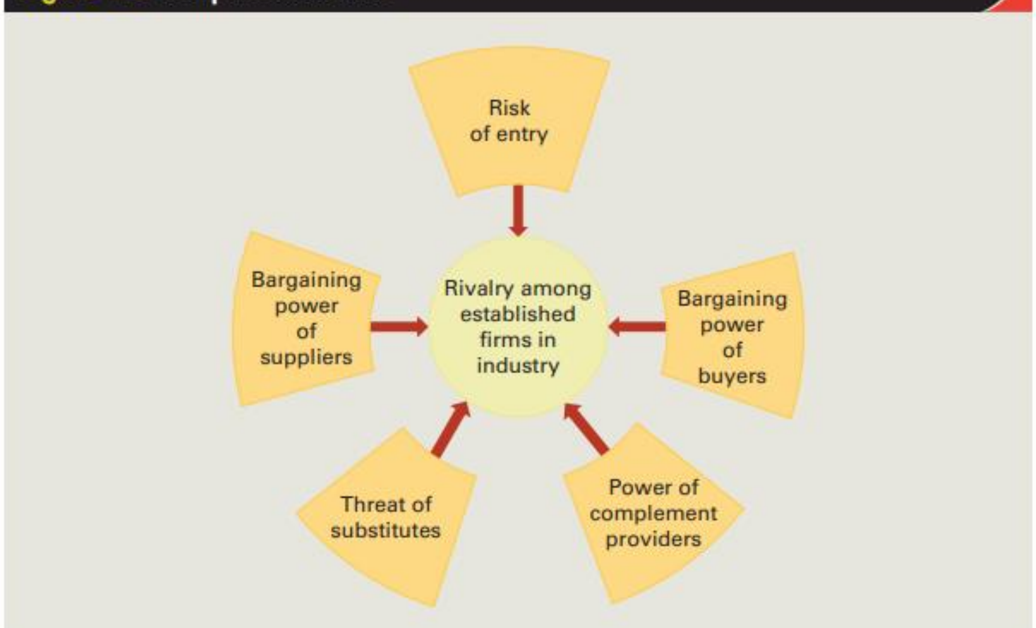
# PORTER'S COMPETITIVE FORCES MODEL

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

As each of these forces grows stronger, it limits the ability of established companies to raise prices and earn greater profits. Within this framework, a strong competitive force can be regarded as a threat because it depresses profits. A weak competitive force can be viewed as an opportunity because it allows a company to earn greater profits. The strength of the six forces may change over time as industry conditions change. Managers face the task of recognizing how changes in the six forces give rise to new opportunities and threats, and formulating appropriate strategic responses. In addition, it is possible for a company, through its choice of strategy, to alter the strength of one or more of the forces to its advantage. This is discussed in the following chapters.

**Figure 2.1** **Competitive Forces**




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

## Risk of Entry by Potential Competitors

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

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

Established companies already operating in an industry often attempt to discourage potential competitors from entering the industry because their entry makes it more difficult for the established companies to protect their share of the market and generate profits. A high risk of entry by potential competitors represents a threat to the profitability of established companies.

The risk of entry by potential competitors is a function of the height of the barriers to entry; that is, those factors that make it costly for companies to enter an industry. The greater the costs potential competitors must bear to enter an industry, the greater the barriers to entry, and the weaker this competitive force. High entry barriers may keep potential competitors out of an industry even when industry profits are high. Important barriers to entry include economies of scale, brand loyalty, absolute cost advantages, customer switching costs, and government regulation.[2] An important strategy is building barriers to entry (in the case of incumbent firms) or finding ways to circumvent those barriers (in the case of new entrants). We shall discuss this topic in more detail in subsequent chapters.

