competition in each product market comprises different sets of firms. Most basic is the distinction between retail banking and investment banking. Even within retail banking we can distinguish different product groups. For example, credit cards and consumer lending are closely related products, but they involve distinct product offerings and different groups of competing firms.

Given the conventional view of industries as broad economic sectors, it can be revealing to focus on competition using a micro-level approach that begins with customers choosing between rival offerings (see Strategy Capsule 3.4).

Defining Markets: Substitution in Demand and Supply

I have argued that the key to defining industry boundaries is identifying the relevant market. By focusing on the relevant market, we do not lose sight of the critical relationship among firms within an industry: competition. But how do we define markets?

A market’s boundaries are defined by *substitutability*. There are two dimensions to this – substitutability on the demand side and the supply side. Let us consider once more the market within which Jaguar competes. Starting with the demand side, if customers are unwilling to substitute trucks for cars on the basis of price differences,

STRATEGY CAPSULE 3.4

Analyzing Competition in Markets for Offerings

Mathur and Kenyon argue that our conventional concept of industry is fundamentally flawed. In order to analyze competition, we must begin with customer choice. Customers do not choose a product or a company, their unit of choice is the single *offering*. Competitive strategy is the “positioning of a single offering vis-à-vis a unique set of potential customers and competitors.” To analyze competition, it makes no sense to talk about the “watch market” or the “watch industry” – the Patek Philippe Sky Moon Tourbillon that sells at about half a million dollars does not compete with the \$35 Timex Sport Watch. Similarly, a \$1,400 Swatch Lustrous Bliss Sapphire Watch is not a close competitor to Swatch’s \$39.95 Pampas Rider. Each model by each watch maker is a separate offering and each offering forms a distinct market where competitors can be ranked according to how closely they compete with the focal offering. Thus, if we consider the Seiko Men’s Steel Watch (\$81), the Citizen Men’s Steel Watch (\$78) and Timex T29771 (\$60) are close competitors, the Bulova Infinity (\$150) and Swatch Once Again (\$45) are a little more distant competitors.

This micro approach to analyzing competition focuses on customer choices and contrasts sharply with Porter’s industry analysis that examines competition at a much higher level of aggregation.

Should we abandon our more aggregated industry analysis in favor of the meticulously

micro analysis advocated by Mathur and Kenyon? The critical consideration is the type of question that we want our competitive analysis to answer. For decisions relating to marketing strategy – including product design, pricing, advertising, distribution, and entry into specific market segments – analysis of competition between narrowly defined offerings in relation to specific customers and customer groups is likely to be particularly revealing.

For understanding and predicting medium-term profit trends, the conventional five forces analysis of fairly broadly defined industries has two virtues. First, it allows us to consider competition in two markets simultaneously – the market for outputs and markets for inputs. Second, it takes account of supply-side substitution. Thus, different Swatch models are produced at the same plants using many of the same components. Indeed, the parent company – Swatch Group – owns 16 brands, including Swatch, Omega, Longines, and Tissot. Even between brands there is scope for reallocating resources. Hence, for analyzing broad questions of profitability and competitive advantage, it is useful to consider the global watch industry – though probably excluding the luxury watch segment, which in terms of demand conditions and production is closer to the jewelry industry than to the watch industry.

Based on: Shiv Mathur and Alfred Kenyon, *Winning Business Strategies* (Oxford: Butterworth-Heinemann, 2007).

Jaguar’s market should be viewed as automobiles rather than all motor vehicles. Again, if customers are only willing to substitute between Jaguars and other makes of luxury cars, then Jaguar’s relevant market is luxury cars rather than the automobile market as a whole.

