

### 3.1 The PESTEL Framework

A firm's external environment consists of all the factors that can affect its potential to gain and sustain a competitive advantage. By analyzing the factors in the external environment, strategic leaders can mitigate threats and leverage opportunities. One common approach to understanding how external factors impinge upon a firm is to consider the source or proximity of these factors. For example, external factors in the firm's *general environment* are ones that managers have little direct influence over, such as macroeconomic factors (e.g., interest or currency exchange rates). In contrast, external factors in the firm's *task environment* are ones that managers do have some influence over, such as the composition of their strategic groups (a set of close rivals) or the structure of the industry. We will now look at each of these environmental layers in detail, moving from a firm's general environment to its task environment. Following along in Exhibit 3.1, we will be working from the outer ring to the inner ring.

The **PESTEL model** groups the factors in the firm's general environment into six segments:

- Political
- Economic
- Sociocultural
- Technological
- Ecological
- Legal

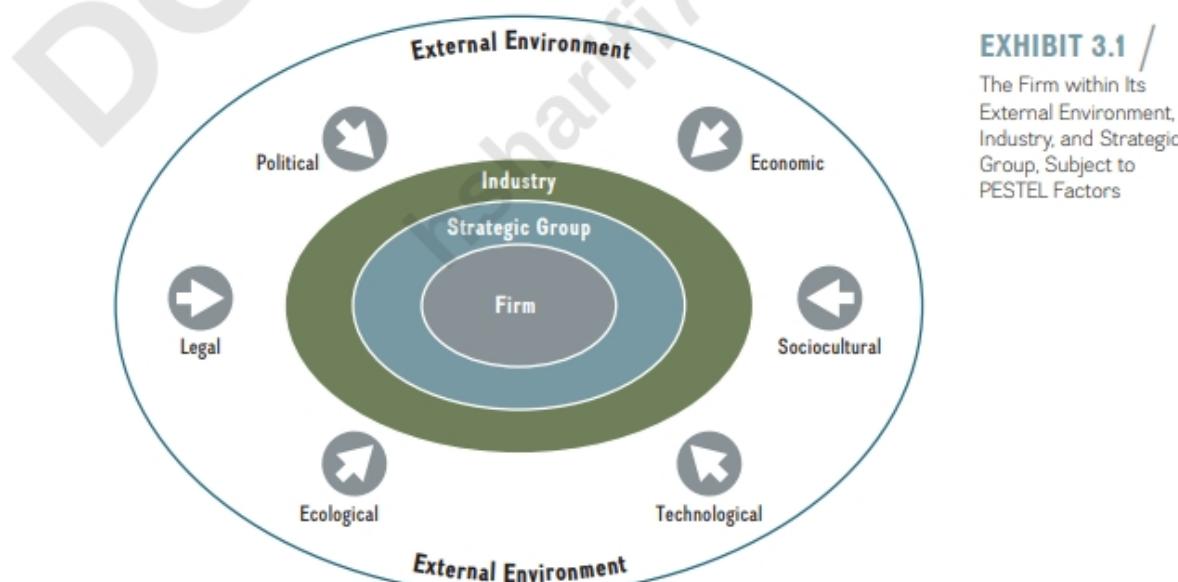
Together these form the acronym PESTEL. The PESTEL model provides a relatively straightforward way to *scan*, *monitor*, and *evaluate* the important external factors and trends that might impinge upon a firm. With more open markets and international trade in recent decades, the PESTEL factors have become more global. Such factors create both opportunities and threats.

#### LO 3-1

Generate a PESTEL analysis to evaluate the impact of external factors on the firm.

#### PESTEL model

A framework that categorizes and analyzes an important set of external factors (political, economic, sociocultural, technological, ecological, and legal) that might impinge upon a firm. These factors can create both opportunities and threats for the firm.



## POLITICAL FACTORS

*Political factors* result from the processes and actions of government bodies that can influence the decisions and behavior of firms.<sup>2</sup>

Although political factors are located in the firm's general environment, where firms traditionally wield little influence, companies nevertheless increasingly work to shape and influence this realm. They do so by applying *nonmarket strategies*—that is, through lobbying, public relations, contributions, litigation, and so on, in ways that are favorable to the firm.<sup>3</sup> For example, hotel chains and resort owners have challenged Airbnb in courts and lobbied local governments, some of which passed regulations to limit or prohibit short-term rentals. Local residents in New York, San Francisco, Berlin, Paris, and many other cities are also pressuring local governments to enact more aggressive rules banning short-term rentals because they argue that companies such as Airbnb contribute to a shortage of affordable housing by turning entire apartment complexes into hotels or transforming quiet family neighborhoods into all-night, every-night party hot spots.

Political and legal factors are closely related, as political pressure often results in changes in legislation and regulation; we discuss legal factors below.

## ECONOMIC FACTORS

Economic factors in a firm's external environment are largely macroeconomic, affecting economy-wide phenomena. Managers need to consider how the following five macroeconomic factors can affect firm strategy:

- Growth rates.
- Levels of employment.
- Interest rates.
- Price stability (inflation and deflation).
- Currency exchange rates.

**GROWTH RATES.** The overall economic *growth rate* is a measure of the change in the amount of goods and services produced by a nation's economy. Strategic leaders look to the *real growth rate*, which adjusts for inflation. This real growth rate indicates the current business cycle of the economy—that is, whether business activity is expanding or contracting. In periods of economic expansion, consumer and business demands are rising, and competition among firms frequently decreases. During economic booms, businesses expand operations to satisfy demand and are more likely to be profitable. The reverse is generally true for recessionary periods, although certain companies that focus on low-cost solutions may benefit from economic contractions because demand for their products or services rises in such times. For customers, expenditures on luxury products are often the first to be cut during recessionary periods. For instance, you might switch from a \$4 venti latte at Starbucks to a \$1 alternative from McDonald's.

Occasionally, boom periods can overheat and lead to speculative asset bubbles. In the early 2000s, the United States experienced an asset bubble in real estate.<sup>4</sup> Easy credit, made possible by the availability of subprime mortgages and other financial innovations, fueled an unprecedented demand in housing. Real estate, rather than stocks, became the investment vehicle of choice for many Americans, propelled by the common belief that house prices could only go up. When the housing bubble burst, the deep economic recession of 2008–2009 began, impacting in some way nearly all businesses in the United States and worldwide.

**LEVELS OF EMPLOYMENT.** Growth rates directly affect the *level of employment*. In boom times, unemployment tends to be low, and skilled human capital becomes a scarce and more expensive resource. As the price of labor rises, firms have an incentive to invest more into capital goods such as cutting-edge equipment or artificial intelligence (AI).<sup>5</sup> In economic downturns, unemployment rises. As more people search for employment, skilled human capital is more abundant and wages usually fall.

**INTEREST RATES.** Another key macroeconomic variable for managers to track is real *interest rates*—the amount that creditors are paid for use of their money and the amount that debtors pay for that use, adjusted for inflation. The economic boom during the early years in the 21st century, for example, was fueled by cheap credit. Low real interest rates have a direct bearing on consumer demand. When credit is cheap because interest rates are low, consumers buy homes, automobiles, computers, and vacations on credit; in turn, all of this demand fuels economic growth. During periods of low real interest rates, firms can easily borrow money to finance growth. Borrowing at lower real rates reduces the cost of capital and enhances a firm's competitiveness. These effects reverse, however, when real interest rates are rising. Consumer demand slows, credit is harder to come by, and firms find it more difficult to borrow money to support operations, possibly deferring investments.

**PRICE STABILITY.** *Price stability*—the lack of change in price levels of goods and services—is rare. Therefore, companies will often have to deal with changing price levels, which is a direct function of the amount of money in any economy. When there is too much money in an economy, we tend to see rising prices—*inflation*. Indeed, a popular economic definition of inflation is *too much money chasing too few goods and services*.<sup>6</sup> Inflation tends to go with lower economic growth. Countries such as Argentina, Brazil, Mexico, and Poland experienced periods of extremely high inflation rates in recent decades.

*Deflation* describes a decrease in the overall price level. A sudden and pronounced drop in demand generally causes deflation, which in turn forces sellers to lower prices to motivate buyers. Because many people automatically think of lower prices from the buyer's point of view, a decreasing price level seems at first glance to be attractive. However, deflation is actually a serious threat to economic growth because it distorts expectations about the future.<sup>7</sup> For example, once price levels start falling, companies will not invest in new production capacity or innovation because they expect a further decline in prices. In recent decades, the Japanese economy has been plagued with persistent deflation.

**CURRENCY EXCHANGE RATES.** The *currency exchange rate* determines how many dollars one must pay for a unit of foreign currency. It is a critical variable for any company that buys or sells products and services across national borders. For example, if the U.S. dollar appreciates against the euro, and so increases in real value, firms need more euros to buy one dollar. This in turn makes U.S. exports such as Boeing aircraft, Intel chips, or John Deere tractors more expensive for European buyers and reduces demand for U.S. exports overall. This process reverses when the dollar depreciates (decreases in real value) against the euro. In this scenario it would take more dollars to buy one euro, and European imports such as LVMH luxury accessories or BMW automobiles become more expensive for U.S. buyers.

In a similar fashion, if the Chinese yuan appreciates in value, Chinese goods imported into the United States are relatively more expensive. At the same time, Chinese purchasing power increases, which in turn allows their businesses to purchase more U.S. capital goods such as sophisticated machinery and other cutting-edge technologies.

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In summary, economic factors affecting businesses are ever-present and rarely static. Managers need to fully appreciate the power of these factors, in both domestic and global markets, to assess their effects on firm performance.

## SOCIOCULTURAL FACTORS

*Sociocultural factors* capture a society's cultures, norms, and values. Because sociocultural factors not only are constantly in flux but also differ across groups, strategic leaders need to closely monitor such trends and consider the implications for firm strategy. In recent years, for example, a growing number of U.S. consumers have become more health-conscious about what they eat. This trend led to a boom for businesses such as Chipotle, Subway, and Whole Foods. At the same time, traditional fast food companies McDonald's and Burger King, along with grocery chains such as Albertsons and Kroger, have all had to scramble to provide healthier choices in their product offerings.

*Demographic* trends are also important sociocultural factors. These trends capture population characteristics related to age, gender, family size, ethnicity, sexual orientation, religion, and socioeconomic class. Like other sociocultural factors, demographic trends present opportunities but can also pose threats. The most recent U.S. census revealed that 55 million Americans (16.4 percent of the total population) are Hispanic. It is now the largest minority group in the United States and growing fast. On average, Hispanics are also younger and their incomes are climbing quickly. This trend is not lost on companies trying to benefit from this opportunity. For example, MundoFox and ESPN Deportes (specializing in soccer) have joined Univision and NBC's Telemundo in the Spanish-language television market. In the United States, Univision is now the fifth most popular network overall, just behind the four major English-language networks (ABC, NBC, CBS, and Fox). Likewise, advertisers are pouring dollars into the Spanish-language networks to promote their products and services.<sup>8</sup>

## TECHNOLOGICAL FACTORS

*Technological factors* capture the application of knowledge to create new processes and products. Major innovations in process technology include lean manufacturing, Six Sigma quality, and biotechnology. The nanotechnology revolution, which is just beginning, promises significant upheaval for a vast array of industries ranging from tiny medical devices to new-age materials for earthquake-resistant buildings.<sup>9</sup> Recent product innovations include the smartphone, wearable devices such as smart watches, and high-performing electric cars such as the Tesla Model S. As discussed in the ChapterCase, Airbnb launched a radical process innovation of offering and renting rooms based on a business model leveraging the sharing economy. If one thing seems certain, technological progress is relentless and seems to be picking up speed.<sup>10</sup> Not surprisingly, changes in the technological environment bring both opportunities and threats for companies. Given the importance of a firm's innovation strategy to competitive advantage, we discuss the effect of technological factors in greater detail in Chapter 7.

Strategy Highlight 3.1 details how BlackBerry fell victim by not paying sufficient attention to the PESTEL factors.

## ECOLOGICAL FACTORS

*Ecological factors* involve broad environmental issues such as the natural environment, global warming, and sustainable economic growth. Organizations and the natural environment coexist in an interdependent relationship. Managing these relationships in a responsible and sustainable way directly influences the continued existence of human societies and

## Strategy Highlight 3.1

### BlackBerry's Bust

A pioneer in smartphones, BlackBerry was the undisputed industry leader in the early 2000s. IT managers preferred BlackBerry. Its devices allowed users to receive e-mail and other data in real time globally, with enhanced security features. For executives, a BlackBerry was not just a tool to increase productivity—and to free them from their laptops—but also an important status symbol. As a consequence, by 2008 BlackBerry's market cap had peaked at \$75 billion. Yet by 2017, this lofty valuation had fallen by almost 95 percent to a mere \$3.9 billion. What happened?

Being Canadian, Jim Balsillie, BlackBerry's longtime CEO, not surprisingly sees ice hockey as his favorite sport. He likes to quote Wayne Gretzky, whom many consider the best ice hockey player ever: "Skate to where the puck is going to be, not to where it is." Alas, BlackBerry did not follow that advice. BlackBerry fell victim to two important PESTEL factors in its external environment: sociocultural and technological.

Let's start with technology. The introduction of the iPhone by Apple in 2007 changed the game in the mobile device industry. Equipped with a camera, the iPhone's slick design offered a user interface with a touchscreen including a virtual keyboard. The iPhone connected seamlessly to cellular networks and Wi-Fi. Combined with thousands of apps

via the Apple iTunes store, the iPhone provided a powerful user experience, or as the late Steve Jobs said, "the internet in your pocket."

