12

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The Economics of Competitive Strategy

Learning Objectives

After reading this chapter, you should be able to:

- Describe why the firm needs to follow a specific competitive strategy if it is to gain superior and sustained profitability.
- Explain how the pursuit of sustainable competitive advantage is effectively the same as pursuing the maximization of the firm's expected net present value (ENPV).
- Identify why Porter's three generic strategies operate to increase the firm's profitability, and why Porter's five forces operate to reduce the firm's profitability.
- Describe the "resource-based view" and the importance of the firm gaining control of resources that are valuable, rare, hard to copy, and nonsubstitutable.
- Reconcile Porter's five forces with the resource-based view as alternative explanations of how the firm can attain sustainable competitive advantage.
- Outline strategies to reduce the impact of Porter's five forces, to increase the inimitability of strategic resources, and to reduce business risk to acceptable levels.

Introduction

Strategies are actions undertaken to achieve desired outcomes. Competitive strategies are actions undertaken to win a competition or attain maximal results. We began this book with the assumption that the business firm will want to maximize profit in the short run, or alternatively, to maximize the expected net present value (ENPV) of profits. In the real world, where the firm's time horizon is usually longer than the short run and it operates in an uncertain business environment, the ENPV criterion is generally appropriate. Thus, we expect the business firm to adopt competitive strategies designed to maximize the ENPV of profit.

The preceding chapters of this book have laid the foundation for the discussion of the firm's competitive strategy. In Chapters 1 and 2, we discussed managerial decision making under risk and uncertainty. In Chapter 3, we examined consumer behavior to better understand how consumers make choices among competing firms. In Chapter 4, we examined the determinants of the demand function to identify the independent variables that drive consumer demand for the firm's product. In Chapter 5, we considered production and cost functions to better understand how the firm might achieve production and cost efficiencies. In Chapter 6, we considered incremental cost and revenue analysis to better estimate the contribution to overhead costs and profit that would follow a decision. In Chapters 7 through 10, we examined the profit-maximizing pricing strategy in a variety of market situations. Finally, Chapter 11 covered nonprice strategies designed to increase the firm's profitability. These 11 chapters cover the basics of managerial economics and provide us with the knowledge and tools we need to now discuss the economics of competitive strategy.

In the preceding chapters we considered decisions that maximize profit (or ENPV) on the basis of the resources that the firm currently possesses or controls in the short run.[1] But when the firm's time horizon is longer than the short run, it will need to consider that profit maximization in the short run (and thus setting a relatively high price) will induce expansion by rival firms and will also attract entry of new firms into the market unless they are prevented by barriers to entry. Thus, the firm that wants to maximize its ENPV must make strategic decisions designed to inhibit the entry of new firms and to insulate its demand from the impact of rival firms' strategies that are designed to steal market share. When the firm is trying to maximize its ENPV, any decision made in the present period must take into account the longer term implications of that decision. This typically means that some part of short-run profit that might have been earned must be sacrificed in favor of a greater long-term profit (i.e., greater ENPV of profit).

1. You will recall that the short run is the period during which some of the firm's resources are in fixed supply, such that neither the firm nor its rivals can expand their plant size, nor can new firms enter the industry in the short run, since this requires expanding plant size from zero to some larger size.

Sustainable Competitive Advantage

Michael Porter (1980) introduced the notion of **sustainable competitive advantage**, by which he meant a continuing and superior rate of profitability as compared with other firms in the same industry (Porter, 1980). In earlier chapters, we discussed *normal* profits and *pure* profits. Normal profit was defined as the level of profit that is just sufficient to keep the firm in the industry, and thus includes the opportunity cost of the firm's resources. Thus, normal profit is equal to the rate of profit that the firm could earn in its next-best-alternative deployment of the resources that it owns. Pure profit was defined as the excess of profit earned that is over and above normal profit. Porter's sustainable competitive advantage means the firm's ability to earn pure profit on a continuing basis, meaning that other firms are unable to compete to such a degree that the focal firm's profit falls back to the normal profit level or below.

Porter argued that firms may be able to attain sustainable competitive advantage by the adoption of a particular **competitive strategy**, which can be defined as a coherent and internally consistent set of decisions designed to achieve the firm's objectives. Porter brought to our attention that within any industry, the rival firms can be quite different in their cost structures and product quality and also in their profitability. He emphasized that the differences in the financial performance among firms within the same industry is due to their adoption of forward-looking competitive strategies. Rather than making short-run decisions that are simply a profit-maximizing response to their current demand and cost situations, he argued that firms consider the future impacts of their current actions and make decisions according to their longer term strategy.

Corporate Social Responsibility and the Triple Bottom Line

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Michael Porter introduced the notion of sustainable competitive advantage, which is a continuing and superior rate of profitability compared to other firms in the same industry.

More recently, two other objectives have joined profit as important longer term considerations for the business firm. These are the attainment of beneficial *social* outcomes, and the attainment of beneficial *environmental* outcomes. As we noted in Chapter 1, firms are now expected to exhibit **corporate social responsibility**, which means they cannot simply maximize profits or ENPV without considering the firm's impact on social welfare and the natural environment. The firm's production and sales activities will almost certainly impose damaging **external effects** on other people and on the natural environment; these are external social and environmental costs associated with production that are caused by, *but are not paid for by*, the firm.