But this fails to take account of substitutability on the supply side. If manufacturers find it easy to switch their production from luxury cars to family sedans to sports cars and the like, such supply-side substitutability would suggest that Jaguar is competing within the broader automobile market. The ability of Toyota, Nissan, and Honda to penetrate the luxury car market suggests that supply-side substitutability between mass-market autos and specialty autos is moderately high. Similarly, the automobile industry is frequently defined to include vans and light trucks, since these can be manufactured at the same plants as automobiles (often using the same platforms and engines). So too with “major appliance” manufacturers. They tend to be classified as a single industry, not because consumers are willing to substitute between refrigerators and dishwashers, but because the manufacturers can use the same manufacturing plants and distribution channels for different appliances.

The same considerations apply to the geographical boundaries of markets. Should Jaguar view itself as competing in a single global market or in a series of separate national or regional markets? The criterion here again is substitutability. If customers are willing and able to substitute cars available on different national markets, or if manufacturers are willing and able to divert their output among different countries to take account of differences in margins, then a market is global. The key test of the geographical boundaries of a market is price: if price differences for the same product between different locations tend to be eroded by demand-side and supply-side substitution, then these locations lie within a single market.

In practice, drawing the boundaries of markets and industries is a matter of judgment that depends on the purposes and context of the analysis. If Ford is considering the pricing and market positioning of its Jaguar cars, it must take a micro-level approach that defines markets around each model, in each country, and in relation to different categories of customer (e.g., distinguishing between sales to car rental companies and sales to individual consumers). In considering decisions over investments in fuel cell technology, the location of engine plants, and which new products to develop over the next five years, Ford will view Jaguar as one part of its auto and light truck business and will define its market as global and extending across its full range of models. The longer term the decisions are that it is considering, the more broadly it will wish to consider its markets, since substitutability is higher in the long run than in the short term.

Second, the precise delineation of the boundaries of a market or industry is seldom critical to the outcome of our analysis so long as we remain wary of external influences. The market in which an offering competes is a continuum rather than a bounded space. Thus, we may view the competitive market of Disneyland, Anaheim as a set of concentric circles. Closest is Universal Studios Tour. Slightly more distant competitors are Sea World and Six Flags. Further still might be a trip to Las Vegas, or a skiing weekend. Beyond these would be the broader entertainment market that might include cinemas, the beach, or playing video games.

For the purposes of applying the five forces framework, industry definition is not critical. We define an industry “box” within which industry rivals compete, but because we include competitive forces outside the industry box – notably entrants and substitutes – the precise boundaries of the industry box are not greatly important. Whether we view Harley-Davidson as competing in the “retro” segment of the heavy-weight motorcycle industry, in the heavyweight motorcycle industry, or in the motorcycle industry as a whole is not critical to the outcome of our analysis. Even if we define Harley’s market narrowly, we can still take into account competition from



Triumph and Ducati as substitute competition. Indeed, we might want to consider competition from more distant substitutes – sports cars, motorized water craft, and participation in “extreme sports.”²¹

From Industry Attractiveness to Competitive Advantage: Identifying Key Success Factors

The five forces framework allows us to determine an industry’s potential for profit. But how is industry profit shared between the different firms competing in that industry? As we have noted in our discussion of industry dynamics, competition between industry participants is ultimately a battle for competitive advantage in which firms rival one another to attract customers and maneuver for positional advantage. Let us look explicitly at the sources of competitive advantage within an industry. In subsequent chapters we develop a more comprehensive analysis of competitive advantage. Our goal here is to identify those factors within the firm’s market environment that determine the firm’s ability to survive and prosper – its *key success factors*.²² In Strategy Capsule 3.5, Kenichi Ohmae of McKinsey’s Tokyo office discusses key success factors in forestry and their link with strategy.

Like Ohmae, our approach to identifying key success factors is straightforward and commonsense. To survive and prosper in an industry, a firm must meet two criteria: first, it must supply what customers want to buy; second, it must survive competition. Hence, we may start by asking two questions:

- What do our customers want?
- What does the firm need to do to survive competition?

To answer the first question we need to look more closely at customers of the industry and to view them not so much as a source of bargaining power, and hence as a threat to profitability, but more as the basic rationale for the existence of the industry and as the underlying source of profit. This implies that the firm must identify who its customers are, what are their needs, and how they choose between competing offerings. Once we have identified the basis of customers’ preference, this is merely the starting point for a chain of analysis. For example, if consumers’ choice of supermarkets is based primarily on which charges the lowest prices and if the ability to charge low prices depends on low costs, the key issues concern the determinants of costs among supermarkets.