However, BlackBerry engineers and executives initially dismissed the iPhone as a mere toy with poor security features. Everyday users thought differently. They had less concern for encrypted software security than they had desire for having fun with a device that allowed them to text, surf the web, take pictures, play games, and do e-mail. Although BlackBerry devices were great in productivity applications, such as receiving and responding to e-mail via typing on its iconic physical keyboard, they provided a poor mobile web browsing experience.

The second external development that helped erode BlackBerry's dominance was sociocultural. Initially, mobile devices were issued top-down by corporate IT departments. The only available device for execs was a company-issued BlackBerry. This made life easy for IT departments ensuring network security. Consumers, however, began to bring their personal iPhones to work and used them for corporate communication and productivity applications. This bottom-up groundswell of the BYOT ("bring your own technology") movement forced corporate IT departments to open up their services beyond the BlackBerry.

Caught in the oncoming gale winds of two PESTEL factors—technological and sociocultural—BlackBerry was pushed backward in the smartphone market. Unlike Gretzky, it failed to skate where the puck was going to be and therefore continued to focus on its existing customer base of corporate IT departments and government. Later, feeble modifications in product lineup appeared to be "too little, too late." Apple continued to drive innovation in the smartphone industry by bringing out more advanced iPhone models and enhancing the usefulness of its apps for the various business and productivity applications.

Let's think about the rapid progress in mobile computing. BlackBerry, once an undisputed leader in the smartphone industry, did not recognize early enough or act upon changes in the external environment. Consumer preferences changed quickly as the iPhone and later the iPad became available. Professionals brought their own Apple or other devices to work instead of using company-issued BlackBerrys. Although the Canadian technology company made a valiant effort to make up lost ground with its new BlackBerry 10 operating system and several new models, it was too little, too late.<sup>11</sup>



NHL great Wayne Gretzky, shown here in 1999, his final season with the New York Rangers, holds the record for most career regular-season goals. ©AP Images/JIM ROGASH

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the organizations we create. Managers can no longer separate the natural and the business worlds; they are inextricably linked.<sup>12</sup>

Negative examples come readily to mind, as many business organizations have contributed to the pollution of air, water, and land, as well as depletion of the world's natural resources. BP's infamous oil spill in the Gulf of Mexico destroyed fauna and flora along the U.S. shoreline from Texas to Florida. This disaster led to a decrease in fish and wildlife populations, triggered a decline in the fishery and tourism industries, and threatened the livelihood of thousands of people. It also cost BP more than \$50 billion and one-half of its market value (see Strategy Highlight 2.2).

The relationship between organizations and the natural environment need not be adversarial, however. Ecological factors can also provide business opportunities. As we saw in Chapter Case 1, Tesla is addressing environmental concerns regarding the carbon emissions of gasoline-powered cars by building zero-emission battery-powered vehicles. To generate the needed energy to charge the batteries in a sustainable way, Tesla integrated with SolarCity to provide clean-tech energy services for its customers, including decentralized solar power generation and storage via its Powerwall.

## LEGAL FACTORS

*Legal factors* include the official outcomes of political processes as manifested in laws, mandates, regulations, and court decisions—all of which can have a direct bearing on a firm's profit potential. In fact, regulatory changes tend to affect entire industries at once. Many industries in the United States have been deregulated over the past few decades, including airlines, telecom, energy, and trucking, among others.

As noted earlier, legal factors often coexist with or result from political will. Governments especially can directly affect firm performance by exerting both political pressure and legal sanctions, including court rulings and industry regulations. Consider how several European countries and the European Union (EU) apply political and legal pressure on U.S. tech companies. European targets include Apple, Amazon, Facebook, Google, and Microsoft—the five largest U.S. tech companies—but also startups such as Uber, the taxi-hailing mobile app. Europe's policy makers seek to retain control

over important industries ranging from transportation to the internet to ensure that profits earned in Europe by Silicon Valley firms are taxed locally. The EU parliament even proposed legislation to break up "digital monopolies" such as Google. This proposal would require Google to offer search services independently as a standalone company from its other online services, including Google Drive, a cloud-based file storage and synchronization service. But the EU wariness extends beyond tax revenue: The eurozone has much stronger legal requirements and cultural expectations concerning data privacy. Taken together, political/legal environments can have a direct bearing on a firm's performance.

Multiple PESTEL factors, for instance, are affecting the implementation of autonomous vehicles for commercial and private use. Companies such as Uber, Alphabet (through its Waymo unit), and Tesla are ready to deploy driverless cars, but political and legal factors are providing serious challenges and are delaying the widespread use of autonomous vehicles.



The Waymo driverless car, displayed during a 2016 Google event in San Francisco, marks another step in an effort to revolutionize the way people get around. Instead of driving themselves, people will be chauffeured in software-controlled vehicles if Waymo, automakers, and ride-hailing services such as Uber realize their vision.

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## 3.2 Industry Structure and Firm Strategy: The Five Forces Model

### INDUSTRY VS. FIRM EFFECTS IN DETERMINING FIRM PERFORMANCE

Firm performance is determined primarily by two factors: industry and firm effects. **Industry effects** describe the underlying economic structure of the industry. They attribute firm performance to the industry in which the firm competes. The structure of an industry is determined by elements common to all industries, elements such as entry and exit barriers, number and size of companies, and types of products and services offered. In a series of empirical studies, academic researchers have found that about 20 percent of a firm's profitability depends on the industry it is in.<sup>13</sup> To more fully comprehend how external factors affect firm strategy and performance, we take a closer look in this chapter at an industry's underlying structure.

**Firm effects** attribute firm performance to the actions strategic leaders take. In Chapter 4, we look inside the firm to understand why firms within the same industry differ, and how differences among firms can lead to competitive advantage.

For now, the key point is that strategic leaders' actions tend to be more important in determining firm performance than the forces exerted on the firm by its external environment.<sup>14</sup> Empirical research studies indicate that a firm's strategy can explain up to 55 percent of its performance.<sup>15</sup> Exhibit 3.2 shows these findings.

Although a firm's industry is not quite as important as the firm's strategy within its industry, they jointly determine roughly 75 percent of overall firm performance. The remaining 25 percent relates partly to business cycles and other effects.

We now move one step closer to the firm (in the center of Exhibit 3.1) and come to the industry in which it competes. An **industry** is a group of incumbent companies facing more or less the same set of suppliers and buyers. Firms competing in the same industry tend to offer similar products or services to meet specific customer needs. Although the PESTEL framework allows us to scan, monitor, and evaluate the external environment to identify opportunities and threats, **industry analysis** provides a more rigorous basis not only to identify an industry's profit potential—the level of profitability that can be expected for the *average* firm—but also to derive implications for one firm's strategic position within an industry. A firm's **strategic position** relates to its ability to create value for customers (*V*) while containing the cost to do so (*C*). Competitive advantage flows to

#### LO 3-2

Differentiate the roles of firm effects and industry effects in determining firm performance.

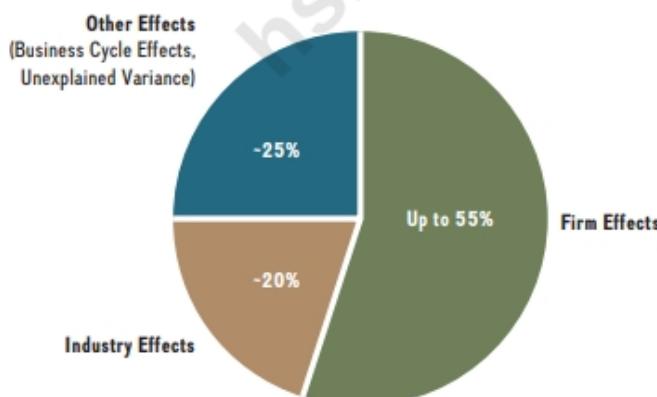
**industry effects** Firm performance attributed to the structure of the industry in which the firm competes.

**firm effects** Firm performance attributed to the actions managers take.

**industry** A group of incumbent companies that face more or less the same set of suppliers and buyers.

**industry analysis** A method to (1) identify an industry's profit potential and (2) derive implications for a firm's strategic position within an industry.

**strategic position** A firm's strategic profile based on the difference between value creation and cost (*V* – *C*).



#### EXHIBIT 3.2 /

Industry, Firm,  
and Other Effects  
Explaining Superior  
Firm Performance

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**five forces model**  
A framework that identifies five forces that determine the profit potential of an industry and shape a firm's competitive strategy.

the firm that is able to create as large a gap as possible between the value the firm's product or service generates and the cost required to produce it ( $V - C$ ).

Michael Porter developed the highly influential **five forces model** to help managers understand the profit potential of different industries and how they can position their respective firms to gain and sustain competitive advantage.<sup>16</sup> By combining theory from industrial organization economics with hundreds of detailed case studies, Porter derived two key insights that form the basis of his seminal five forces model:

1. Rather than defining competition narrowly as the firm's closest competitors to explain and predict a firm's performance, competition must be viewed more broadly, to also encompass the other forces in an industry: buyers, suppliers, potential new entry of other firms, and the threat of substitutes.
2. The profit potential of an industry is neither random nor entirely determined by industry-specific factors. Rather, it is a function of the five forces that shape competition: *threat of entry, power of suppliers, power of buyers, threat of substitutes, and rivalry among existing firms*.

**LO 3-3**

Apply Porter's five competitive forces to explain the profit potential of different industries.

## COMPETITION IN THE FIVE FORCES MODEL

Because the five forces model has especially powerful implications for strategy and competitive advantage, we will explore it in some detail. We start with the concept of competition. The first major insight this model provides is that competition involves more than just creating economic value; firms must also capture a significant share of it or they will see the economic value they create lost to suppliers, customers, or competitors. Firms create economic value by expanding as much as possible the gap between the value ( $V$ ) the firm's product or service generates and the cost ( $C$ ) to produce it. *Economic value* thus equals  $V$  minus  $C$ . To succeed, creating value is not enough. Firms must also be able to capture a significant share of the value created to gain and sustain a competitive advantage.

In Porter's five forces model, competition is more broadly defined beyond the firm's closest competitors (e.g., Nike versus Under Armour, The Home Depot versus Lowe's, Merck versus Pfizer, and so on) to include other industry forces: buyers, suppliers, potential new entry of other firms, and the threat of substitutes. Competition describes the struggle among these forces to capture as much of the economic value created in an industry as possible. A firm's strategic leaders, therefore, must be concerned not only with the intensity of rivalry among direct competitors, but also with the strength of the other competitive forces that are attempting to extract part or all of the economic value the firm creates. When faced with competition in this broader sense, strategy explains how a firm is able to achieve superior performance.

The second major insight from the five forces model is that it enables managers to not only understand their industry environment but also shape their firm's strategy. As a rule of thumb, *the stronger the five forces, the lower the industry's profit potential*—making the industry less attractive for competitors. The reverse is also true: *the weaker the five forces, the greater the industry's profit potential*—making the industry more attractive. Therefore, from the perspective of a strategic leader of an existing firm competing for advantage in an established industry, the company should be positioned in a way that relaxes the constraints of strong forces and leverages weak forces. The goal of crafting a strategic position is of course to improve the firm's ability to achieve and sustain a competitive advantage.

Strategy Highlight 3.2 provides an overview of the five competitive forces that shape strategy, with an application to the U.S. domestic airline industry. We will take up the topic of competitive positioning in Chapter 6 when studying business-level strategy in more detail.

Taking a closer look at the U.S. domestic airline industry in Strategy Highlight 3.2 shows how the five forces framework is a powerful and versatile tool to analyze industries.

## Strategy Highlight 3.2

### The Five Forces in the Airline Industry

Although many of the mega-airlines such as American, Delta, and United have lost billions of dollars over the past few decades and continue to struggle to generate consistent profitability, other players in this industry have been quite profitable because they were able to extract some of the economic value created. The airlines, however, benefited from a windfall because the prices for jet fuel fell from a high of \$3.25 per gallon (in 2011) to \$1.50 (in 2015), giving some reprieve to cash-strapped airlines. Nonetheless, competition remains intense in this industry.

**Entry barriers** are relatively low, resulting in a number of new airlines popping up. To enter the industry (on a small scale, serving a few select cities), a prospective new entrant needs only a couple of airplanes, which can be rented; a few pilots and crew members; some routes connecting city pairs; and gate access in airports. Indeed, despite notoriously low industry profitability, Virgin America entered the U.S. market in 2007. Virgin America is the brainchild of Sir Richard Branson, founder and chairman of the Virgin Group, a UK conglomerate of hundreds of companies using the Virgin brand, including the international airline Virgin Atlantic. Its business strategy is to offer low-cost service between major metropolitan cities on the American East and West Coasts. (In 2016, Alaska Airlines acquired Virgin America for \$2.6 billion).

To make matters worse, **substitutes** are also readily available: If prices are seen as too high, customers can drive their cars or use the train or bus. As an example, the route between Atlanta and Orlando (roughly 400 miles) used to be one of Delta's busiest and most profitable. Given the increasing security delays at airports, more and more people now prefer to drive. Taken together, the competitive forces are quite unfavorable for generating a profit potential in the

airline industry: low entry barriers, high supplier power, high buyer power combined with low customer switching costs, and the availability of low-cost substitutes. This type of hostile environment leads to intense rivalry among existing airlines and low overall industry profit potential.