**economies of scale**
Reductions in unit costs attributed to large output.

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

**Brand Loyalty** **Brand loyalty** exists when consumers have a preference for the products of established companies. A company can create brand loyalty by continuously advertising its brand-name products and company name, patent protection of its products, product innovation achieved through company research and development (R&D) programs, an emphasis on high-quality products, and exceptional after-sales service. Significant brand loyalty makes it difficult for new entrants to take market share away from established companies. Thus, it reduces the threat of entry by potential competitors; they may see the task of breaking down well-established customer preferences as too costly. In the smartphone business, for example, Apple has generated such strong brand loyalty with its iPhone offering and related products that Microsoft is finding it very difficult to attract customers away from Apple and build demand for its Windows phone, introduced in late 2011. Despite its financial might, three years after launching the Windows phone, Microsoft's U.S. market share remained mired at around 3.6%, whereas Apple led the market with a 42% share.[3]

**brand loyalty**
Preference of consumers for the products of established companies.

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

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

**Customer Switching Costs** **Switching costs** arise when a customer invests time, energy, and money switching from the products offered by one established company to the products offered by a new entrant. When switching costs are high, customers can be locked in to the product offerings of established companies, even if new entrants offer better products.[4] A familiar example of switching costs concerns the costs associated with switching from one computer operating system to another. If a person currently uses Microsoft's Windows operating system and has a library of related software applications and document files, it is expensive for that person to switch to another computer operating system. To effect the change, this person would need to purchase a new set of software applications and convert all existing document files to the new system's format. Faced with such an commitment of money and time, most people are unwilling to make the switch unless the competing operating system offers a substantial leap forward in performance. Thus, the higher the switching costs, the higher the barrier to entry for a company attempting to promote a new computer operating system. Similarly, as we saw in the Opening Case, wireless service companies have traditionally created high switching costs by requiring customers to enter into 2-year contracts with early-termination fees whenever they upgrade their equipment.

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

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

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

## Rivalry Among Established Companies

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

## 2.1 STRATEGY IN ACTION

### Circumventing Entry Barriers into the Soft Drink Industry

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

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

Emboldened by this success, Cott tried to convince other retailers to carry private-label cola. To retailers, the value proposition was simple because, unlike its major rivals, Cott spent almost nothing on advertising and promotion. This constituted a major source of cost savings, which Cott passed on to retailers in the form of lower prices. Retailers found that they could significantly undercut the price of Coke and Pepsi colas and still make better profit margins on private-label brands than on branded colas.

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

By 2014, Cott's private-label customers included Wal-Mart, Kroger, Costco, and Safeway. Cott had revenues of \$2.33 billion and accounted for 60% of all private-label sales of carbonated beverages in the United States, and 6 to 7% of overall sales of carbonated beverages in grocery stores, its core channel. Although Coca-Cola and PepsiCo remain dominant, they have lost incremental market share to Cott and other companies that have followed Cott's strategy.

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

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

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

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

**Exit Barriers** Exit barriers are economic, strategic, and emotional factors that prevent companies from leaving an industry.[8] If exit barriers are high, companies become locked into an unprofitable industry where overall demand is static or declining. The result is often excess productive capacity, leading to even more intense rivalry and price competition as companies cut prices, attempting to obtain the customer orders needed to use their idle capacity and cover their fixed costs.[9] Common exit barriers include:

- Investments in assets such as specific machines, equipment, or operating facilities that are of little or no value in alternative uses, or cannot be later sold. If the company wishes to leave the industry, it must write off the book value of these assets.
- High fixed costs of exit such as severance pay, health benefits, or pensions that must be paid to workers who are being made laid off when a company ceases to operate.

## 2.2 STRATEGY IN ACTION

### Price Wars in the Breakfast Cereal Industry

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

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

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

If breakfast cereal companies were hoping that price cuts would stimulate demand, they were wrong. Instead, demand remained flat while revenues and margins followed price decreases, and operating margins at Kellogg's dropped from 18% in 1995 to 10.2% in 1996, a trend also experienced by the other brand-name cereal manufacturers.