The second question requires that the firm examines the basis of competition in the industry. How intense is competition and what are its key dimensions? Thus, in the luxury car market, consumers select primarily on the basis of prestige, design, quality, and exclusiveness. However, these qualities are an insufficient basis for success. In this intensely competitive market, survival requires a strong financial position (to finance new product development) and costs that are sufficiently low to allow a company to cover its cost of capital.

A basic framework for identifying key success factors is presented in Figure 3.7. Application of the framework to identify key success factors in three industries is outlined in Table 3.3.

Key success factors can also be identified through the direct modeling of profitability. In the same way that the five forces analysis models the determinants of industry-level profitability, we can also attempt to model firm-level profitability in terms of



STRATEGY CAPSULE 3.5

Probing for Key Success Factors

As a consultant faced with an unfamiliar business or industry, I make a point of first asking the specialists in the business, "What is the secret of success in this industry?" Needless to say, I seldom get an immediate answer, and so I pursue the inquiry by asking other questions from a variety of angles in order to establish as quickly as possible some reasonable hypotheses as to key factors for success. In the course of these interviews it usually becomes quite obvious what analyses will be required in order to prove or disprove these hypotheses. By first identifying the probable key factors for success and then screening them by proof or disproof, it is often possible for the strategist to penetrate very quickly to the core of a problem.

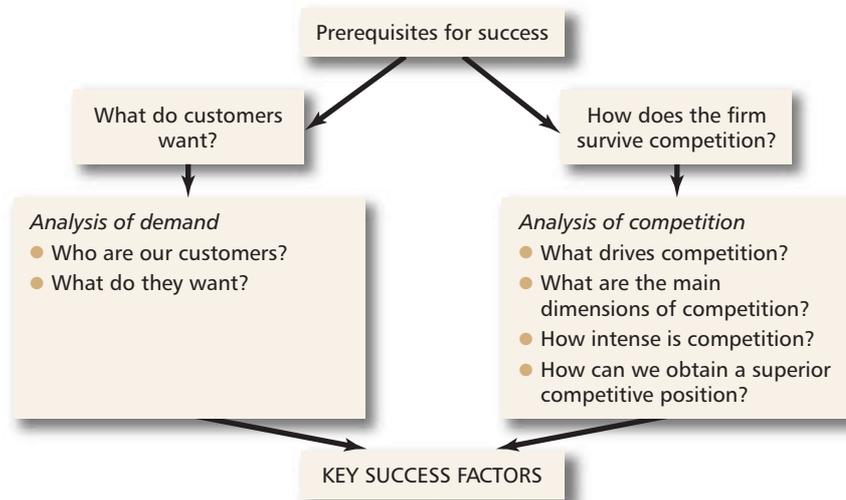
Traveling in the United States last year, I found myself on one occasion sitting in a plane next to a director of one of the biggest lumber companies in the country. Thinking I might learn something useful in the course of the five-hour flight, I asked him, "What are the key factors for success in the lumber industry?" To my surprise, his reply was immediate: "Owning large forests and maximizing the yield from them." The first of these key factors is a relatively simple matter: purchase of forest land. But his second point required further explanation. Accordingly, my next question was: "What variable or variables do you control in order to maximize the yield from a given tract?"

He replied: "The rate of tree growth is the key variable. As a rule, two factors promote growth: the amount of sunshine and the amount of water. Our company doesn't have many forests with enough of both. In Arizona and Utah, for example, we get more than enough sunshine but too little water, and so tree growth is very low. Now, if we could give the trees in those states enough water, they'd be ready in less than fifteen years instead of the thirty it takes now. The most important project we have in hand at the moment is aimed at finding out how to do this."