In the airline industry, the **supplier power** is also strong. The providers of airframes (e.g., Boeing or Airbus), makers of aircraft engines (e.g., GE or Rolls-Royce), aircraft maintenance companies (e.g., Goodrich), caterers (e.g., Marriott), labor unions, and airports controlling gate access all bargain away the profitability of airlines. Moreover, large corporate customers can contract with airlines to serve all of their employees' travel needs; such **powerful buyers** further reduce profit margins for air carriers. To make matters worse, consumers primarily make decisions based on price.

As a consequence of these powerful industry forces, the **nature of rivalry** among airlines is incredibly intense. In inflation-adjusted dollars, ticket prices have been falling since industry deregulation in 1978. Thanks to internet travel sites such as Orbitz, Travelocity, and Kayak, price comparisons are effortless. Consumers benefit from cut-throat price competition between carriers and capture significant value. Low switching costs and nearly perfect information combine to strengthen buyer power.

The surprising conclusion is that while the mega-airlines themselves (i.e., American, Delta, and United) frequently struggle to make a profit, the other players in the industry—such as the suppliers of aircraft engines, aircraft maintenance companies, IT companies providing reservation and logistics services, caterers, airports, and so on—are quite profitable, all extracting significant value from the air transportation industry. Customers also are better off, as ticket prices have decreased and travel choices increased.<sup>17</sup>

The five forces model allows strategic leaders to analyze all players using a wider industry lens, which in turn enables a deeper understanding of an industry's profit potential. Moreover, a five forces analysis provides the basis for how a firm should position itself to gain and sustain a competitive advantage. We are now ready to look more closely at each of the five competitive forces.

As Exhibit 3.3 shows, Porter's model identifies five key competitive forces that managers need to consider when analyzing the industry environment and formulating competitive strategy:

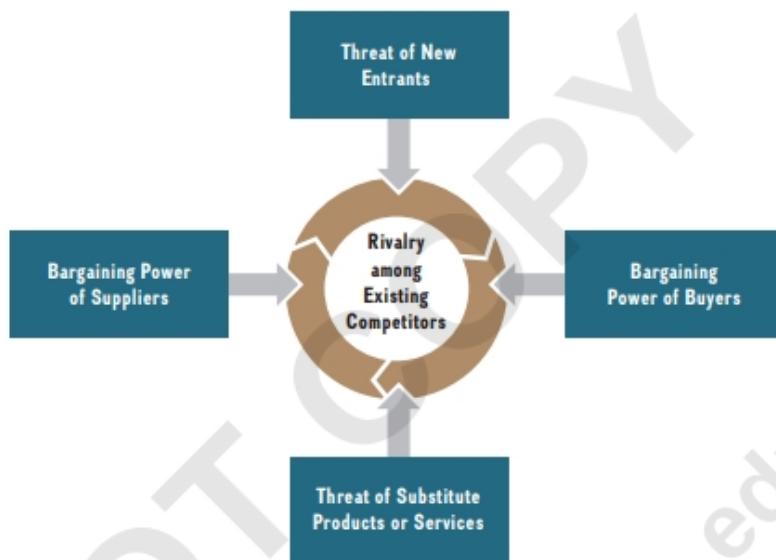
1. Threat of entry.
2. Power of suppliers.

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**EXHIBIT 3.3**

Porter's Five Forces Model

**SOURCE:** Porter, M. E. (2008, Jan.). "The five competitive forces that shape strategy." *Harvard Business Review*.



3. Power of buyers.
4. Threat of substitutes.
5. Rivalry among existing competitors.

## THE THREAT OF ENTRY

**threat of entry**  
The risk that potential competitors will enter an industry.

The **threat of entry** describes the risk that potential competitors will enter the industry. Potential new entry depresses industry profit potential in two major ways:

1. With the threat of additional capacity coming into an industry, incumbent firms may lower prices to make entry appear less attractive to the potential new competitors, which would in turn reduce the overall industry's profit potential, especially in industries with slow or no overall growth in demand. Consider the market for new microwaves. Demand consists of the replacement rate for older models and the creation of new households. Since this market grows slowly, if at all, any additional entry would likely lead to excess capacity and lower prices overall.
2. The threat of entry by additional competitors may force incumbent firms to spend more to satisfy their existing customers. This spending reduces an industry's profit potential, especially if firms can't raise prices. Consider how Starbucks has chosen to constantly upgrade and refresh its stores and service offerings. Starbucks has over 13,000 U.S. stores and more than 25,000 globally. By raising the value of its offering in the eyes of the consumers, it slows others from entering the industry or from rapidly expanding. This allows Starbucks to hold at bay smaller regional competitors, such as Peet's Coffee & Tea, with fewer than 200 stores mostly on the West Coast, and prevents smaller national chains, such as Caribou Coffee, with 415 stores nationally, from increasing the level of competition. Starbucks is willing to accept a lower profit margin to maintain its market share.

Of course, the more profitable an industry, the more attractive it is for new competitors to enter. There are, however, a number of important barriers to entry that raise the costs for potential competitors and reduce the threat of entry. **Entry barriers**, which are

**entry barriers**  
Obstacles that determine how easily a firm can enter an industry and often significantly predict industry profit potential.

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advantageous for incumbent firms, are obstacles that determine how easily a firm can enter an industry. Incumbent firms can benefit from several important sources of entry barriers:

- Economies of scale.
- Network effects.
- Customer switching costs.
- Capital requirements.
- Advantages independent of size.
- Government policy.
- Credible threat of retaliation.

**ECONOMIES OF SCALE.** *Economies of scale* are cost advantages that accrue to firms with larger output because they can spread fixed costs over more units, employ technology more efficiently, benefit from a more specialized division of labor, and demand better terms from their suppliers. These factors in turn drive down the cost per unit, allowing large incumbent firms to enjoy a cost advantage over new entrants that cannot muster such scale.

We saw the important relationship between scale and production cost in Chapter Case 1 when featuring Tesla, a U.S. manufacturer of all-electric vehicles. Usually entrants into the broad automobile industry need large-scale production to be efficient. Tesla leveraged new technology to circumvent this entry barrier. Yet, reaching sufficient manufacturing scale to be cost-competitive is critical for Tesla as it is moving more into the mass market.

To benefit from economies of scale, Tesla is introducing new models, helping it move away from small-scale and costly production of niche vehicles to larger production runs of cars with a stronger mass-market appeal. Tesla's first vehicle, the Roadster (costing over \$110,000) was more or less a prototype to prove the viability of an all-electric car that outperforms high-performance traditional sports cars. For consumers, it created a new mind-set of what electric cars can do. Tesla ended production of the Roadster to focus more fully on its next model: the family sedan, Model S (over \$70,000). Tesla's manufacturing scale increased more than 50-fold, from some 2,500 Roadsters to 125,000 Model S's. The all-electric car company is hoping for an even broader customer appeal with its Model 3, a smaller and lower-priced vehicle (starting at \$35,000) that will allow the new company to break into the mass market and manufacture many more cars. Tesla CEO Elon Musk set an audacious goal of selling 500,000 cars a year by 2018, which is needed for the company to be profitable.<sup>18</sup> Tesla's new product introductions over time are motivated by an attempt to capture benefits that accrue to economies of scale. To capture benefits from economies of scale including lower unit cost, Musk hopes that Tesla can increase its production volume from a mere 50,000 vehicles in 2015 to 1 million cars a year by 2020.

**network effects** The value of a product or service for an individual user increases with the number of total users.



**NETWORK EFFECTS.** **Network effects** describe the positive effect that one user of a product or service has on the value of that product or service for other users. When network effects are present, the value of the product or service increases with the number of users. This is an example of a *positive externality*. The threat of potential entry is reduced when network effects are present.

For example, Facebook, with 2 billion active users worldwide, enjoys tremendous network effects, making it difficult for more recent entrants such as Google Plus to compete effectively. We will discuss network effects in more detail in Chapter 7.

Facebook CEO Mark Zuckerberg speaks about Facebook Graph Search, introduced in 2013. Facebook's 2 billion active users reinforce its strong network effects.  
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**CUSTOMER SWITCHING COSTS.** *Switching costs* are incurred by moving from one supplier to another. Changing vendors may require the buyer to alter product specifications, retrain employees, and/or modify existing processes. Switching costs are onetime sunk costs, which can be quite significant and a formidable barrier to entry. For example, a firm that has used enterprise resource planning (ERP) software from SAP for many years will incur significant switching costs when implementing a new ERP system from Oracle.

**CAPITAL REQUIREMENTS.** *Capital requirements* describe the “price of the entry ticket” into a new industry. How much capital is required to compete in this industry, and which companies are willing and able to make such investments? Frequently related to economies of scale, capital requirements may encompass investments to set up plants with dedicated machinery, run a production process, and cover start-up losses.

Tesla made a sizable capital investment of roughly \$150 million when it purchased the Fremont, California, manufacturing plant from Toyota and upgraded it with a highly automated production process using robots to produce cars of the highest quality at large scale.<sup>19</sup> This strategic commitment, however, is dwarfed by the \$5 billion that Tesla is investing to build its battery “gigafactory” in Nevada.<sup>20</sup> The new factory allows Tesla to not only secure supplies of lithium-ion batteries, the most critical and expensive component of an all-electric car, but also build as many as 1 million vehicles a year.<sup>21</sup> In such cases, the likelihood of entry is determined by not only the level of capital investment required to enter the industry, but also the expected return on investment. The potential new entrant must carefully weigh the required capital investments, the cost of capital, and the expected return. Taken together, the threat of entry is high when capital requirements are low in comparison to the expected returns. If an industry is attractive enough, efficient capital markets are likely to provide the necessary funding to enter an industry. Capital, unlike proprietary technology and industry-specific know-how, is a fungible resource that can be relatively easily acquired in the face of attractive returns.

**ADVANTAGES INDEPENDENT OF SIZE.** Incumbent firms often possess cost and quality advantages that are independent of size. These advantages can be based on brand loyalty, proprietary technology, preferential access to raw materials and distribution channels, favorable geographic locations, and cumulative learning and experience effects.

Tesla has loyal customers, which strengthens its competitive position and reduces the threat of entry into the all-electric car segment, at least by other start-up companies.<sup>22</sup> Unlike GM or Ford, which spend billions each year on advertising, Tesla doesn’t have a large marketing budget. Rather, it relies on word of mouth. It luckily has its own “cool factor” of being different, similar to Apple in its early days. Tesla can back this perception with beautifully designed cars of top-notch quality made domestically in California. Indeed, when *Consumer Reports* tested the Model S, the usually understated magazine concluded: “The Tesla Model S is the best car we ever tested.”<sup>23</sup> In addition, many Tesla owners feel an emotional connection to the company because they deeply believe in the company’s vision “to accelerate the world’s transition to sustainable energy.”

Preferential access to raw materials and key components can bestow absolute cost advantages. As mentioned, lithium-ion batteries are not only the most expensive and critical parts of an all-electric vehicle, but they are also in short supply. Tesla’s new battery “gigafactory” will afford it independence from the few worldwide suppliers, such as Panasonic of Japan, and also likely bestow an absolute cost advantage.<sup>24</sup> This should further reduce the threat of new entry in the all-electric vehicle segment, assuming no radical technological changes are to be expected in battery-cell technology in the next few years.

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Favorable locations, such as Silicon Valley for Tesla, often present advantages that other locales cannot match easily, including access to human and venture capital, and world-class research and engineering institutions.

Finally, incumbent firms often benefit from cumulative learning and experience effects accrued over long periods of time. Tesla now has more than 10 years of experience in designing and building high-performance all-electric vehicles of superior quality and design. Attempting to obtain such deep knowledge within a shorter time frame is often costly, if not impossible, which in turn constitutes a formidable barrier to entry.

**GOVERNMENT POLICY.** Frequently government policies restrict or prevent new entrants. Until recently, India did not allow foreign retailers such as Walmart or IKEA to own stores and compete with domestic companies in order to protect the country's millions of small vendors and wholesalers. China frequently requires foreign companies to enter joint ventures with domestic ones and to share technology.

In contrast, deregulation in industries such as airlines, telecommunications, and trucking have generated significant new entries. Therefore, the threat of entry is high when restrictive government policies do not exist or when industries become deregulated.

**CREDIBLE THREAT OF RETALIATION.** Potential new entrants must also anticipate how incumbent firms will react. A credible threat of retaliation by incumbent firms often deters entry. Should entry still occur, however, incumbents are able to retaliate quickly, through initiating a price war, for example. The industry profit potential can in this case easily fall below the cost of capital. Incumbents with deeper pockets than new entrants are able to withstand price competition for a longer time and wait for the new entrants to exit the industry—then raise prices again. Other weapons of retaliation include increased product and service innovation, advertising, sales promotions, and litigation.

Potential new entrants should expect a strong and vigorous response beyond price competition by incumbent firms in several scenarios. If the current competitors have deep pockets, unused excess capacity, reputational clout with industry suppliers and buyers, a history of vigorous retaliation during earlier entry attempts, or heavy investments in resources specific to the core industry and ill-suited for adaptive use, then they are likely to press these advantages. Moreover, if industry growth is slow or stagnant, incumbents are more likely to retaliate against new entrants to protect their market share, often initiating a price war with the goal of driving out these new entrants.

In contrast, the threat of entry is high when new entrants expect that incumbents will not or cannot retaliate. For example, in the southeastern United States, TV cable company Comcast has entered the market for residential and commercial telephone services and internet connectivity (as an ISP, internet service provider), emerging as a direct competitor for AT&T. Comcast also acquired NBC Universal, combining delivery and content. AT&T responded to Comcast's threat by introducing U-verse, a product combining high-speed internet access with cable TV and telephone service, all provided over its fast fiber-optic network.