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

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

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

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

- Emotional attachments to an industry, such as when a company's owners or employees are unwilling to exit an industry for sentimental reasons or because of pride.
- Economic dependence because a company relies on a single industry for its entire revenue and all profits.
- The need to maintain an expensive collection of assets at or above a minimum level in order to participate effectively in the industry.
- Bankruptcy regulations, particularly in the United States, where Chapter 11 bankruptcy provisions allow insolvent enterprises to continue operating and to reorganize under this protection. These regulations can keep unprofitable assets in the industry, result in persistent excess capacity, and lengthen the time required to bring industry supply in line with demand.

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

## The Bargaining Power of Buyers

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

- When buyers have choice. If the industry is a monopoly, buyers obviously lack choice. If there are two or more companies in the industry, the buyers clearly have choice.
- When the buyers purchase in large quantities, they can use their purchasing power as leverage to bargain for price reductions.

- When the supply industry depends upon buyers for a large percentage of its total orders.
- When switching costs are low and buyers can pit the supplying companies against each other to force down prices.
- When it is economically feasible for buyers to purchase an input from several companies at once, they can pit one company in the industry against another.
- When buyers can threaten to enter the industry and independently produce the product, thus supplying their own needs, they can force down industry prices.

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

## The Bargaining Power of Suppliers

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

- The product that suppliers sell has few substitutes and is vital to the companies in an industry.
- The profitability of suppliers is not significantly affected by the purchases of companies in a particular industry; in other words, when the industry is not an important customer to the suppliers.
- Companies in an industry would experience significant switching costs if they moved to the product of a different supplier because a particular supplier's products are unique or different. In such cases, the company depends upon a particular supplier and cannot pit suppliers against each other to reduce prices.
- Suppliers can threaten to enter their customers' industry and use their inputs to produce products that would compete directly with those of companies already in the industry.
- Companies in the industry cannot threaten to enter their suppliers' industry and make their own inputs as a tactic for lowering the price of inputs.

## Substitute Products

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

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

## Complementors

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

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

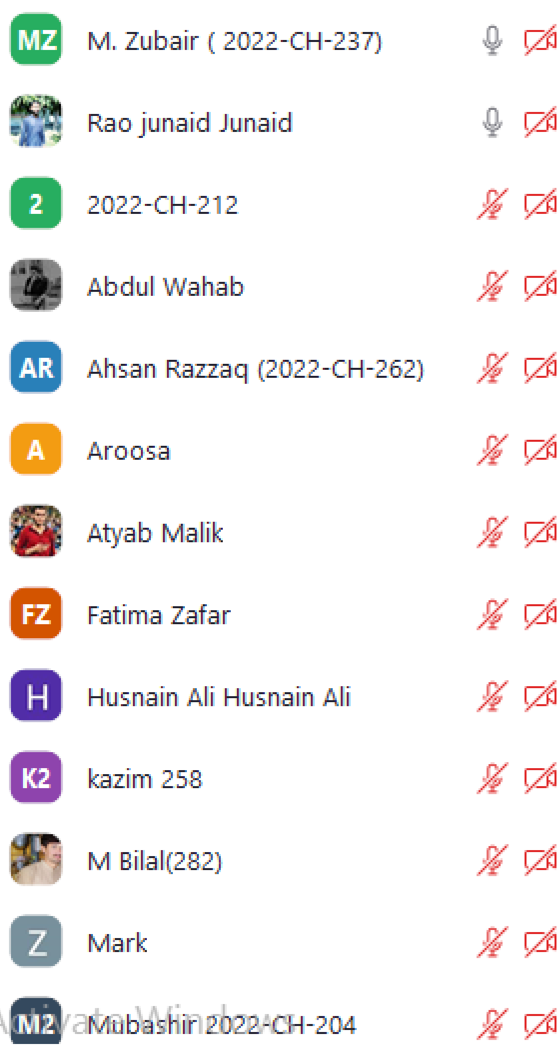
It is also possible for complementors to gain so much power that they are able to extract profit from the industry to which they provide complements. Complementors this strong can be a competitive threat. For example, in the videogame industry, the companies that produce the consoles—Nintendo, Microsoft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

## Summary: Why Industry Analysis Matters

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

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

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



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