Impressed that this director knew how to work out a key factor strategy for his business, I offered my own contribution: "Then under the opposite conditions, where there is plenty of water but too little sunshine – for example, around the lower reaches of the Columbia River – the key factors should be fertilizers to speed up the growth and the choice of tree varieties that don't need so much sunshine."

Having established in a few minutes the general framework of what we were going to talk about, I spent the rest of the long flight very profitably hearing from him in detail how each of these factors was being applied.

Source: Kenichi Ohmae, *The Mind of the Strategist* (Harmondsworth: Penguin, 1982): 85.

FIGURE 3.7 Identifying key success factors

identifying the key factors that drive a firm's relative profitability within an industry. In Chapter 2, we made some progress on this front. By disaggregating a firm's return on capital employed into individual operating factors and ratios, we can pinpoint the most important determinants of firm success (see Figure 2.1). In many industries, these primary drivers of firm-level profitability are well known and widely used as performance targets. Strategy Capsule 3.6 begins with a well-known profitability formula used in the airline industry, then identifies the factors that drive this ratio. More generally, the approach introduced in Chapter 2 to disaggregate return on capital into its component ratios can be extended to identify the specific operational and strategic drivers of superior profitability. Figure 3.8 applies this analysis to identifying success factors in retailing.

The value of success factors in formulating strategy has been scorned by some strategy scholars. Pankaj Ghemawat observes that the "whole idea of identifying a success factor and then chasing it seems to have something in common with the ill-considered medieval hunt for the philosopher's stone, a substance that would transmute everything it touched into gold."²³ Our objective in identifying key success factors is less ambitious. There is no universal blueprint for a successful strategy and, even in individual industries, there is no "generic strategy" that can guarantee success. However, each market is different in terms of what motivates customers and how competition works. Understanding these aspects of the industry environment is a prerequisite for an effective business strategy. Nevertheless, this does not imply that firms within an industry adopt common strategies. Since every firm comprises a unique set of resources and capabilities, even when an industry is subject to common success factors (e.g. low costs), firms will select unique strategies to link their resources and capabilities to industry success factors.

TABLE 3.3 Identifying Key Success Factors: Steel, Fashion Clothing, and Supermarkets

	WHAT DO CUSTOMERS WANT? (Analysis of demand)	HOW DO FIRMS SURVIVE COMPETITION? (Analysis of competition)	KEY SUCCESS FACTORS
Steel	<ul style="list-style-type: none"> ● Low price ● Product consistency ● Reliability of supply ● Specific technical specifications for special steels 	<ul style="list-style-type: none"> ● Commodity products, excess capacity, high fixed costs, excess capacity, exit barriers, and substitute competition mean intense price competition and cyclical profitability ● Cost efficiency and financial strength essential 	<ul style="list-style-type: none"> ● Cost efficiency requires: large-scale plants, low-cost location, rapid capacity adjustment ● Alternatively, high technology, small-scale plants can achieve low costs through flexibility and high productivity ● Differentiation through technical specifications and service quality
Fashion clothing	<ul style="list-style-type: none"> ● Diversity of customer preferences in terms of garment type, style, quality, color ● Customers willing to pay premium for brand, style, exclusivity, and quality ● Mass market highly price sensitive 	<ul style="list-style-type: none"> ● Low barriers to entry and exit, low seller concentration, and buying power of retail chains imply intense competition ● Differentiation can yield substantial price premium, but imitation is rapid 	<ul style="list-style-type: none"> ● Combining differentiation with low costs ● Differentiation requires speed of response to changing fashions, style, reputation and quality ● Cost efficiency requires manufacture in low wage countries
Supermarkets	<ul style="list-style-type: none"> ● Low prices ● Convenient location ● Wide range of products adapted to local preferences ● Fresh/quality produce; good service; ease of parking; pleasant ambience 	<ul style="list-style-type: none"> ● Intensity of price competition depends on number and proximity of competitors ● Bargaining power a critical determinant of cost of bought-in goods 	<ul style="list-style-type: none"> ● Low costs require operational efficiency, scale-efficient stores, large aggregate purchases, low wage costs ● Differentiation requires large stores (to allow wide product range), convenient location, familiarity with local customer preferences