## THE POWER OF SUPPLIERS

The bargaining power of suppliers captures pressures that industry suppliers can exert on an industry's profit potential. This force reduces a firm's ability to obtain superior performance for two reasons: Powerful suppliers can raise the cost of production by demanding higher prices for their inputs or by reducing the quality of the input factor or service level delivered. Powerful suppliers are a threat to firms because they reduce the industry's profit potential by capturing part of the economic value created.

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To compete effectively, companies generally need a wide variety of inputs into the production process, including raw materials and components, labor (via individuals or labor unions, when the industry faces collective bargaining), and services. The relative bargaining power of suppliers is high when

- The supplier's industry is more concentrated than the industry it sells to.
- Suppliers do not depend heavily on the industry for a large portion of their revenues.
- Incumbent firms face significant switching costs when changing suppliers.
- Suppliers offer products that are differentiated.
- There are no readily available substitutes for the products or services that the suppliers offer.
- Suppliers can credibly threaten to forward-integrate into the industry.

In Strategy Highlight 3.2, we noted that the airline industry faces strong supplier power. Let's take a closer look at one important supplier group to this industry: Boeing and Airbus, the makers of large commercial jets. The reason airframe manufacturers are powerful suppliers to airlines is because their industry is much more concentrated (only two firms) than the industry it sells to. Compared to two airframe suppliers, there are hundreds of commercial airlines around the world. Given the trend of large airlines merging to create even larger mega-airlines, however, increasing buyer power may eventually balance this out a bit. Nonetheless, the airlines face nontrivial switching costs when changing suppliers because pilots and crew would need to be retrained to fly a new type of aircraft, maintenance capabilities would need to be expanded, and some routes may even need to be reconfigured due to differences in aircraft range and passenger capacity. Moreover, while some of the aircraft can be used as substitutes, Boeing and Airbus offer differentiated products. This fact becomes clearer when considering the most recent models from each company. Boeing introduced the 787 Dreamliner to capture long-distance point-to-point travel (close to an 8,000-mile range, sufficient to fly nonstop from Los Angeles to Sydney), while Airbus introduced the A-380 Superjumbo to focus on high-volume transportation (close to 900 passengers) between major airport hubs (e.g., Tokyo's Haneda Airport and Singapore's Changi International Airport). When considering long-distance travel, there are no readily available substitutes for commercial airliners, a fact that strengthens supplier power.

All in all, the vast strengths of these factors lead us to conclude that the supplier power of commercial aircraft manufacturers is quite significant. This puts Boeing and Airbus in a strong position to extract profits from the airline industry, thus reducing the profit potential of the airlines themselves.

Although the supplier power of Boeing and Airbus is strong, several factors moderate their bargaining positions somewhat. First, the suppliers of commercial airliners depend heavily on commercial airlines for their revenues. Second, Boeing and Airbus are unlikely to threaten forward integration and become commercial airlines themselves. Third, Bombardier of Canada and Embraer of Brazil, both manufacturers of smaller commercial airframes, have begun to increase the size of the jets they offer and thus now compete with some of the smaller planes such as Boeings 737 and Airbus A-320. Finally, industry structures are not static, but can change over time. In the past few years, several of the remaining large domestic U.S. airlines have merged (Delta and Northwest, United and Continental, and American and U.S. Airways), which changed the industry structure in their favor. There are now fewer but even larger airlines remaining. This fact increases their buyer power, which we turn to next.

## THE POWER OF BUYERS

In many ways, the bargaining power of buyers is the flip side of the bargaining power of suppliers. Buyers are the customers of an industry. The power of buyers concerns the

pressure an industry's customers can put on the producers' margins in the industry by demanding a lower price or higher product quality. When buyers successfully obtain price discounts, it reduces a firm's top line (revenue). When buyers demand higher quality and more service, it generally raises production costs. Strong buyers can therefore reduce industry profit potential and a firm's profitability. Powerful buyers are a threat to the producing firms because they reduce the industry's profit potential by capturing part of the economic value created.

As with suppliers, an industry may face many different types of buyers. The buyers of an industry's product or service may be individual consumers—like you or me when we decide which provider we want to use for our wireless devices. In many areas, you can choose between several providers such as AT&T, Sprint, T-Mobile, or Verizon. Although we might be able to find a good deal when carefully comparing their individual service plans, as individual consumers we generally do not have significant buyer power. On the other hand, large institutions such as businesses or universities have significant buyer power when deciding which provider to use for their wireless services, because they are able to sign up or move several thousand employees at once.

The power of buyers is high when

- There are a few buyers and each buyer purchases large quantities relative to the size of a single seller.
- The industry's products are standardized or undifferentiated commodities.
- Buyers face low or no switching costs.
- Buyers can credibly threaten to backwardly integrate into the industry.

In addition, companies need to be aware of situations when buyers are especially price sensitive. This is the case when

- The buyer's purchase represents a significant fraction of its cost structure or procurement budget.
- Buyers earn low profits or are strapped for cash.
- The quality (cost) of the buyers' products and services is not affected much by the quality (cost) of their inputs.

The retail giant Walmart provides perhaps the most potent example of tremendous buyer power. Walmart is not only the largest retailer worldwide (with 12,000 stores and over 2 million employees), but it is also one of the largest companies in the world (with some \$500 billion in revenues in 2017). Walmart is one of the few large big-box global retail chains and frequently purchases large quantities from its suppliers. Walmart leverages its buyer power by exerting tremendous pressure on its suppliers to lower prices and to increase quality or risk losing access to shelf space at the largest retailer in the world. Walmart's buyer power is so strong that many suppliers co-locate offices next to Walmart's headquarters in Bentonville, Arkansas, because such proximity enables Walmart's managers to test the suppliers' latest products and negotiate prices.

The bargaining power of buyers also increases when their switching costs are low. Having multiple suppliers of a product category located close to its headquarters allows Walmart to demand further price cuts and quality improvements because it can easily switch from one supplier to the next. This threat is even more pronounced if the products are non-differentiated commodities from the consumer's perspective. For example, Walmart can easily switch from Rubbermaid plastic containers to Sterlite containers by offering more shelf space to the producer that offers the greatest price cut or quality improvement.



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Buyers are also powerful when they can credibly threaten backward integration. Backward integration occurs when a buyer moves upstream in the industry value chain, into the seller's business. Walmart has exercised the threat to backward-integrate by producing a number of products as private-label brands such as Equate health and beauty items, Ol'Roy dog food, and Parent's Choice baby products. Taken together, powerful buyers have the ability to extract a significant amount of the value created in the industry, leaving little or nothing for producers.

In regard to any of the five forces that shape competition, it is important to note that their relative strengths are context-dependent. For example, the Mexican multinational CEMEX, one of the world's leading cement producers, faces very different buyer power in the United States than domestically. In the United States, cement buyers consist of a few large and powerful construction companies that account for a significant percentage of CEMEX's output. The result? Razor-thin margins. In contrast, the vast majority of CEMEX customers in its Mexican home market are numerous, small, individual customers facing a few large suppliers, with CEMEX being the biggest. CEMEX earns high profit margins in its home market. With the same undifferentiated product, CEMEX competes in two different industry scenarios in terms of buyer strength.

## THE THREAT OF SUBSTITUTES

Substitutes meet the same basic customer needs as the industry's product but in a different way. The threat of substitutes is the idea that products or services available from *outside the given industry* will come close to meeting the needs of current customers.<sup>25</sup> For example, many software products are substitutes to professional services, at least at the lower end. Tax preparation software such as Intuit's TurboTax is a substitute for professional services offered by H&R Block and others. LegalZoom, an online legal documentation service, is a threat to professional law firms. Other examples of substitutes are energy drinks versus coffee, videoconferencing versus business travel, e-mail versus express mail, gasoline versus biofuel, and wireless telephone services versus Voice over Internet Protocol (VoIP), offered by Skype or now many apps such as Facebook's WhatsApp or Tencent's WeChat.

A high threat of substitutes reduces industry profit potential by limiting the price the industry's competitors can charge for their products and services. The threat of substitutes is high when:

- The substitute offers an attractive price-performance trade-off.
- The buyers cost of switching to the substitute is low.

The movie rental company Redbox, which uses 44,000 kiosks in the United States to make movie rentals available for just \$2, is a substitute for buying movie DVDs. For buyers, video rental via Redbox offers an attractive price-performance trade-off with low switching costs in comparison to DVD ownership. Moreover, for customers that view only a few movies a month, Redbox is also a substitute for Netflix's on-demand internet movie streaming service, which costs \$9.99 a month. Rather than a substitute, however, Redbox is a direct competitor to Netflix's DVD rental business, where plans cost \$7.99 a month (for one DVD out at a time).

In addition to a lower price, substitutes may also become more attractive by offering a higher value proposition.<sup>26</sup> In Spain, some 6 million people travel annually between Madrid and Barcelona, roughly 400 miles apart. The trip by car or train takes most of the day, and 90 percent of travelers would choose to fly, creating a highly profitable business for local airlines. This all changed when the Alta Velocidad Española (AVE), an ultra-modern high-speed train, was completed in 2008. Taking into account total time involved,

high-speed trains are faster than short-haul flights. Passengers travel in greater comfort than airline passengers and commute from one city center to the next, with only a short walk or cab ride to their final destinations.

The AVE example highlights the two fundamental insights provided by Porter's five forces framework. First, competition must be defined more broadly to go beyond direct industry competitors. In this case, rather than defining competition narrowly as the firm's closest competitors, airline executives in Spain must look beyond other airlines and consider substitute offerings such as high-speed trains. Second, any of the five forces on its own, if sufficiently strong, can extract industry profitability. In the AVE example, the threat of substitutes is limiting the airline industry's profit potential. With the arrival of the AVE, the airlines' monopoly on fast transportation between Madrid and Barcelona vanished, and with it the airlines' high profits. The strong threat of substitutes in this case increased the rivalry among existing competitors in the Spanish air transportation industry.

## RIVALRY AMONG EXISTING COMPETITORS

Rivalry among existing competitors describes the intensity with which companies within the same industry jockey for market share and profitability. It can range from genteel to cut-throat. The other four forces—threat of entry, the power of buyers and suppliers, and the threat of substitutes—all exert pressure upon this rivalry, as indicated by the arrows pointing toward the center in Exhibit 3.3. The stronger the forces, the stronger the expected competitive intensity, which in turn limits the industry's profit potential.

Competitors can lower prices to attract customers from rivals. When intense rivalry among existing competitors brings about price discounting, industry profitability erodes. Alternatively, competitors can use non-price competition to create more value in terms of product features and design, quality, promotional spending, and after-sales service and support. When non-price competition is the primary basis of competition, costs increase, which can also have a negative impact on industry profitability. However, when these moves create unique products with features tailored closely to meet customer needs and willingness to pay, then average industry profitability tends to increase because producers are able to raise prices and thus increase revenues and profit margins.

The intensity of rivalry among existing competitors is determined largely by the following factors:

- Competitive industry structure.
- Industry growth.
- Strategic commitments.
- Exit barriers.

**COMPETITIVE INDUSTRY STRUCTURE.** The **competitive industry structure** refers to elements and features common to all industries. The structure of an industry is largely captured by

- The number and size of its competitors.
- The firm's degree of pricing power.
- The type of product or service (commodity or differentiated product).
- The height of entry barriers.<sup>27</sup>

Exhibit 3.4 shows different industry types along a continuum from fragmented to consolidated structures. At one extreme, a *fragmented industry* consists of many small firms and tends to generate low profitability. At the other end of the continuum, a *consolidated*

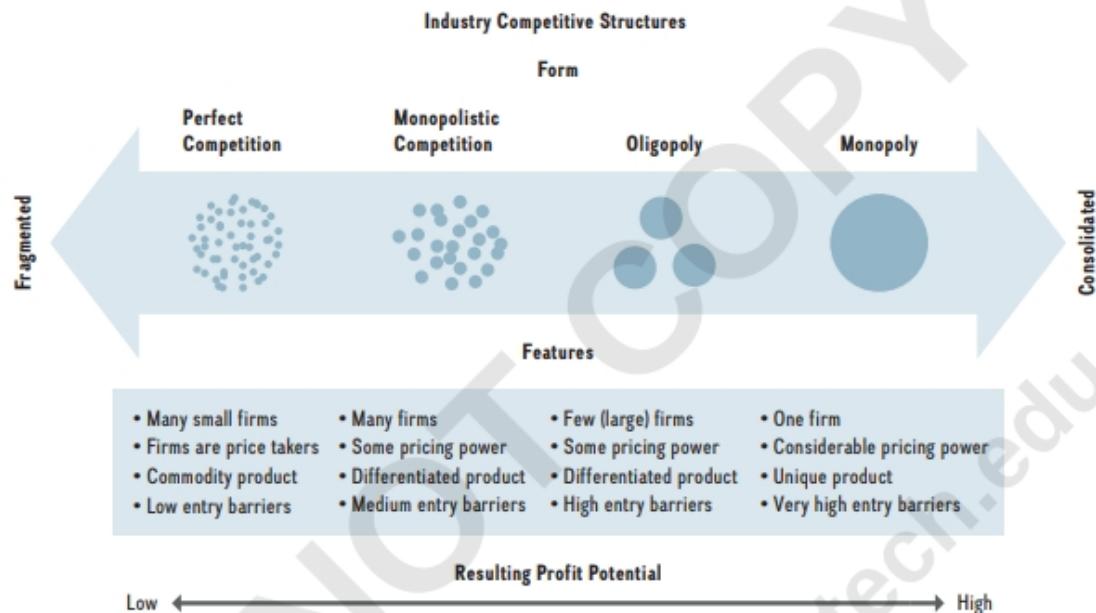
### LO 3-4

Examine how competitive industry structure shapes rivalry among competitors.