External social costs include the monetary and psychic costs imposed on workers, nearby residents, and customers due to production and consumption of the firm's product. External environmental costs include the damage done to the physical landscape, vegetation, and the quality of air and water due to the production and consumption of the firm's product. If the firm does not compensate people for these social costs, or repair the natural environment that it has damaged, these costs that remain external to the firm (known as negative externalities) are not internalized by the firm, and thus the private costs of production (to the firm) are less than the total costs of production to society and the natural environment. When these external costs are brought to the attention of the firm, it has two basic choices: either to change its business methods to eliminate these external costs, or to internalize the costs by making payments to individuals or organizations to compensate injured members of society and to repair the natural environment. Business firms tend to be reluctant to internalize negative externalities unless forced by legislation to do so, although thoughtful discrimination by investors, suppliers, and consumers against firms that do not display sufficient corporate social responsibility is now causing managers to factor these social and environmental externalities into their decision making. In effect, instead of judging a firm's performance by its bottom-line profit, managers, and society more generally, are judging the firm's performance by the triple bottom line of economic, social, and environmental outcomes.[2]

In Chapter 1 we noted that the objective function of individuals can be modeled as the maximization of their psychic satisfaction, or utility, and that while utility is derived (via consumption of goods and services) from income or profit, it is also derived from good social and environmental outcomes. Conversely, disutility is derived from contributing to or experiencing bad social and environmental outcomes. Thus, stakeholders of firms—managers, shareholders, employees, customers—should all be expected to want better economic, social, and environmental outcomes for the firm. Given the mobility of financial and human resources in the market system, those consumers, employees, and shareholders that want the triple bottom line outcome will gravitate toward firms that offer such outcomes and will tolerate reduced financial returns if they are gaining better social and environmental outcomes. Meanwhile, legislative restrictions on social and environmental damage will become increasingly stringent to bring into line firms who are slow to adopt the triple bottom line philosophy. Increasingly, when politicians and others speak of **sustainability** as a prime objective of a nation or the world, they are referring to the triple bottom line objective of profits, social well-being, and environmental protection. Note that this usage of the word "sustainability" is different from the usage in "sustainable competitive advantage" where sustainability means ongoing profitability (or pure profit that is sustained over time).

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2. Note that firms may also create ***positive*** externalities as byproducts of their production. These are social and environmental external benefits that accrue to members of society (and to wildlife) and to the quality of the air, water, and physical landscape, for which the firm is not compensated. Such positive externalities also enter the triple bottom line reckoning and their provision is often seen as an important element of corporate social responsibility.

12.1 Porter's Generic Competitive Strategies

Porter (1985) outlined three main competitive strategies that are generic in the sense that they can be applied in a wide variety of market situations. Porter stated that the firm should choose either (a) to be the low-cost firm; (b) to differentiate its product from rival products; or (c) to focus on a niche market within the broader market. Porter argued that firms must adopt one of these competitive strategies, or otherwise will lose profits to those rival firms that have adopted a specific competitive strategy.

The **low-cost firm** would strive to minimize its cost of production (for any particular output and quality level) and by so doing would increase its contribution margin (i.e., P – AVC) by reducing its AVC, and hopefully also would reduce its AFC due to greater volumes sold at the lower price made possible by the lower cost structure. A firm following a **low-cost strategy** seeks economies in administration, production and marketing, striving to be as lean as it can be without compromising the level of quality it chooses to produce and be known for. Thus, low-cost firms try to widen the price-cost (or contribution) margin primarily by reducing the costs per unit. Such firms try to attain greater production and sales volumes in search of learning curve effects, economies of scale, economies of scope, marketing economies, and/or pecuniary economies (i.e., buying materials and components in bulk to gain a lower cost per unit of those items).

The **differentiating firm** strives to gain superior profits by producing a product or service that is different from those supplied by rivals. The differentiating firm seeks to have its product recognized as being of higher quality, and, thus, better serving the target customer's needs and preferences. Thus, a **differentiation strategy** means trying to make a product or service that is of higher quality in the eyes of the target customer, such that the customer is willing to pay a higher price for it. But higher quality almost invariably costs more to produce than lower quality, so the differentiating firm strives to widen the price-cost margin by increasing its selling price by a higher proportion than the increase in its production costs that are due to higher quality. Thus, the differentiating firm would spend more on product quality (raising AVC and possibly also AFC) to allow its product to be differentiated from those of rivals and thus to achieve a higher price point. Its profits will be increased if it is able to raise price by more than it has raised unit costs. Note that many firms in the same market can be differentiators when the preferences of customers differ—each firm may differentiate its product to produce the best product or service for a particular customer or a particular group of customers (i.e., for its niche market).[3]

The **focusing firm**, rather than seeing the market as a whole, will focus on a subset of the market. It may choose to focus on either (a) a geographic market area or (b) a niche market for a particular variant of the product. In its particular geographic area or niche

3. Note that quality is as perceived by the consumer. The highest quality for Mr. X is the product that best suits his particular tastes and preferences, that is, it provides the attributes that Mr. X seeks. But remember that the purchase decision is made on the basis of value (which equals quality over price), so the consumer may not choose the highest quality product if it is not seen as the best value proposition—for example, I really like Ferraris, but do not own one.

market, the firm will then try to be either a low-cost firm or a differentiating firm. For example, a printing firm might focus on the "business cards" segment of the national market and either try to sell business cards at the lowest price, or, alternatively, offer high-quality business cards. Alternatively, the printing firm might focus its marketing efforts geographically to, say, the western suburbs of the city, and offer a wider range of printed products (including local newspapers, leaflets, wedding invitations, and business cards) and strive to give the best printing quality and service to customers in that geographic region.