STRATEGY CAPSULE 3.6

Identifying Key Success Factors by Modeling Profitability: Airlines

Profitability, as measured by operating income per available seat-mile (ASM), is determined by three factors: yield, which is total operating revenues divided by the number of revenue passenger miles (RPM); load factor, which is the ratio between RPMs and ASMs; and unit cost, which is total operating expenses divided by ASMs. Thus:

$$\frac{\text{Income}}{\text{ASMs}} = \frac{\text{Revenue}}{\text{RPMs}} \times \frac{\text{RPMs}}{\text{ASMs}} \text{ less } \frac{\text{Expenses}}{\text{ASMs}}$$

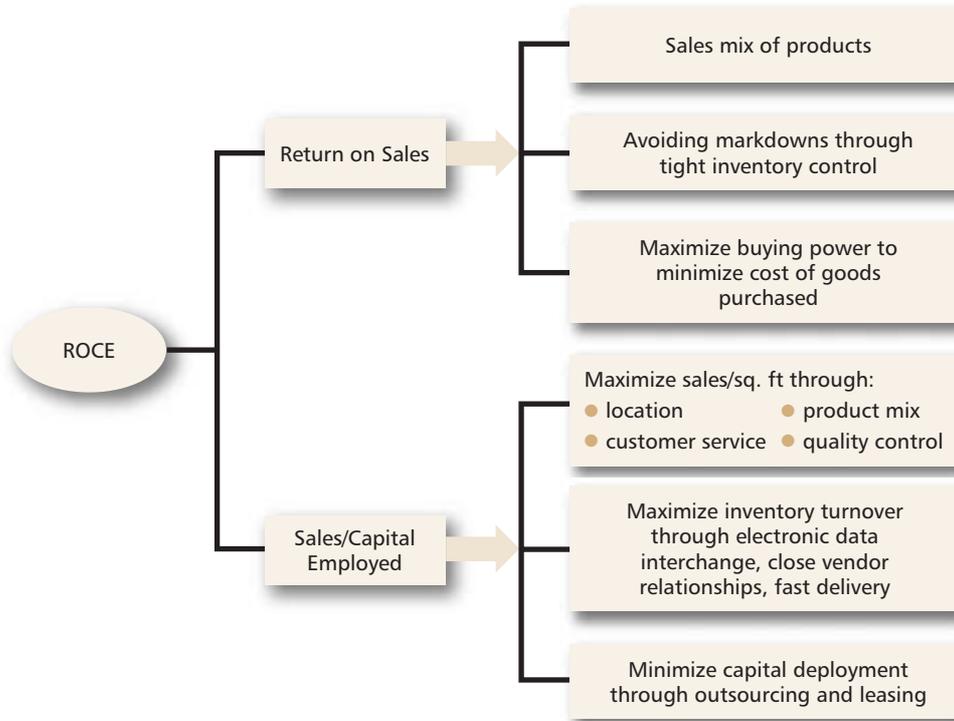
Some of the primary determinants of each of these measures are the following:

- Revenue/RPMs
 - Intensity of competition on routes flown.
 - Effective yield management to permit quick price adjustment to changing market conditions.
 - Ability to attract business customers.
 - Superior customer service.
- Load factors
 - Competitiveness of prices.
 - Efficiency of route planning (e.g., through hub-and-spoke systems).
 - Building customer loyalty through quality of service, frequent-flier programs.

- Matching airplane size to demand for individual flights.
- Expenses/ASMs
 - Wage rates and benefit levels.
 - Fuel efficiency of aircraft.
 - Productivity of employees (determined partly by their job flexibility).
 - Load factors.
 - Level of administrative cost.