**competitive industry structure** Elements and features common to all industries, including the number and size of competitors, the firms' degree of pricing power, the type of product or service offered, and the height of entry barriers.

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**EXHIBIT 3.4** / Industry Competitive Structures along the Continuum from Fragmented to Consolidated



industry is dominated by a few firms, or even just one firm, and has the potential to be highly profitable. The four main competitive industry structures are:

1. Perfect competition
2. Monopolistic competition
3. Oligopoly
4. Monopoly

**Perfect Competition.** A *perfectly competitive* industry is fragmented and has many small firms, a commodity product, ease of entry, and little or no ability for each individual firm to raise its prices. The firms competing in this type of industry are approximately similar in size and resources. Consumers make purchasing decisions solely on price, because the commodity product offerings are more or less identical. The resulting performance of the industry shows low profitability. Under these conditions, firms in perfect competition have difficulty achieving even a temporary competitive advantage and can achieve only competitive parity. Although perfect competition is a rare industry structure in its pure form, markets for commodities such as natural gas, copper, and iron tend to approach this structure.

Modern high-tech industries are also not immune to the perils of perfect competition. Many internet entrepreneurs learned the hard way that it is difficult to beat the forces of perfect competition. Fueled by eager venture capitalists, about 100 online pet supply stores such as *pets.com*, *petopia.com*, and *pet-store.com* had sprung up by 1999, at the height of the internet bubble.<sup>28</sup> Cut-throat competition ensued, with online retailers selling products below cost. When many small firms are offering a commodity product in an industry that is easy to enter, no one is able to increase prices and generate profits. To make matters worse, at the same time, category-killers such as PetSmart and PetCo were expanding rapidly, opening some 2,000 brick-and-mortar stores in the United States and Canada. The

ensuing price competition led to an industry shakeout, leaving online retailers in the dust. Looking at the competitive industry structures depicted in Exhibit 3.4, we might have predicted that online pet supply stores were unlikely to be profitable.

**Monopolistic Competition.** A *monopolistically competitive* industry has many firms, a differentiated product, some obstacles to entry, and the ability to raise prices for a relatively unique product while retaining customers. The key to understanding this industry structure is that the firms now offer products or services with unique features.

The computer hardware industry provides one example of monopolistic competition. Many firms compete in this industry, and even the largest of them (Apple, ASUS, Dell, HP, or Lenovo) have less than 20 percent market share. Moreover, while products between competitors tend to be similar, they are by no means identical. As a consequence, firms selling a product with unique features tend to have some ability to raise prices. When a firm is able to differentiate its product or service offerings, it carves out a niche in the market in which it has some degree of monopoly power over pricing, thus the name “monopolistic competition.” Firms frequently communicate the degree of product differentiation through advertising.

**Oligopoly.** An *oligopolistic* industry is consolidated with a few large firms, differentiated products, high barriers to entry, and some degree of pricing power. The degree of pricing power depends, just as in monopolistic competition, on the degree of product differentiation.

A key feature of an oligopoly is that the competing firms are *interdependent*. With only a few competitors in the mix, the actions of one firm influence the behaviors of the others. Each competitor in an oligopoly, therefore, must consider the strategic actions of the other competitors. This type of industry structure is often analyzed using *game theory*, which attempts to predict strategic behaviors by assuming that the moves and reactions of competitors can be anticipated.<sup>29</sup> Due to their strategic interdependence, companies in oligopolies have an incentive to coordinate their strategic actions to maximize joint performance. Although explicit coordination such as price fixing is illegal in the United States, tacit coordination such as “an unspoken understanding” is not.

The express-delivery industry is an example of an oligopoly. The main competitors in this space are FedEx and UPS. Any strategic decision made by FedEx (e.g., to expand delivery services to ground delivery of larger-size packages) directly affects UPS; likewise, any decision made by UPS (e.g., to guarantee next-day delivery before 8:00 a.m.) directly affects FedEx. Other examples of oligopolies include the soft drink industry (Coca-Cola versus Pepsi), airframe manufacturing business (Boeing versus Airbus), home-improvement retailing (The Home Depot versus Lowe’s), toys and games (Hasbro versus Mattel), and detergents (P&G versus Unilever).<sup>30</sup>

Companies in an oligopoly tend to have some pricing power if they are able to differentiate their product or service offerings from those of their competitors. *Non-price competition*, therefore, is the preferred mode of competition. This means competing by offering unique product features or services rather than competing based on price alone. When one firm in an oligopoly cuts prices to gain market share from its competitor, the competitor typically will respond in kind and also cut prices. This process initiates a price war, which can be especially detrimental to firm performance if the products are close rivals.

In the early years of the soft drink industry, for example, whenever PepsiCo lowered prices, Coca-Cola followed suit. These actions only resulted in reduced profitability for both companies. In recent decades, both Coca-Cola and PepsiCo have repeatedly demonstrated that they have learned this lesson. They shifted the basis of competition from price-cutting to new product introductions and lifestyle advertising. Any price adjustments are merely short-term promotions. By leveraging innovation and advertising, Coca-Cola and PepsiCo have moved to non-price competition, which in turn allows them to charge higher prices and to improve industry and company profitability.<sup>31</sup>

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**Monopoly.** An industry is a *monopoly* when there is only one, often large firm supplying the market. The firm may offer a unique product, and the challenges to moving into the industry tend to be high. The monopolist has considerable pricing power. As a consequence, firm and thus industry profit tends to be high. The one firm is the industry.

In some instances, the government will grant one firm the right to be the sole supplier of a product or service. This is often done to incentivize a company to engage in a venture that would not be profitable if there was more than one supplier. For instance, public utilities incur huge fixed costs to build plants and to supply a certain geographic area. Public utilities supplying water, gas, and electricity to businesses and homes are frequently monopolists. As examples, Georgia Power is the only supplier of electricity for some 2.5 million customers in the southeastern United States. Philadelphia Gas Works is the only supplier of natural gas in the city of Philadelphia, Pennsylvania, serving some 500,000 customers. These are so-called *natural monopolies*. Without them, the governments involved believe the market would not supply these products or services. In the past few decades, however, more and more of these natural monopolies have been deregulated in the United States, including airlines, telecommunications, railroads, trucking, and ocean transportation. This deregulation has allowed competition to emerge, which frequently leads to lower prices, better service, and more innovation.

While natural monopolies appear to be disappearing from the competitive landscape, so-called *near monopolies* are of much greater interest to strategists. These are firms that have accrued significant market power, for example, by owning valuable patents or proprietary technology. In the process, they are changing the industry structure in their favor, generally from monopolistic competition or oligopolies to near monopolies. These near monopolies are firms that have accomplished product differentiation to such a degree that they are in a class by themselves, just like a monopolist. The European Union, for example, views Google with its 90 percent market share in online search as a “digital monopoly.”<sup>32</sup> This is an enviable position in terms of the ability to extract profits by leveraging its data to provide targeted online advertising and other customized services, so long as Google can steer clear of monopolistic behavior, which may attract antitrust regulators and lead to legal repercussions.



The prosthetic for knee replacement is a fast-growing market segment in the medical products industry.

©BSIP/Getty Images

**INDUSTRY GROWTH.** Industry growth directly affects the intensity of rivalry among competitors. In periods of high growth, consumer demand rises, and price competition among firms frequently decreases. Because the pie is expanding, rivals are focused on capturing part of that larger pie rather than taking market share and profitability away from one another. The demand for knee replacements, for example, is a fast-growing segment in the medical products industry. In the United States, robust demand is driven by the need for knee replacements for an aging population as well as for an increasingly obese population.

The leading competitors are Zimmer Biomet, DePuy, and Stryker, with significant share held by Smith & Nephew. Competition is primarily based on innovative design, improved implant materials, and differentiated products such as gender solutions and a range of high-flex knees. With improvements to materials and procedures, younger patients are also increasingly choosing early surgical

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intervention. Competitors are able to avoid price competition and, instead, focus on differentiation that allows premium pricing.

In contrast, rivalry among competitors becomes fierce during slow or even negative industry growth. Price discounts, frequent new product releases with minor modifications, intense promotional campaigns, and fast retaliation by rivals are all tactics indicative of an industry with slow or negative growth. Competition is fierce because rivals can gain only at the expense of others; therefore, companies are focused on taking business away from one another. Demand for traditional fast food providers such as McDonald's, Burger King, and Wendy's has been declining in recent years. Consumers have become more health-conscious and demand has shifted to alternative restaurants such as Subway, Chick-fil-A, and Chipotle. Attempts by McDonald's, Burger King, and Wendy's to steal customers from one another include frequent discounting tactics such as dollar menus. Such competitive tactics are indicative of cut-throat competition and a low profit potential in the traditional hamburger fast food industry.

Competitive rivalry based solely on cutting prices is especially destructive to profitability because it transfers most, if not all, of the value created in the industry to the customers—leaving little, if anything, for the firms in the industry. While this may appear attractive to customers, firms that are not profitable are not able to make the investments necessary to upgrade their product offerings or services to provide higher value, and they eventually leave the industry. Destructive price competition can lead to limited choices, lower product quality, and higher prices for consumers in the long run if only a few large firms survive.

**STRATEGIC COMMITMENTS.** If firms make strategic commitments to compete in an industry, rivalry among competitors is likely to be more intense. **Strategic commitments** are firm actions that are costly, long-term oriented, and difficult to reverse. Strategic commitments to a specific industry can stem from large, fixed cost requirements, but also from noneconomic considerations.<sup>33</sup>

For example, significant strategic commitments are required to compete in the airline industry when using a hub-and-spoke system to provide not only domestic but also international coverage. U.S. airlines Delta, United, and American have large fixed costs to maintain their network of routes that affords global coverage, frequently in conjunction with foreign partner airlines. These fixed costs in terms of aircraft, gate leases, hangars, maintenance facilities, baggage facilities, and ground transportation all accrue before the airlines sell any tickets. High fixed costs create tremendous pressure to fill empty seats. An airline seat on a specific flight is perishable, just like hotel rooms not filled. Empty airline seats are often filled through price-cutting. Given similar high fixed costs, other airlines respond in kind. Eventually, a vicious cycle of price-cutting ensues, driving average industry profitability to zero, or even negative numbers (where the companies are losing money). To make matters worse, given their strategic commitments, airlines are unlikely to exit an industry. Excess capacity remains, further depressing industry profitability.

In other cases, strategic commitments to a specific industry may be the result of more political than economic considerations. Airbus, for example, was created by a number of European governments through direct subsidies to provide a countervailing power to Boeing. The European Union in turn claims that Boeing is subsidized by the U.S. government indirectly via defense contracts. Given these political considerations and large-scale strategic commitments, neither Airbus nor Boeing is likely to exit the aircraft manufacturing industry even if industry profit potential falls to zero.

**strategic commitments**  
Firm actions that  
are costly, long-term  
oriented, and difficult to  
reverse.

**EXIT BARRIERS.** The rivalry among existing competitors is also a function of an industry's **exit barriers**, the obstacles that determine how easily a firm can leave that industry. Exit barriers

**exit barriers** Obstacles  
that determine how  
easily a firm can leave  
an industry.

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comprise both economic and social factors. They include fixed costs that must be paid regardless of whether the company is operating in the industry or not. A company exiting an industry may still have contractual obligations to suppliers, such as employee health care, retirement benefits, and severance pay. Social factors include elements such as emotional attachments to certain geographic locations. In Michigan, entire communities still depend on GM, Ford, and Chrysler. If any of those carmakers were to exit the industry, communities would suffer. Other social and economic factors include ripple effects through the supply chain. When one major player in an industry shuts down, its suppliers are adversely impacted as well.

An industry with low exit barriers is more attractive because it allows underperforming firms to exit more easily. Such exits reduce competitive pressure on the remaining firms because excess capacity is removed. In contrast, an industry with high exit barriers reduces its profit potential because excess capacity still remains. All of the large airlines featured in Strategy Highlight 3.2 (American, Delta, and United) have filed for bankruptcy at one point. Due to a unique feature of U.S. Chapter 11 bankruptcy law, however, companies may continue to operate and reorganize while being temporarily shielded from their creditors and other obligations until renegotiated. This implies that excess capacity is not removed from the industry, and by putting pressure on prices further reduces industry profit potential.

To summarize our discussion of the five forces model, Exhibit 3.5 provides a checklist that you can apply to any industry when assessing the underlying competitive forces that shape strategy. The key take-away from the five forces model is that the stronger the forces, the lower the industry's ability to earn above-average profits, and correspondingly, the lower the firm's ability to gain and sustain a competitive advantage. Conversely, the weaker the forces, the greater the industry's ability to earn above-average profits, and correspondingly, the greater the firm's ability to gain and sustain competitive advantage. Therefore, managers need to craft a strategic position for their company that leverages weak forces into opportunities and mitigates strong forces because they are potential threats to the firm's ability to gain and sustain a competitive advantage.