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Godiva Chocolatier is an example of a focus firm because it aims to be the quality leader in its market segment.

The Relationship Between Information Cost and Strategy Choice

In Chapter 11, we noted that products can be categorized according to the magnitude of the search cost necessary to ascertain product quality. The types of product we refer to are *search*, *experience,* and *credence* goods. To review briefly, potential buyers are exposed to quality risk until they verify that the quality is as claimed by the seller. This process of information discovery and quality verification will cost the customer time and money. Alternatively, the seller can provide the information and sample products free or in small package sizes to induce trial and subsequent purchase. For some products, this search process is quick and inexpensive, such as looking over the cut and quality of a jacket. For other products, such as a restaurant meal, one really has to experience (and thus pay for) the meal in order to know or verify the quality attributes. Thus, search goods are goods with quality attributes for which the customer can quickly and inexpensively determine the quality level, while experience goods are those that must be experienced before one can know the quality. With experience goods the consumer must rely on information from others who have previously consumed the product, including online reviews, or take advantage of "taste tests" offered by the seller. For "pure experience goods" the quality information gained is reliable for future purchases as well, due to the consistency of the product's quality over time, such as Coca-Cola's beverages or McDonald's hamburgers. Credence goods, on the other hand, are experience goods for which previously gained information is not likely to be reliable, due to the seller's inability (or unwillingness) to completely control production or delivery quality. Thus, a meal in a restaurant, and the performance of a rock band, are two examples of credence goods. The quality the next time you purchase one of these products may be quite different from the quality experienced the previous time. In effect, you have to "pay your money and take your chances" that the quality will turn out to be as expected (or as promised by the supplier). In the next section, we will see that there is a logical connection between the type of product according to its information search costs and the generic strategy that might best be applied to the product.

Search Goods and the Cost-Leadership Strategy

A search product may have a unique feature that allows differentiation on the basis of that unique feature, but if not, or if these features are easily imitated, a cost leadership strategy is indicated since customers can easily ascertain the relative qualities of the rival products available. If a search product is clearly superior in quality, it can sustain a price premium, but if all products are more or less of similar quality then the forum for inter-firm rivalry will shift to price, and price competition will tend to force price levels downward. Accordingly, the firm with the lowest cost structure will be in the best position to survive and make superior profits.

With search goods it is also easy for *rivals* to see what makes your product superior, and this may make it easy for them to copy those features. Thus, a search product with distinctive features may soon face competition from other firms that have matched those features, forcing it to reduce any price premium it may have enjoyed. If product innovations are easily copied, differentiation is possible only for short periods until rivals copy the innovations, and then the strategy must revert to cost-leadership (unless the firm can innovate relentlessly). In markets where quality is similar across all brands, the firms will tend to focus on price competition with occasional nonprice strategic initiatives that will soon be copied or countered by rival firms' nonprice initiatives. For example, economy-class passenger air transportation is essentially a search good. The prospective customers can easily find out the main quality aspects that enter their decision to buy or not buy the product (such as times of departure and arrival, routing, number of stops en route, aircraft type and model, and seat selection). You will notice that airlines tend to advertise their discounted prices of their economy air travel service, rather than the comfort of their seats or other qualitative aspects.[4]

Experience Goods and the Differentiation Strategy

With experience goods, qualitative differences may be claimed that may be true or may be false since the customer cannot verify the quality claims until after purchase (or at least sampling) of the product or service. Note that fraud is possible in this situation, particularly where prepurchase samples are not given and where guarantees are unenforceable for some reason. Thus, word-of-mouth information from other customers and celebrity endorsements carry greater weight than the (probably biased and possibly fraudulent) quality claims of the seller. In the olden days, "snake oil" salesmen would sell potions claiming to fix all medical problems, and would ride over the horizon before their quality claims could be disproved. These days, baldness and wrinkle treatments might seem to be the modern counterpart of snake oil, although laws against fraud and misrepresentation limit the claims made by sellers.

4. Business- and first-class services, on the other hand, are typically promoted by their qualitative features, with price usually not mentioned, since the person flying is either quite wealthy or the airfare is being paid by a firm or organization (which is less sensitive to the affordability of the airfare).

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Loyal Colgate toothpaste users are unlikely to respond to a price reduction for a rival brand of toothpaste if they are unfamiliar with the quality of the rival product.

Note that the price elasticity of demand (i.e., customer willingness to switch products when there is a small price reduction) for experience goods will be significantly less than for search goods, because customers will be unsure whether the cheaper product represents better value (because quality is less transparent). Thus, the incentive to reduce prices is reduced or even eliminated and rivalry will take place in terms of product features and claimed benefits. The firm with a differentiated product should focus on nonprice strategic initiatives, utilizing occasional price competition to reflect cost reductions or to reduce excess inventories. For example, automobile companies introduce periodic model changes with new product features (product design strategy), advertise their differentiated product features heavily (promotion strategy), and maintain a network of dealerships offering convenient sales and service locations (place of sale strategy). Between these periodic bursts of nonprice competition, these companies offer discounts and low-interest loans (price strategy).