In their battle for survival, the airlines have sought to optimize as many of these factors as possible in order to improve their profitability. To enhance revenue, several airlines have withdrawn from their most intensely competitive routes; others have sought to achieve a fare premium over the cut-price airlines through superior punctuality, convenience, comfort, and services. To improve load factors, companies have become more flexible in their pricing and in allocating different planes to different routes. Most notably, companies have sought to cut costs by increasing employee productivity, reducing overhead, sharing services with other airlines, and reducing salaries and benefits.

FIGURE 3.8 Identifying key success factors through analyzing profit drivers: the case of retailing

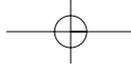


Summary

In Chapter 1, we established that profound understanding of the competitive environment is a critical ingredient of a successful strategy. In this chapter, we have developed a systematic approach to analyzing a firm's industry environment in order to evaluate that industry's profit potential and to identify the sources of competitive advantage. The centerpiece of our approach is Porter's *five forces of competition* framework, which links the structure of an industry to the competitive intensity within it and to the profitability that it realizes. Although every industry is unique, competition and profitability are the result of the

systematic influences of the structure of that industry. The Porter framework provides a simple, yet powerful organizing framework for classifying the relevant features of an industry's structure and predicting their implications for competitive behavior. The framework is particularly useful for predicting industry profitability and for identifying how the firm can influence industry structure in order to improve industry profitability.

As with most of the tools for strategy analysis that we shall consider in this book, the Porter five forces framework is easy to comprehend. While its basis is a substantial body of microeconomic



theory, the relationships it posits are straightforward and consistent with commonsense. However, the real learning about industry analysis, and about the Porter framework in particular, derives from its *application*. It is only when we apply the Porter framework to analyzing competition and diagnosing the causes of high or low profitability in an industry that we are forced to confront the complexities and subtleties of the model. What industry (or industries) does a company compete in? Where do the industry's boundaries lie? How wide a range of substitutes do we consider? How do excess capacity, cost structures, and exit barriers interact with one another?

I urge you to put the tools of industry analysis to work – not just in your strategic management coursework, but also in your interpretation of

everyday business events. What will be the impact of Linux, Apache, and other open-source software on Microsoft's hugely profitable sales of operating systems and server software? What are the prospects for the fixed-line telecom providers currently battered by wireless and internet telephony? Is your cousin's plan to leave her law firm to take up the position of legal counsel with a major airline a good idea given the different competitive circumstances of the two industries?

Through practical applications of the Porter framework, we shall also become aware of its limitations. In the next chapter we shall consider some of these limitations and look to ways in which we can extend and augment our analysis with additional concepts, tools, and frameworks.

Self-Study Questions

- 1 The major forces shaping the business environment of the fixed-line telecom industry are technology and government policy. The industry has been influenced by fiber-optics (greatly increasing transmission capacity), new modes of telecommunication (wireless and internet telephony), deregulation, and privatization. Using the five forces of competition framework, show how each of these developments has influenced competition in the fixed-line telecom industry.
- 2 From Table 3.1, select a high-profit industry and a low-profit industry. From what you know of the structure of your selected industry, use the five forces framework to explain why profitability has been either high or low.
- 3 With reference to Strategy Capsule 3.1, use the five forces framework to explain why the US smokeless tobacco industry is so profitable (as indicated by the profitability of its dominant firm).
- 4 Despite high fuel costs, profitability in the world airline industry increased substantially during 2005 and 2006 – even while fuel costs were rising sharply. Why?
- 5 Wal-Mart (like Carrefour, Ahold, and Metro) competes in several countries of the world, yet most shoppers choose between retailers within a radius of a few miles. For the purposes of analyzing profitability and competitive strategy, should Wal-Mart consider the discount retailing industry to be global, national, or local?
- 6 What do you think are key success factors in:
 - a) The delivered pizza industry?
 - b) The investment banking industry?

Notes

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- 9 M. Lieberman ("Excess Capacity as a Barrier to Entry," *Journal of Industrial Economics* 35, June 1987: 607–27) argues that, to be credible, the threat of retaliation needs to be supported by incumbents holding excess capacity giving them the potential to flood the market.
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