## A SIXTH FORCE: THE STRATEGIC ROLE OF COMPLEMENTS

As valuable as the five forces model is for explaining the profit potential and attractiveness of industries, the value of Porter's five forces model can be further enhanced if one also considers the availability of complements.<sup>34</sup>

A **complement** is a product, service, or competency that adds value to the original product offering when the two are used in tandem.<sup>35</sup> Complements increase demand for the primary product, thereby enhancing the profit potential for the industry and the firm. A company is a **complementor** to your company if customers value your product or service offering more when they are able to combine it with the other company's product or service.<sup>36</sup> Firms may choose to provide the complements themselves or work with another company to accomplish this.

For example, in the smartphone industry, Alphabet's Google complements Samsung. The Korean high-tech company's smartphones are more valuable when they come with Google's Android system installed. At the same time, Google and Samsung are increasingly becoming competitors. With Google's acquisition of Motorola Mobility, the online search company launched its own line of smartphones and Chromebooks. This development illustrates the process of **co-opetition**, which is cooperation by competitors to achieve a strategic objective. Samsung and Google cooperate as complementors to compete against Apple's strong position in the mobile device industry, while at the same time Samsung and Google are increasingly becoming competitive with one another. While Google retained Motorola's patents to use for development in its future phones, and to defend itself against competitors such as Samsung and Apple, Alphabet (Google's parent company) sold the manufacturing arm of Motorola to Lenovo, a Chinese maker of computers and mobile devices.

**complement** A product, service, or competency that adds value to the original product offering when the two are used in tandem.

**LO 3-5**  
Describe the strategic role of complements in creating positive-sum co-opetition.

**complementor**  
A company that provides a good or service that leads customers to value your firm's offering more when the two are combined.

**co-opetition** Cooperation by competitors to achieve a strategic objective.

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***The threat of entry is high when:***

- ✓ The minimum efficient scale to compete in an industry is low.
- ✓ Network effects are not present.
- ✓ Customer switching costs are low.
- ✓ Capital requirements are low.
- ✓ Incumbents do not possess:
  - Brand loyalty.
  - Proprietary technology.
  - Preferential access to raw materials.
  - Preferential access to distribution channels.
  - Favorable geographic locations.
  - Cumulative learning and experience effects.
- ✓ Restrictive government regulations do not exist.
- ✓ New entrants expect that incumbents will not or cannot retaliate.

***The power of suppliers is high when:***

- ✓ Supplier's industry is more concentrated than the industry it sells to.
- ✓ Suppliers do not depend heavily on the industry for their revenues.
- ✓ Incumbent firms face significant switching costs when changing suppliers.
- ✓ Suppliers offer products that are differentiated.
- ✓ There are no readily available substitutes for the products or services that the suppliers offer.
- ✓ Suppliers can credibly threaten to forward-integrate into the industry.

***The power of buyers is high when:***

- ✓ There are a few buyers and each buyer purchases large quantities relative to the size of a single seller.
- ✓ The industry's products are standardized or undifferentiated commodities.
- ✓ Buyers face low or no switching costs.
- ✓ Buyers can credibly threaten to backwardly integrate into the industry.

***The threat of substitutes is high when:***

- ✓ The substitute offers an attractive price-performance trade-off.
- ✓ The buyer's cost of switching to the substitute is low.

***The rivalry among existing competitors is high when:***

- ✓ There are many competitors in the industry.
- ✓ The competitors are roughly of equal size.
- ✓ Industry growth is slow, zero, or even negative.
- ✓ Exit barriers are high.
- ✓ Incumbent firms are highly committed to the business.
- ✓ Incumbent firms cannot read or understand each other's strategies well.
- ✓ Products and services are direct substitutes.
- ✓ Fixed costs are high and marginal costs are low.
- ✓ Excess capacity exists in the industry.
- ✓ The product or service is perishable.

**EXHIBIT 3.5**

**The Five Forces Competitive Analysis Checklist**

**SOURCE:** Adapted from M.E. Porter (2008), "The five competitive forces that shape strategy," *Harvard Business Review*, January.

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In 2017, Google acquired HTC's smartphone engineering group for \$1.1 billion. The Taiwanese smartphone maker developed the Google Pixel phone. With this acquisition, Google is making a commitment to handset manufacturing, unlike in the Motorola deal which was more motivated by intellectual property considerations. Integrating HTC's smartphone unit within Google will allow engineers to more tightly integrate hardware and software. This in turn will allow Google to differentiate its high-end Pixel phone more from the competition, especially Apple's newly released iPhone X and Samsung's Galaxy 8 line of phone, including the Note 8.

LO 3-6

Explain the five choices required for market entry.

### 3.3 Changes over Time: Entry Choices and Industry Dynamics

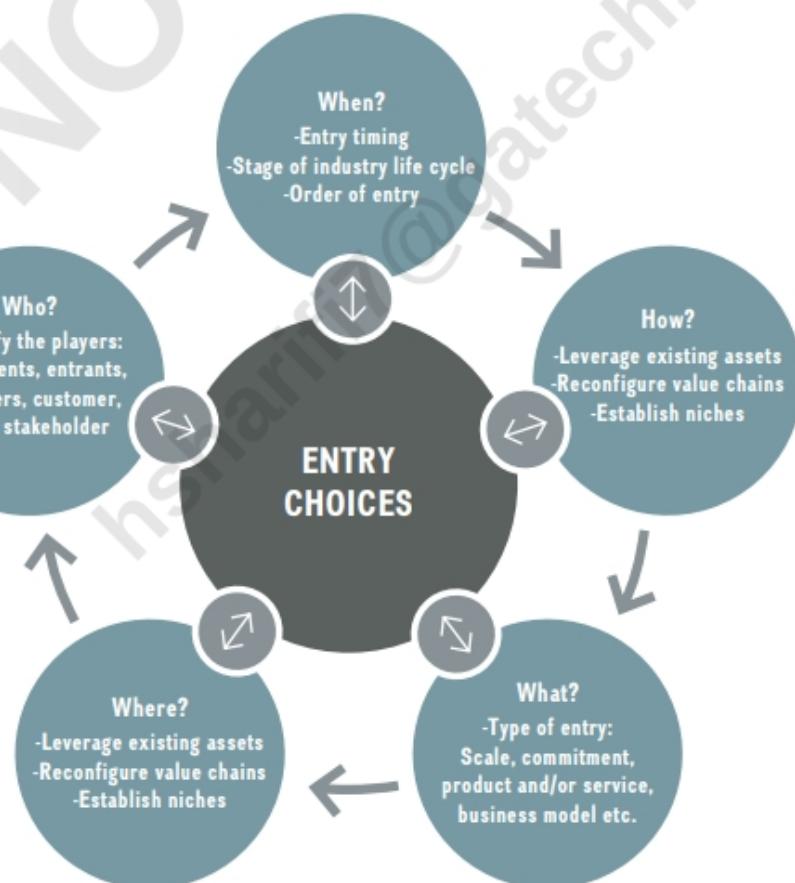
#### ENTRY CHOICES

One of the key insights of the five forces model is that the more profitable an industry, the more attractive it becomes to competitors. Let's assume a firm's strategic leaders are aware of potential barriers to entry (discussed above), but would nonetheless like to contemplate potential market entry because the industry profitability is high and thus quite attractive. Exhibit 3.6 shows an integrative model that can guide the entry choices firms make.

#### EXHIBIT 3.6 /

##### Entry Choices

SOURCE: Based on and adapted from Zachary, M.A., P.T. Giannidis, G. Tyte Payne, and G.D. Markman (2014), "Entry timing: enduring lessons and future directions," *Journal of Management* 41: 1409; and Bryce, D.J., and J.H. Dyer (2007), "Strategies to crack well-guarded markets," *Harvard Business Review*, May: 84–92.



Rather than considering firm entry as a discrete event (i.e., simple yes or no decision), or a discrete event composed of five parts, this model suggests that the entry choices firms make constitute a strategic process unfolding over time.

In particular, to increase the probability of successful entry, strategic leaders need to consider the following five questions:<sup>37</sup>

1. *Who are the players?* Building on Porter's insight that competition must be viewed in a broader sense beyond direct competitors, the *who are the players* question allows strategic leaders to not only identify direct competitors but also focus on other external and internal stakeholders necessary to successfully compete in an industry, such as customers, employees, regulators, and communities (see discussion of stakeholder strategy in Chapter 2).
2. *When to enter?* This question concerns the *timing of entry*. Given that our perspective is that of a firm considering potential entry into an *existing* industry, any first-mover advantages are bygones. Nonetheless, the potential new entrant needs to consider at which stage of the industry life cycle (introduction, growth, shakeout, maturity, or decline) it should enter. We are taking a deep dive into the industry life cycle and how it unfolds over time in Chapter 7.
3. *How to enter?* One of the challenges that strategic leaders face is that often the most attractive industries in terms of profitability are also the hardest to break into because they are protected by entry barriers. Thus, the *how to enter* question goes to the heart of this problem.
  - One option is to *leverage existing assets*, that is to think about a new combination of resources and capabilities that firms already possess, and if needed to combine them with partner resources through strategic alliances. Although Circuit City went bankrupt as an electronics retailer, losing out to Best Buy and Amazon, a few years earlier it recombined its existing expertise in big-box retailing including optimization of supply and demand in specific geographic areas to create CarMax, now the largest used-car dealer in the United States and a Fortune 500 company.
  - Another option is to *reconfigure value chains*. This approach allowed Skype to enter the market for long-distance calls by combining value chains differently (offering VOIP rather than relying on more expensive fiber-optic cables), and thus compete with incumbents such as AT&T.
  - The third option is to *establish a niche* in an existing industry, and then use this beachhead to grow further. This is the approach the Austrian maker of Red Bull used when entering the U.S. soft drink market, long dominated by Coca-Cola and PepsiCo. Its energy drink was offered in a small 8.3-ounce can, but priced at multiples compared to Coke or Pepsi. This allowed retailers to stock Red Bull cans in small spaces such as near the checkout counter. In addition, Red Bull initially used many nontraditional outlets as points of sale such as nightclubs and gas stations. This approach created a loyal following from which the energy drink maker could expand its entry into the mainstream carbonated beverage drink in the United States and elsewhere. Indeed, energy drinks are now one of the fastest growing segments in this industry.
4. *What type of entry?* The *what* question of entry refers to the type of entry in terms of product market (e.g., smartphones), value chain activity (e.g., R&D for smartphone chips or manufacturing of smartphones), geography (e.g., domestic and/or international), and type of business model (e.g., subsidizing smartphones when providing services). Depending on the market under consideration for entry, firms may face unique competitive and institutional challenges. For example, discount carrier Spirit Airlines' unbundling of its services by charging customers separately for elements such as checked luggage, assigned seating, carry-on items, and other in-flight perks such as

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drinks met with considerable backlash in 2007 when introduced. Yet this marked the starting point of Spirit Airlines' strategic positioning as an ultra-low-cost carrier and enabled the company to add many attractive routes, and thus to enter geographic markets it was not able to compete in previously.

5. *Where to enter?* After deciding on the type of entry, the *where* to enter question refers to more fine-tuned aspects of entry such as product positioning (high end versus low end), pricing strategy, potential partners, and so forth.

**LO 3-7**

Appraise the role of industry dynamics and industry convergence in shaping the firm's external environment.

## INDUSTRY DYNAMICS

Although the five forces plus complements model is useful in understanding an industry's profit potential, it provides only a point-in-time snapshot of a moving target. With this model (as with other static models), one cannot determine the changing speed of an industry or the rate of innovation. This drawback implies that managers must repeat their analysis over time to create a more accurate picture of their industry. It is therefore important that managers consider industry dynamics.

Industry structures are not stable over time. Rather, they are dynamic. Since a consolidated industry tends to be more profitable than a fragmented one (see Exhibit 3.4), firms have a tendency to change the industry structure in their favor, making it more consolidated through horizontal mergers and acquisitions. Having fewer competitors generally equates to higher industry profitability. Industry incumbents, therefore, have an incentive to reduce the number of competitors in the industry. With fewer but larger competitors, incumbent firms can mitigate the threat of strong competitive forces such as supplier or buyer power more effectively.

The U.S. domestic airline industry (featured in Strategy Highlight 3.2) has witnessed several large, horizontal mergers between competitors, including Delta and Northwest, United and Continental, Southwest and AirTran, as well as American and U.S. Airways. These moves allow the remaining carriers to enjoy a more benign industry structure. It also allows them to retire some of the excess capacity in the industry as the merged airlines consolidate their networks of routes. The merger activity in the airline industry provides one example of how firms can proactively reshape industry structure in their favor. A more consolidated airline industry is likely to lead to higher ticket prices and fewer choices for customers, but also more profitable airlines.

In contrast, consolidated industry structures may also break up and become more fragmented. This generally happens when there are external shocks to an industry such as deregulation, new legislation, technological innovation, or globalization. For example, the emergence of the internet moved the stock brokerage business from an oligopoly controlled by full-service firms such as Merrill Lynch and Morgan Stanley to monopolistic competition with many generic online brokers such as Ameritrade, E\*Trade, and Scottrade.

Another dynamic to be considered is **industry convergence**, a process whereby formerly unrelated industries begin to satisfy the same customer need. Industry convergence is often brought on by technological advances. For years, many players in the media industries have been converging due to technological progress in IT, telecommunications, and digital media. Media convergence unites computing, communications, and content, thereby causing significant upheaval across previously distinct industries. Content providers in industries such as newspapers, magazines, TV, movies, radio, and music are all scrambling to adapt. Many standalone print newspapers are closing up shop, while others are trying to figure out how to offer online news content for which consumers are willing to pay.<sup>38</sup> Internet companies such as Google, Facebook, Instagram (acquired by Facebook), LinkedIn (acquired by Microsoft), Snap, Pinterest, and Twitter are changing the industry structure by constantly morphing their capabilities and forcing old-line media companies

**industry convergence**  
A process whereby formerly unrelated industries begin to satisfy the same customer need.

such as News Corp., Time Warner, and Disney to adapt. A wide variety of mobile devices, including smartphones, tablets, and e-readers, provide a new form of content delivery that has the potential to make print media obsolete.