For pure experience goods (i.e., those for which prior consumption experience provides reliable information about future product quality), regular customers already know the level of quality, so they will know that a price reduction for their preferred brand offers them better value, but conversely, a price reduction for a rival's product will not likely induce them to switch if they are unfamiliar with the quality of the rival product. Thus, most Coke drinkers are unlikely to switch away from Coke when Brand X cola drops its price by 50 cents. Coca-Cola does better by keeping its price relatively high and advertising the claimed "unique taste" of Coke.

The implications of this for competitive strategy are that if the firm's product has some unique feature that gives it a qualitative advantage, the firm will be best served by a differentiation strategy that will capitalize on that qualitative advantage, as long as this advantage lasts. If the advantage is durable, for example due to intellectual property protection or possession of a superior reputation and brand name, then the firm can continue to follow a differentiation strategy. If this advantage is likely to disappear, because rivals can soon copy the product attributes, the firm must expect to revert to a cost-leadership strategy.[5] Table 12.1 summarizes the relationship between the degree of product

5. Note that in monopolistic competition, where there are no barriers to entry and firms ultimately make only normal profits because rivals copy their product differences, firms must strive to have the lowest-possible costs in order to survive in the long run. Similarly, firms in pure competition must follow a low-cost strategy to allow them to earn normal profits—if not they must exit to avoid taking losses.

differentiation, the cost of information, and the generic competitive strategy that is most likely to be appropriate.

Table 12.1: Relationship between information cost and competitive strategy

	Product Differentiation	
Information cost	**LOW**	**HIGH**
LOW (Search goods)	Low-cost leadership	Differentiation strategy, or low-cost leadership**
HIGH (Experience goods)	Low-cost leadership, or differentiation strategy*	Differentiation strategy

The single asterisk (*) in Table 12.1 is to draw attention to the fact that even if information cost is high, when product differentiation is low, firms may fraudulently claim their product to be more differentiated than it really is, until the correct information flows to customers either from personal experience or by "word-of-mouth" information from trusted people either directly or via the Internet and social media. This will be particularly so if the experience good is a credence good—where prior experience cannot be relied upon for future consumption decisions. Using Internet search engines, the wary consumer can seek current information from recent consumers of the product or service and gain current information about product quality, albeit that some of this information might be biased reporting—either positive bias by "friends of the firm" or negative bias by disaffected former patrons.

The double asterisk (**) in Table 12.1 is to draw attention to the case where, even when product differentiation is high, if search costs are low, rivals may be able to identify the basis for differentiation and subsequently copy it, such that the product category moves left into the low differentiation category, and a low-cost strategy becomes more appropriate. Alternatively, for pure experience goods, where the differences can be seen but cannot easily be copied (for example, due to their strong brand names, such as branded hamburger chains or major beverage companies), the lower-quality firms will need to set lower prices in order to offer a competitive value proposition.

The Value-Maximizing Strategy

Pursuit of a superior value proposition can be achieved either by increasing quality or by reducing price, or by a combination of the two. That is, if the firm tries to make its product both less expensive *and* qualitatively better than rival offerings it should expect to carve out a healthy market share in an existing market. An example of a value-maximizing strategy is seen in the laptop computer market, where laptops are sold at increasingly lower prices but with increasingly better performance features and other user benefits. Thus, new customers are attracted both by the lower prices and by the additional qualitative features incorporated into successive laptop models. Thus, while a cost-leadership strategy (offering the same or similar quality at a lower price) offers better value to the customer, and a differentiation strategy (offering better quality at a higher price) will also offer better value (if quality is raised by more than price is raised, and compared to the best-value existing product), the combination of the two is likely to be even more potent.

12.2 Porter's Five Forces

In his 1980 book, Porter argued that in any industry there are five forces that might operate to reduce the firm's profitability, and he advocated strategies to mitigate these five forces. The **five forces** that might operate to capture part of the firm's profitability relate to the number of buyers, the number of suppliers, the height of barriers to entry, the availability of substitutes, and the extent of inter-firm rivalry, which we shall consider in turn.

Starting with **buyers**, if there is only one buyer (i.e., a **monopsony**), the supplier firm is at risk of having its price forced downwards because the single buyer can adopt a "take it or leave it" negotiating stance. Even if there are a few buyers (i.e., an **oligopsony**), their fewness facilitates their ability to act in conscious parallelism or collusively to fix price at a lower level than would occur if they were to compete to purchase the firm's product. Conversely, when there are many potential buyers, any single buyer cannot induce a lower price by refusing to buy at the seller's price—the seller simply looks for other buyers who are willing to pay the asking price.[6]

Second, if there is one or only a few **suppliers** of necessary inputs (i.e., a monopoly or an oligopoly in the resource markets), the new venture is at risk of increased input prices due to the ability of the monopoly supplier to refuse to sell at a lower price or the ability of the oligopoly firms to act in conscious parallelism (or perhaps to collude) to keep prices at a relatively high level. If there were many suppliers, the buyer could seek alternative sources of supply at lower prices.

Third, if the barriers to entry are low, the firm is subject to the entry of new firms that would compete for market share and potentially drive prices downward and thus drive the firm's profit down to the normal profit level or below. The potential for entry of new firms in the long run may mean that the focal firm cannot set the profit-maximizing price in the short run, since that higher price level would attract the entry of new firms and cause lower profitability in subsequent time periods.

Fourth, if the threat of substitutes is high, the firm's profits could be reduced in future periods by the advent of new ways to satisfy the customer's needs. For example, plasma-screen TVs were subject to the threat that TVs with liquid crystal display (LCD) screens would be developed, and later the LCD screens were replaced by light-emitting diode

6. You may argue that in farmer's markets, where various suppliers sell fresh vegetables, or in tourist-oriented street markets, where various artisans sell their handmade wares, the individual buyer can indeed bargain the price down from the seller's initial asking price. In such markets, the attention of the individual buyer is captured by a particular seller and they enter a bilateral monopoly (i.e., single buyer vs. single seller) situation where the final price is somewhere between the seller's initial asking price and the buyer's initial offer. Even here, if the seller is unwilling to reduce price, the buyer will refuse to buy and will look elsewhere.

(LED) screens. Similarly, three-dimensional (3D) televisions threaten to replace two-dimensional (2D) televisions. In each case, the threat of the new (substitute) technology operated as a force to keep prices down and thus limit the profit that might have been earned by the firms if those substitute technologies had not been foreseen. By keeping prices relatively low, the TV manufacturers manage to sell more of the older technology TVs rather than induce the customer to switch earlier to the higher-priced newer-technology TVs.[7]

Fifth, if the potential for **rivalry** is relatively high, the firm may have its profit margins beaten down by rival firms, each desperately competing to maintain market share and profitability. We know that rivalry, in the form of price competition, will be higher if the firm's products or services are relatively undifferentiated compared to its rivals' products or services. Thus, the threat of rivalry is related to the firm's difficulty of maintaining the differentiation of its products. In the extreme case, a monopoly has little threat of rivalry since there are no close substitute technologies. However, a monopoly may fear the entry of new rivals (with the same technology) or the advent of substitute technologies, and the threat of rivalry would arise subsequently. For oligopolists and monopolistic competitors, rivalry comes with the territory and is reduced by the firm's ability to maintain its differentiation. We noted in Chapter 11 that this differentiation might not be resident in the physical product *per se*, (e.g., similar pizzas offered by different firms) but instead be due to the location of the seller (convenience attribute) or the strength of the brand name (quality assurance attribute), for example.

Porter's five forces interact to determine *industry attractiveness*, which refers to the potential profitability in the industry, and this attractiveness will be negatively related to the strength of the five factors; that is, the stronger are the five forces the lower will be the typical firm's profitability (and the less attractive will that industry be for the profit-seeking firm). The five forces simultaneously identify five main areas of potential threat to the survival of the business firm—if an industry is highly *unattractive* these five forces could interact to pose a higher risk of bankruptcy for the firm. For example, the restaurant industry is notable for its relatively high incidence of bankruptcy.

Let's look at the five forces as they apply to restaurants. First, there are many buyers, so that is not a problem unless the firm specializes in a type of food that is not sufficiently popular in the firm's local area. Second, while there are usually many suppliers of meat, vegetables, and other raw materials, there may be oligopoly suppliers of restaurant-style kitchen appliances and utensils, and possibly a monopoly supplier of restaurant labor (if the employees are members of a strong labor union). Third, there are virtually no barriers to entry to this industry. Almost anyone can set up and operate as a restaurant with very little formality and licensing requirements, and subsequently compete on a price

7. We have seen the prices of each generation of new-technology TVs start at a relatively high level and then fall rapidly as time passes. This is due to three main causes. First, the production costs of the new-technology TVs are initially very high and then slide down a learning curve (see Chapter 5). Second, other manufacturers enter the market with competing brands also using the new technology but offering lower prices. Third, the prospect of a newer (better) technology on the horizon causes the firms to set their prices (on older technology products) lower to delay the point where the newer technology becomes the better value proposition for the consumer.

or quality basis. Fourth, there are several viable substitutes for (eat-in) restaurants, including fast-food suppliers, home-delivery of cooked food, and do-it-yourself (home) cooking. Finally there is likely to be substantial rivalry among restaurants of a given genre (e.g., among pizza brands) and across genres (e.g., Indian versus Thai food). For firms in the restaurant industry, the most risk is likely to arise due to new entrants (i.e., lack of barriers to entry), the availability of alternative sources of food (i.e., substitutes), and the difficulty of building and maintaining differentiation (i.e., rivalry). In the next section we shall examine the strategies the firm might employ to mitigate the threat to its profitability represented by each of these five forces.

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A common risk-reducing strategy is to lock the buyer into a longer-term agreement to avoid being forced to accept a lower price at short notice when a product may be at risk of deterioration or obsolescence if not sold.