### 3.4 Performance Differences within the Same Industry: Strategic Groups

In further analyzing the firm's external environment to explain performance differences, we now move to firms *within the same industry*. As noted earlier in the chapter, a firm occupies a place within a **strategic group**, a set of companies that pursue a similar strategy within a specific industry in their quest for competitive advantage (see Exhibit 3.1).<sup>39</sup> Strategic groups differ from one another along important dimensions such as expenditures on research and development, technology, product differentiation, product and service offerings, market segments, distribution channels, and customer service.

To explain differences in firm performance within the same industry, the **strategic group model** clusters different firms into groups based on a few key strategic dimensions.<sup>40</sup> Even within the same industry, firm performances differ depending on strategic group membership. Some strategic groups tend to be more profitable than others. This difference implies that firm performance is determined not only by the industry to which the firm belongs, but also by its strategic group membership.

The distinct differences across strategic groups reflect the business strategies that firms pursue. Firms in the same strategic group tend to follow a similar strategy. Companies in the same strategic group, therefore, are direct competitors. The rivalry among firms *within* the same strategic group is generally more intense than the rivalry *among* strategic groups: *Intra-group rivalry exceeds inter-group rivalry*. The number of different business strategies pursued within an industry determines the number of strategic groups in that industry. In most industries, strategic groups can be identified along a fairly small number of dimensions. In many instances, two strategic groups are in an industry based on two different business strategies: one that pursues a low-cost strategy and a second that pursues a differentiation strategy (see Exhibit 3.7). We'll discuss each of these generic business strategies in detail in Chapter 6.

#### LO 3-8

Generate a strategic group model to reveal performance differences between clusters of firms in the same industry.

**strategic group**  
The set of companies that pursue a similar strategy within a specific industry.

**strategic group model**  
A framework that explains differences in firm performance within the same industry.

### THE STRATEGIC GROUP MODEL

To understand competitive behavior and performance within an industry, we can map the industry competitors into strategic groups. We do this by:

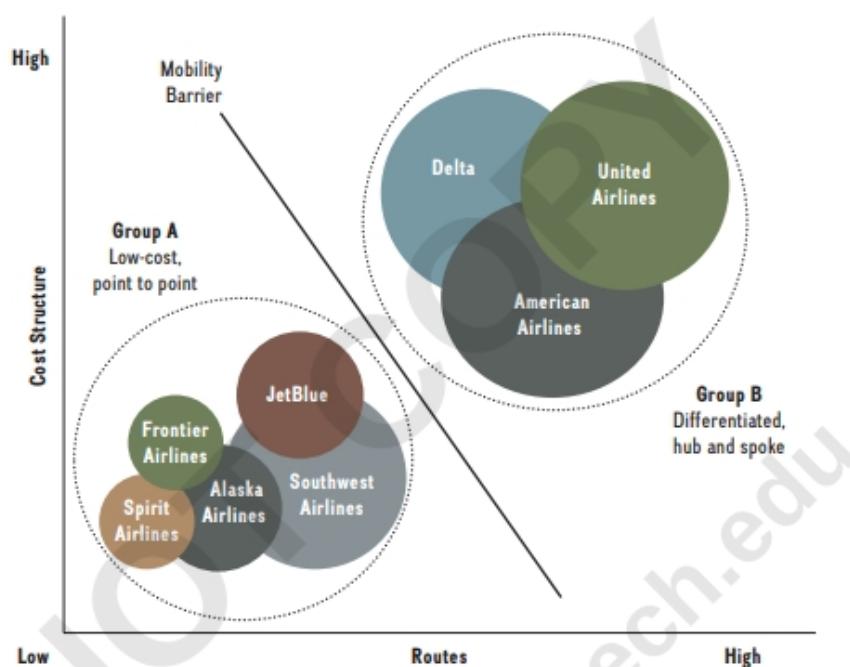
- Identifying the most important strategic dimensions such as expenditures on research and development, technology, product differentiation, product and service offerings, cost structure, market segments, distribution channels, and customer service. These dimensions are strategic commitments based on managerial actions that are costly and difficult to reverse.
- Choosing two key dimensions for the horizontal and vertical axes, which expose important differences among the competitors.
- Graphing the firms in the strategic group, indicating each firm's market share by the size of the bubble with which it is represented.<sup>41</sup>

The U.S. domestic airline industry (featured in Strategy Highlight 3.2) provides an illustrative example. Exhibit 3.7 maps companies active in this industry. The two strategic dimensions on the axes are cost structure and routes. As a result of this mapping, two strategic groups become apparent, as indicated by the dashed circles: Group A, low-cost, point-to-point airlines (Alaska Airlines, Frontier Airlines, JetBlue, Southwest Airlines, and Spirit Airlines) and Group B, differentiated airlines using a hub-and-spoke system

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**EXHIBIT 3.7**

Strategic Groups and Mobility Barrier in U.S. Domestic Airline Industry



(American, Delta, and United). The low-cost, point-to-point airlines are clustered in the lower-left corner because they tend to have a lower cost structure but generally serve fewer routes due to their point-to-point operating system.

The differentiated airlines in Group B, offering full services using a hub-and-spoke route system, comprise the so-called legacy carriers. They are clustered in the upper-right corner because of their generally higher cost structures. The legacy carriers usually offer many more routes than the point-to-point low-cost carriers, made possible by use of the hub-and-spoke system, and thus offer many different destinations. For example, Delta's main hub is in Atlanta, Georgia.<sup>42</sup> If you were to fly from Seattle, Washington, to Miami, Florida, you would stop to change planes in Delta's Atlanta hub on your way.

The strategic group mapping in Exhibit 3.7 provides additional insights:

- **Competitive rivalry is strongest between firms that are within the same strategic group.** The closer firms are on the strategic group map, the more directly and intensely they are in competition with one another. After a wave of mergers, the remaining megairlines—American, Delta, and United—are competing head-to-head, not only in the U.S. domestic market but also globally. They tend to monitor one another's strategic actions closely. While Delta faces secondary competition from low-cost carriers such as Southwest Airlines (SWA) on some domestic routes, its primary competitive rivals remain the other legacy carriers. This is because they compete more on providing seamless global services within their respective airline alliances (SkyTeam for Delta, Oneworld for American, and Star Alliance for United) than on low-cost airfares for particular city pairs in the United States. Nonetheless, when Delta is faced with direct competition from SWA on a particular domestic route (say from Atlanta to Chicago), both tend to offer similar low-cost fares.
- **The external environment affects strategic groups differently.** During times of economic downturn, for example, the low-cost airlines tend to take market share away from the legacy carriers. Moreover, given their generally higher cost structure, the

legacy carriers are often unable to stay profitable during recessions, at least on domestic routes. This implies that external factors such as recessions or high oil prices favor the companies in the low-cost strategic group. On the other hand, given a number of governmental restrictions on international air travel, the few airlines that are able to compete globally usually make a tidy profit in this specific industry segment.

- **The five competitive forces affect strategic groups differently.** *Barriers to entry*, for example, are higher in the hub-and-spoke (differentiated) airline group than in the point-to-point (low-cost) airline group. Following deregulation, many airlines entered the industry, but all of these new players used the point-to-point system. Since hub-and-spoke airlines can offer worldwide service and are protected from foreign competition by regulation to some extent, they often face weaker *buyer power*, especially from business travelers. While the hub-and-spoke airlines compete head-on with the point-to-point airlines when they are flying the same or similar routes, the *threat of substitutes* is stronger for the point-to-point airlines. This is because they tend to be regionally focused and compete with the viable substitutes of car, train, or bus travel. The threat of *supplier power* tends to be stronger for the airlines in the point-to-point, low-cost strategic group because they are much smaller and thus have weaker negotiation power when acquiring new aircraft, for example. To get around this, these airlines frequently purchase used aircraft from legacy carriers. This brief application of the five forces model leads us to conclude that rivalry among existing competitors in the low-cost, point-to-point strategic group is likely to be more intense than within the differentiated, hub-and-spoke strategic group.
- **Some strategic groups are more profitable than others.** Historically, airlines clustered in the lower-left corner tend to be more profitable when considering the U.S. domestic market only. Why? Because they create similar, or even higher, value for their customers in terms of on-time departure and arrival, safety, and fewer bags lost, while keeping their cost structure well below those of the legacy carriers. The point-to-point airlines have generally lower costs than the legacy carriers because they are faster in turning their airplanes around, keep them flying longer, use fewer and older airplane models, focus on high-yield city pairs, and tie pay to company performance, among many other activities that all support their low-cost business model. The point-to-point airlines, therefore, are able to offer their services at a lower cost and a higher perceived value, resulting in more pricing options, and thus creating the basis for a competitive advantage.

## MOBILITY BARRIERS

Although some strategic groups tend to be more profitable and therefore more attractive than others, **mobility barriers** restrict movement between groups. These are industry-specific factors that separate one strategic group from another.<sup>43</sup> The dimensions to determine a strategic group are mobility barriers, which are strategic commitments. These are actions that are costly and not easily reversed such as the firm's underlying cost structure because it is based on managerial commitments resulting in hard-to-reverse investments.

The two groups identified in Exhibit 3.7 are separated by the fact that offering international routes necessitates the hub-and-spoke model. Frequently, the international routes tend to be the remaining profitable routes left for the legacy carriers; albeit the up-and-coming Persian Gulf region carriers, in particular Emirates, Etihad Airways, and Qatar Airways, are beginning to threaten this profit sanctuary.<sup>44</sup>

This economic reality implies that if carriers in the lower-left cluster, such as SWA or JetBlue, would like to compete globally, they would likely need to change their point-to-point operating model to a hub-and-spoke model. Or they could select a few profitable

**mobility barriers**  
Industry-specific factors  
that separate one  
strategic group from  
another.

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international routes and service them with long-range aircrafts such as Boeing 787s or Airbus A-380s. Adding international service to the low-cost model, however, would require managerial commitments resulting in significant capital investments and a likely departure from a well-functioning business model. Additional regulatory hurdles reinforce these mobility barriers, such as the difficulty of securing landing slots at international airports around the world.

Despite using its point-to-point operating system, SWA experienced these and many other challenges when it began offering international flights to selected resort destinations such as Aruba, Cabo San Lucas, Cancun, the Bahamas, and Jamaica: changes to its reservation system, securing passports for crew members, cultural-awareness training, learning instructions in foreign languages, and performing drills in swimming pools on how to evacuate passengers onto life rafts. All of these additional requirements result in a somewhat higher cost for SWA to servicing international routes.<sup>45</sup>

### 3.5 Implications for Strategic Leaders

At the start of the strategic management process, it is critical for managers to conduct a thorough analysis of the firm's external environment to identify threats and opportunities. The initial step is to apply a PESTEL analysis to scan, monitor, and evaluate changes and trends in the firm's macroenvironment. This versatile framework allows managers to track important trends and developments based on the *source* of the external factors: political, economic, sociocultural, technological, ecological, and legal. When applying a PESTEL analysis, the guiding consideration for strategic leaders should be the question of how the external factors identified affect the firm's industry environment.

Exhibit 3.1 delineates external factors based on the *proximity* of these external factors by gradually moving from the general to the task environment. The next layer for managers to understand is the industry. Applying Porter's five forces model allows strategic leaders to understand the profit potential of an industry and to obtain clues on how to carve out a strategic position that makes gaining and sustaining a competitive advantage more likely. Follow these steps to apply the five forces model:<sup>46</sup>

1. **Define the relevant industry.** In the five forces model, industry boundaries are drawn by identifying a group of incumbent companies that face more or less the same suppliers and buyers. This group of competitors is likely to be an industry if it also has the same entry barriers and a similar threat from substitutes. In this model, therefore, an industry is defined by commonality and overlap in the five competitive forces that shape competition.
2. **Identify the key players in each of the five forces and attempt to group them into different categories.** This step aids in assessing the relative strength of each force. For example, while makers of jet engines (GE, Rolls-Royce, Pratt & Whitney) and local catering services are all suppliers to airlines, their strengths vary widely. Segmenting different players within each force allows you to assess each force at a fine-grained level.
3. **Determine the underlying drivers of each force.** Which forces are strong, and which are weak? And why? Keeping with the airline example, why is the supplier power of jet engine manufacturers strong? Because they are supplying a mission-critical, highly differentiated product for airlines. Moreover, there are only a few suppliers of jet engines worldwide and no viable substitutes.
4. **Assess the overall industry structure.** What is the industry's profit potential? Here you need to identify forces that directly influence industry profit potential, because not all forces are likely to have an equal effect. Focus on the most important forces that drive industry profitability.

The final step in industry analysis is to draw a strategic group map. This exercise allows you to unearth and explain *performance differences within the same industry*. When analyzing a firm's external environment, it is critical to apply the three frameworks introduced in this chapter (PESTEL, Porter's five forces, and strategic group mapping). Taken together, the external environment can determine up to roughly one-half of the performance differences across firms (see Exhibit 1.1).