Strategies to Combat Buyer Power

Concentrated buying power, as would happen with a single buyer (i.e., a monopsony) or a few buyers (i.e., an oligopsony), will allow buyers to serve their own profit objectives by forcing the seller to accept a lower price. In effect, the buyer(s) would be able to capture some of the potential contribution to overheads and profit. The most obvious strategy to reduce buyer power is to actively seek new buyers for the firm's product—this may mean entering export markets to gain access to a greater number of buyers in other countries. A second strategy is to enter into a long-term agreement with the buyer regarding price, quantity, and quality to avoid being forced to accept a lower price at short notice sometime in the future. This agreement with the buyer might take the form of a strategic alliance, or a joint venture, or a simple sales agreement. A third strategy would be to diversify into other product lines that are saleable to different markets, and, preferably, for markets in which there are many buyers. An example of this is the decision to develop the Hummer version of the Humvee military vehicle, and thus move from a situation of a single buyer (the military) to a market with many buyers. A fourth risk-reducing strategy is to vertically integrate into the (downstream) business operated by the buyer, such that you become a competitor for that business and hopefully sell into a market with many buyers. An example of this might be a land owner who sells logs to the (local monopoly) sawmill. That land owner might decide to set up a saw-milling operation and subsequently sell lumber to the (more numerous) lumberyards. A final strategy (which is really an exit strategy) might be to position your business for takeover by the buyer. This might be a more profitable outcome than being squeezed back to zero profits by a powerful buyer.

Strategies to Combat Supplier Power

Concentrated supplier power poses a threat similar to concentrated buyer power. Monopoly or oligopoly suppliers of raw materials, components, or labor might force upwards the price of their product or service and, thus, capture part of the focal firm's surplus that would otherwise fall to the bottom line as profits. The suppliers of labor might be a union representing the employees or simply one or more people with highly specialized skills that are in extremely short supply. Considering labor suppliers first, one risk-reducing strategy is to invite the employees to join in the management or ownership team, to better align their incentives with that of the business. Incentive remuneration schemes, such as bonuses, profit sharing, and the issue of stock options, will reduce the individual's incentive to take self-serving actions that reduce the profitability of the firm. Actively seeking and developing alternate sources of supply is a necessary strategy to reduce the risk associated with supplier power. Additional sources of supply might be found internationally (i.e., imports) if there are none locally. Similarly, recruiting or training people in the areas where skills are scarce also serve to reduce the bargaining power of the individuals with the relatively scarce skills. Medium- to long-term supply agreements might also be used to reduce the risk of an unexpected increase in wages or materials prices. For materials and component suppliers these agreements might include strategic alliances or joint ventures, as well as simple supply/purchase agreements. Another risk-reduction strategy is to threaten to (or actually) integrate backwards into the supply of those raw materials and components, to become a competitor for the upstream supplier in its own industry, and thus exert a countervailing force on the supplier. Finally, taking over or merging with the monopoly supplier is also a risk-reducing strategy that the focal firm might resort to if the threat of exploitation by the supplier seems intolerably high.

Strategies to Discourage Substitutes

One strategy to deter the development of substitutes, or the acceptance of substitutes by your customers, is to keep innovating in product design such that the quality of your product continually improves. Another is to actively seek cost efficiencies so you can avoid price increases that might suddenly make the substitutes economically feasible (i.e., become a better value proposition). A third is to develop awareness and knowledge of possible substitutes and to conduct research and development (R&D) on likely substitutes, so that if the substitute threat becomes real you will have the necessary foundation to begin production of that product as well. A fourth strategy is to expand into the production of the substitute product to learn all the nuances of production and management such that your firm is ready to engage in that new industry when the substitute has improved its quality and reduced its price enough to become an attractive value proposition for your customers.

Strategies to Deter Entry of New Rivals

Incumbent firms can implement strategies that effectively erect barriers to entry and thus deter the entry of new firms. One such strategy is to actively build brand name recognition and your firm's reputation for quality products, management integrity, environmental conservation, and so on. New entrants would need to spend additional sums on promotional efforts to offset the beneficial impact of these assets, and thus they act as a barrier to entry. Another strategy is to gain patent protection for the intellectual property that is embodied in your product, preventing potential rivals from utilizing that technology. Similarly, building a strong brand name will make your offer to the market harder to copy by potential entrants. Entering emerging market niches, before they are large enough to support more than one firm, can serve to pre-empt the entry of rival firms into that niche market since they would foresee taking losses if your firm is already operating in that market. Similarly, building excess capacity to facilitate timely supply to the market as it grows, and public statements of intent to retain market share at all costs (e.g., "we will match any lower prices"), are strategies or tactics designed to deter the entry of new rivals.