Although the different models discussed in this chapter are an important step in the strategic management process, they are not without shortcomings. First, all of the models presented are *static*. They provide a snapshot of what is actually a moving target and do not allow for consideration of industry dynamics. However, changes in the external environment can appear suddenly, for example, through black swan events. Industries can be revolutionized by innovation. Strategic groups can be made obsolete through deregulation or technological progress. To overcome this important shortcoming, strategic leaders must conduct external analyses at different points in time to gain a sense of the underlying *dynamics*. The frequency with which these tools need to be applied is a function of the rate of change in the industry. The mobile app industry is changing extremely fast, while the railroad industry experiences a less volatile environment.

Second, the models presented in this chapter do not allow strategic leaders to fully understand *why* there are performance differences among firms in the *same* industry or strategic group. To better understand differences in firm performance, we must look *inside the firm* to study its resources, capabilities, and core competencies. We do this in the next chapter by moving from external to internal analysis.

## CHAPTERCASE 3 / Consider This . . .

Even though Airbnb is at \$31 billion one of the most valuable private startups in the world and offers more accommodations than the three largest hotel chains (Marriott, Hilton, and Intercontinental) combined, not all is smooth sailing. In particular, PESTEL factors discussed in this chapter are creating major headwinds for Airbnb. Take regulation, for example. In late 2016, New York state strengthened legislation first passed in 2010. In particular, it is illegal in New York to rent out entire apartments in residential blocks for less than 30 days. (It still remains legal if the renter is living in the apartment at the same time, so "true space sharing" is still possible.) Fines increased to \$1,000 for the first offense, rising to \$7,500 for repeat offenders. This creates major problems for Airbnb because New York City is by far the largest market for the internet venture, with some 35,000 accommodations available for rent.

The issue for Airbnb is that about one-third of those listings are from hosts with multiple offerings in the same city. In particular, commercial landlords found out that it is more profitable to convert some apartments into short-term rentals

and to offer them via Airbnb than to sign long-term rentals with just one tenant, which often fall under some sort of rent control in New York City. Although this tactic increases the landlord's return on investment and profits, it creates all kinds of negative externalities. Neighbors complain about noisy tourists partying all night. Some apartments get ransacked or are used for illegal activities such as drug deals and prostitution. New Yorkers expressed their frustration by scrawling on Airbnb posters: "The dumbest person in your building is passing out keys to your front door!" On a more macro level, some argue that Airbnb drives out affordable rental space in many metropolitan cities where apartments are already scarce. Other cities such as Paris, Berlin, and Barcelona face similar problems and passed laws with stiff penalties, fining offenders over \$100,000!

### Questions

1. Have you ever used Airbnb, either as a renter or a host? What were some of the positives and some of the negatives of your experience? Explain.

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2. How was an internet startup able to disrupt the hotel industry, long dominated by giants such as Marriott and Hilton, which took decades to become successful worldwide hospitality chains? Explain.
3. Why is it that PESTEL factors can have such a strong impact on the future of a business? Do you support legislation such as that passed in New York (and elsewhere), or do you think it has more to do with protecting vested interests such as the hotel industry?
4. Citing the Digital Millennium Copyright Act (DMCA), Airbnb is challenging the New York law and others in the United States, arguing that it merely operates a digital marketplace, and thus is not responsible for the content that users place on its site. Do you think Airbnb has a strong argument? Why or why not?
5. Are you concerned that the concept of the sharing economy could be abused by unscrupulous “entrepreneurs” and thus give the entire novel concept a bad reputation? Why or why not? Explain.

## TAKE-AWAY CONCEPTS

This chapter demonstrated various approaches to analyzing the firm's *external environment*, as summarized by the following learning objectives and related take-away concepts.

**LO 3-1 / Generate a PESTEL analysis to evaluate the impact of external factors on the firm.**

- A firm's macroenvironment consists of a wide range of political, economic, sociocultural, technological, ecological, and legal (PESTEL) factors that can affect industry and firm performance. These external factors have both domestic and global aspects.
- Political factors describe the influence governmental bodies can have on firms.
- Economic factors to be considered are growth rates, interest rates, levels of employment, price stability (inflation and deflation), and currency exchange rates.
- Sociocultural factors capture a society's cultures, norms, and values.
- Technological factors capture the application of knowledge to create new processes and products.
- Ecological factors concern a firm's regard for environmental issues such as the natural environment, global warming, and sustainable economic growth.

- Legal factors capture the official outcomes of the political processes that manifest themselves in laws, mandates, regulations, and court decisions.

**LO 3-2 / Differentiate the roles of firm effects and industry effects in determining firm performance.**

- A firm's performance is more closely related to its managers' actions (firm effects) than to the external circumstances surrounding it (industry effects).
- Firm and industry effects, however, are interdependent. Both are relevant in determining firm performance.

**LO 3-3 / Apply Porter's five competitive forces to explain the profit potential of different industries.**

- The profit potential of an industry is a function of the five forces that shape competition: (1) threat of entry, (2) power of suppliers, (3) power of buyers, (4) threat of substitutes, and (5) rivalry among existing competitors.
- The stronger a competitive force, the greater the threat it represents. The weaker the competitive force, the greater the opportunity it presents.
- A firm can shape an industry's structure in its favor through its strategy.

**LO 3-4 / Examine how competitive industry structure shapes rivalry among competitors.**

- The competitive structure of an industry is largely captured by the number and size of competitors in an industry, whether the firms possess some degree of pricing power, the type of product or service the industry offers (commodity or differentiated product), and the height of entry barriers.
- A perfectly competitive industry is characterized by many small firms, a commodity product, low entry barriers, and no pricing power for individual firms.
- A monopolistic industry is characterized by many firms, a differentiated product, medium entry barriers, and some pricing power.
- An oligopolistic industry is characterized by few (large) firms, a differentiated product, high entry barriers, and some degree of pricing power.
- A monopoly exists when there is only one (large) firm supplying the market. In such instances, the firm may offer a unique product, the barriers to entry may be high, and the monopolist usually has considerable pricing power.

**LO 3-5 / Describe the strategic role of complements in creating positive-sum co-opetition.**

- Co-opetition (cooperation among competitors) can create a positive-sum game, resulting in a larger pie for everyone involved.
- Complements increase demand for the primary product, enhancing the profit potential for the industry and the firm.
- Attractive industries for co-opetition are characterized by high entry barriers, low exit barriers, low buyer and supplier power, a low threat of substitutes, and the availability of complements.

**LO 3-6 / Explain the five choices required for market entry.**

- The more profitable an industry, the more attractive it becomes to competitors, who must consider the *who*, *when*, *how*, *what*, and *where* of entry.
- The five choices constitute more than parts of a single decision point; their consideration forms a

strategic process unfolding over time. Each choice involves multiple decisions including many dimensions.

- *Who* includes questions about the full range of stakeholders, and not just competitors; *when*, questions about the industry life cycle; *how*, about overcoming barriers to entry; *what*, about options among product market, value chain, geography, and business model; and *where*, about product positioning, pricing strategy, and potential partners.

**LO 3-7 / Appraise the role of industry dynamics and industry convergence in shaping the firm's external environment.**

- Industries are dynamic—they change over time.
- Different conditions prevail in different industries, directly affecting the firms competing in these industries and their profitability.
- In industry convergence, formerly unrelated industries begin to satisfy the same customer need. Such convergence is often brought on by technological advances.

**LO 3-8 / Generate a strategic group model to reveal performance differences between clusters of firms in the same industry.**

- A strategic group is a set of firms within a specific industry that pursue a similar strategy in their quest for competitive advantage.
- Generally, there are two strategic groups in an industry based on two different business strategies: one that pursues a low-cost strategy and a second that pursues a differentiation strategy.
- Rivalry among firms of the same strategic group is more intense than the rivalry between strategic groups: intra-group rivalry exceeds inter-group rivalry.
- Strategic groups are affected differently by the external environment and the five competitive forces.
- Some strategic groups are more profitable than others.
- Movement between strategic groups is restricted by mobility barriers—industry-specific factors that separate one strategic group from another.

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## KEY TERMS

Competitive industry structure (p. 83)	Firm effects (p. 73)	Network effects (p. 77)
Complement (p. 88)	Five forces model (p. 74)	PESTEL model (p. 67)
Complementor (p. 88)	Industry (p. 73)	Strategic commitments (p. 87)
Co-opetition (p. 88)	Industry analysis (p. 73)	Strategic group (p. 93)
Entry barriers (p. 76)	Industry convergence (p. 92)	Strategic group model (p. 93)
Exit barriers (p. 87)	Industry effects (p. 73)	Strategic position (p. 73)
	Mobility barriers (p. 95)	Threat of entry (p. 76)

## DISCUSSION QUESTIONS

1. Why is it important for any organization (firms, nonprofits, etc.) to study and understand its external environment?
2. How do the five competitive forces in Porter's model affect the average profitability of the industry? For example, in what way might weak forces increase industry profits, and in what way do strong forces reduce industry profits? Identify an industry in which many of the competitors seem to be having financial performance problems. Which of the five forces seems to be strongest?
3. This chapter covers the choices firms make in entering new markets (LO 3-6). Reflect on ChapterCase 3 and discuss how Airbnb might have answered these questions in Exhibit 3.6.
4. How do mobility barriers affect the structure of an industry? How do they help us explain firm differences in performance?

## ETHICAL/SOCIAL ISSUES

1. One of the world's largest car manufacturers, Volkswagen (VW), admitted to criminal wrongdoing in 2017. The firm confirmed that it systematically cheated on emissions tests related to its two-liter diesel engines. These engines were designed in 2005 to meet more rigorous U.S. emission standards taking effect in 2007. Apparently the new engines did not perform as planned and the company then designed a software feature to artificially pass the emissions testing process. Road testing in 2014 uncovered a large difference between EPA-measured emissions and the actual output of the vehicles. This was then further investigated by several legal entities. In September 2015 the CEO of VW lost his job over the scandal. The financial cost to the firm is currently more than \$20 billion and could go above \$25 billion in fines and consumer compensation

- for nearly 11 million vehicles with this "defeat device."<sup>47</sup>
- a. The external environment of the global automobile industry is quite complex. Regulations vary from country to country and in the United States even from one state to another in some cases. Firms must be prepared to anticipate and respond to these external forces. It appears VW's response to the design issue, in this case, was neither ethical nor legal. Why do you think VW made the decisions it did regarding this emissions problem in the late 2000s? What could VW have done differently?
  - b. In January 2017, a U.S. grand jury indicted six current and former VW executives for their alleged role in the emissions scandal and its subsequent cover-up. The U.S. Justice

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Department decided to bring charges against these executives after a 16-month criminal investigation by the FBI. In the past, it has been rare for executives to be personally indicted for company misconduct. Do you agree with the decision to go after individual managers in this case? Why or why not?

- c. What are the competitive implications of the actions of VW? Does this situation impact the industry rivalry that is discussed in the five forces model, for instance?
2. The chapter notes that national governments provide incentives for industry growth. One such example is for the purchase of electric vehicles (EVs). Norway, for example, has provided tax discounts for electric vehicles since the 1990s. Norway waives a substantial automobile import

tax on EVs sold inside the country. Largely as a result of these policies, 22 percent of the automobiles owned in Norway were electric powered in 2015. This compares with 0.5 percent in the United States, 0.8 percent in China, and 1.1 percent in the United Kingdom in 2015.<sup>48</sup>

- a. What is the appropriate role for governments to encourage or discourage certain purchasing behaviors? You may note many national governments have for decades collected additional taxes on tobacco and alcohol products as a measure to try to moderate consumption of these items.
- b. As a strategist in a major firm, how would you seek to position your company in light of such current and potential future governmental policies?

## SMALL GROUP EXERCISES

### //// Small Group Exercise 1

Your group is a team of KraftHeinz Co. ([www.kraftheinzcompany.com](http://www.kraftheinzcompany.com)) marketing interns. The company has asked you to propose new guidelines for helping it promote food to children in a socially responsible way. As the fifth-largest consumer packaged food and beverage company globally, KraftHeinz's 2016 sales exceeded \$26 billion. The company projects steady growth, but would like your help in boosting growth. One of Kraft's largest brands is Oscar Mayer Lunchables, described as making lunch fun and targeted to busy parents who want a quick lunch to send with their children to school or keep on hand as an after-school snack. One of the options is Lunchables with Juice, Nachos Cheese Dip, and Salsa. However, controversy is growing about the social responsibility of directly marketing to children when the food is unhealthy—high in fat, sugar, and salt, but low in nutrition. There is a societal concern with the growing rate of obesity in children and the increased incidence of diabetes that results from childhood obesity.

Kraft would like to have a reputation as a socially responsible company. Accordingly, Kraft would like to create internal guidelines that will help it market Lunchables (as well as other packaged food items) responsibly and gain the approval of medical professionals, parents, and watchdog groups.<sup>49</sup>

1. Visit the Kraft food website ([www.lunchables.com](http://www.lunchables.com)) and review the Lunchables products, as well as other packaged food products that Kraft offers. Discuss among your group members the extent to which the product options are healthy choices.
2. Identify other actions that Kraft might take to demonstrate that it is a food company that genuinely cares about children's health and a company that would like to help reverse the trend of increasing childhood obesity.
3. If your group believes that the company is not responsible for personal choices that consumers make to eat unhealthy food, then describe how the company should respond to activist groups and public health officials that are urging companies to stop producing and marketing unhealthy foods.

### //// Small Group Exercise 2

One industry with an impact on both undergraduate and MBA students is textbook publishing. Traditional printed textbooks are being challenged on one hand by self-publishing firms offering very low prices for specific instructor materials, and on the other hand by a need to offer digital resources that substitute for printed materials. Large textbook publishers are increasingly