Strategies to Avoid Competitive Rivalry

Competitive rivalry can be debilitating, especially if it manifests in price competition and drives profit margins down to rock-bottom levels. Strategies to avoid price competition include confining price discounts to infrequent and short-term sales rather than competing on price on a daily basis. Formal or informal agreements to fix prices (or to refrain from price competition) are illegal, so should not even be considered. Nonetheless, simply not being aggressive on the price front may encourage rivals to be similarly passive, and thus avoid a price war that could cause the firm to incur significant losses. Another strategy is to compete on the basis of product quality, that is, particular product attributes. The new firm should probably follow Porter's generic competitive strategy of *differentiation* rather than a cost-leadership strategy. As argued earlier, a differentiation strategy is generally more effective in markets for experience and credence goods rather than in markets for search goods. This occurs because rivals may not be able to ascertain exactly what it is about your product (particularly if it is a service) that makes some customers prefer it, and thus they are likely to have problems copying it. With search goods, rivals find it easier to copy the features of the most successful products, and such markets often degenerate into price competition. If your product is a search good, you may follow a differentiation strategy if your product has significant quality advantages, but you must continually introduce product upgrades (i.e., incorporate new features into your product), since rivals will be continually catching up by emulating your previous innovations. Another strategy may be to consider the market as a series of segments and try to achieve a dominant position in some of these segments and allow rivals to dominate other segments. In this way your products and the products of rivals are differentiated and less prone to the outbreak of price competition. For example, a soft-drink manufacturer might decide to stop making colas and lemon-based sodas and instead focus on making ginger beer or sarsaparilla drinks, hopefully, developing a brand that is recognized as the highest-quality product in those niche markets.

12.3 The Resource-Based View of SCA

Contrary to Michael Porter's industry-based view, other economists such as Joan Robinson (1933), Edith Penrose (1959), Birger Wernerfelt (1984), and Jay Barney (1991) developed the "resource-based view" of sustainable competitive advantage. They pointed out that a firm could only *sustain* a higher rate of profit than its rivals over time if it had control of resources that rivals could neither copy nor substitute to achieve the same outcomes. They argued that a low-cost firm could only remain a low-cost firm if rivals were unable to imitate that firm's low-cost production methods, and that the inimitability of these low-cost production methods must be based on the low-cost firm's possession and control of a **strategic resource**, which they defined as a resource that is valuable, rare, hard to copy, and nonsubstitutable. For example, a strategic resource might be a patent on a new technology, a location that is superior to all others, or a brand name that connotes high-quality (e.g., Mercedes-Benz). It is the firm's possession of a strategic resource that allows that firm to maintain its superior profitability—the rivals' inability to imitate the focal firm's differentiated product must be based on the fact that the rivals do not possess or control one or more strategic resources that are necessary for the production or marketing of that product. Thus, the **resource-based view** says that sustainable competitive advantage for the firm derives from that firm's ownership or control of resources that are valuable, rare, and inimitable and where the firm has the organizational capability to effectively utilize its resource advantage. These prerequisites of a strategic resource give rise to the **VRIO** acronym, standing for valuable, rare, inimitable, and organization. Note that inimitable means not only that the resource is hard to copy but also that it cannot be substituted with an alternative resource or technology that will achieve the same outcomes for the consumer.

Prior to the resource-based view (RBV) the firm's resources were thought of as tangible assets that appeared on the firm's balance sheet, but the RBV defines resources more broadly to include a variety of intangible assets such as organizational capability, reputation, and intellectual resources. Dollinger (2003) identifies six categories of resources that the firm uses to compete in its market, these being physical, reputational, organizational, financial, intellectual, and technical. Notice that the order of these resource categories is arranged so the first letter of each resource type spells out the acronym **PROFIT** (which helps us remember them, rather than indicates an order of importance) (Dollinger, 2003).

Physical resources include buildings; plant; technical equipment, such as R&D labs; testing facilities; vehicles; and furniture. The firm's location, and the amenities and services available at that location, is also considered a physical resource. **Reputational resources** include the firm's corporate image and reputation for corporate social responsibility; the firm's product quality; and the firm's financial soundness—these can be extremely valuable resources and can be reflected in customers' brand loyalty and repeat purchase intentions. **Organizational resources** include the firm's organizational capability to produce products at consistently low-cost levels and consistent quality levels. Whether a firm can do this depends on its organizational structure, its established work routines, and on its information-generating, decision-making, and planning systems—these in turn are critically dependent on the quality of management. **Financial resources** include cash and other liquid assets available, the amount of free cash flow that can be generated internally by operations, and the firm's ability to raise new capital relatively quickly and cheaply. Intellectual and human resources include the knowledge, training, and experience of the entrepreneur, of the other members of the top management team, and of employees. This category of resources therefore includes the attitudes and abilities of managers and workers, as well as the motivation of all employees to work effectively as a team, and thus contributes to the quality of the firm's organizational capabilities. Finally, **technical resources** are agreements, or legal contracts, including the big six of intellectual property protection (patents, licenses, trademarks, registered designs, copyrights, and trade secrets). Contractual agreements with important buyers, suppliers, and opinion leaders are valuable technical resources for some firms (for example, "Engine by Honda," "Shoes Endorsed by Usain Bolt" or "Official Supplier to the White House").

The resource-based theory says that a firm will have sustainable competitive advantage *if and only if* at least one of the resources that it controls is valuable, rare, and inimitable (i.e., both hard to copy *and* nonsubstitutable). A resource is **valuable** if it contributes

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Patents, licenses, trademarks, registered designs, and copyrights are examples of technical resources, which are agreements made to protect intellectual property rights.

significantly to the firm's ability to make profit (or achieve the desired social objectives). A resource is not valuable if it is just lying around contributing nothing, such as an old truck or an empty warehouse. Resources that are not valuable should be leased out or sold so that the funds can be used more effectively to buy other resources that do contribute significantly to the attainment of the entrepreneur's objectives.[8] Many resources, including paperclips, while valuable because they are needed for production, are not rare. Such resources are available to all rivals on roughly equal terms, and we call them "common resources" in this context. By **rare** resources we mean "relatively rare," as rarity is relative to the size of the market. In large markets, a particular resource might be available to a few firms only, and thus allow those firms to form a profitable oligopoly. If a particular resource is indeed rare, such as a patented technology or an ideal location, attention must then shift to whether or not it is **hard to copy**. We do not mean impossible to copy, instead we mean that it will take a lot of money or a lot of time to replicate the resource in question. Thus, the firm that owns or controls that resource has a competitive advantage for as long as it takes others to copy it (meanwhile, the firm should be working on its next product innovation or other nonprice strategic initiative).

Finally, if a particular resource is rare and hard to copy, attention must then focus on whether it is **nonsubstitutable**. Are there any other technologies that may make the firm's resource obsolete or unnecessary? For example, the Internet is making a physical "shop" unnecessary for many businesses, such as travel agents. Similarly, perhaps new plastics could replace metals that are presently hard to copy. If so, rival firms will arise, not by copying the firm's technology or resources, but by using an alternative resource to achieve the same result. Again, the time and money it would take to develop a substitute technology are pertinent here. Eventually substitutes will probably arise if your resource is relatively expensive and your firm is making extraordinary profits for an extended period. Nothing lasts forever—the manager's task is to ensure that the firm is ready with the next generation of resources (such as new technology) that rejuvenates the firm's competitive advantage.

Which Resources Are Most Likely to Generate Sustainable Competitive Advantage?

The RBV asks us to scrutinize the firm's resources to determine whether any of its resources are valuable, rare, hard to copy, and nonsubstitutable (VRHN). If one or more resources

8. Idle equipment may have value as a "spare" to be utilized if there is an equipment breakage or failure—availability of this spare equipment would avoid the loss of production while a replacement piece of equipment is being sourced and delivered. If so, the opportunity cost of the idle equipment is not zero.

are VRHN, then the firm can expect to gain sustainable competitive advantage (SCA) if it has the necessary organizational capability. If no resources are VRHN, and no resources can be developed to be VRHN (such as building a strong reputation), the firm's products may be imitated easily and rival firms will compete the focal firm's profits back to normal profits, or below. In Table 12.2, we consider each of the six categories of resources and whether they are likely to be valuable, rare, hard to copy, and nonsubstitutable. We show all resources used by the firm as being valuable, since we are assuming the firm wants to maximize ENPV, and if an owned resource was not valuable to the firm, it should be sold and the cash should be used to buy inputs that *are* valuable.

Table 12.2: The VRHN test for sustainable competitive advantage

Resource	Valuable?	Rare?	Hard to copy?	Nonsubstitutable?
Physical	Yes, or should be leased or sold	Initially they may be rare, since it takes time and money to assemble these	Usually not, since similar resources can eventually be purchased	Usually, although Internet sales are substituting in some cases for stores
Reputational	Yes, or should be built or repaired to become valuable	Yes, a very strong reputation is rare	Yes, it takes time and focussed effort to build a strong reputation	Yes, customers rely on reputation in order to offset quality risk
Organizational	Yes, or should be restructured or improved to be made valuable	Yes, if a very efficient organization	Yes, it takes time and effort to build an efficient organization	Yes, efficient organizations keep costs low and quality high
Financial	Yes, financial resources have an opportunity cost	Initially maybe, but not once the idea is proven to be a good investment	No, global capital markets will flow to firms promising high returns	Yes, funds will always be required
Intellectual	Yes, or should be trained or replaced with people who are "valuable"	Yes, at least initially before others build similar top management teams and employees	Yes, initially, but information leakage makes it easier to imitate as time passes	Yes, at this point we are not betting on robots or cyborgs to replace humans
Technical	Yes, or if not these agreements should be sold off or discarded	Initially, until the technology is known by others, or rivals "invent around" the technical resources	Yes for patents, trademarks, designs, copyright, and long-term contracts	No, patents can be invented around; rivals can create substitute agreements

Source*: Adapted from Dollinger (2003).*

The shaded rows indicate the resources that are more likely to score a "Yes" across all four VRHN columns. Notice that these three resources, reputational, organizational, and intellectual, are largely intangible and are not items that the firm can simply buy off-the-shelf. They need to be developed and maintained by the firm's managers and this involves a cost that is effectively a cost of differentiating the firm's product.[9] Reputation can be built by managers paying special attention to the quality of products and associated services; to the fairness of their dealing with customers and suppliers; by displaying moral integrity and corporate social responsibility, and so on. A good reputation is indeed hard to copy; it will take time and money to replicate and meanwhile the firm can continue to strengthen its reputation further. Even when two firms' products are physically identical, a superior reputation will allow the firm to set higher prices or sell more volume and thus earn higher profit. Similarly, managers must pay particular attention to building an efficient organization that facilitates cost efficiencies, reliable quality, and idea generation for nonprice strategic initiatives that rivals will find that hard to copy. Regarding intellectual and human resources, if the firm can employ highly talented and committed individuals who can efficiently manufacture and market the firm's products or services, this will be hard to copy for rival firms. It will also be nonsubstitutable, since it seems unlikely that robots or some other nonhuman thing will soon replace these resources.

Because highly skilled and committed employees are hard to copy by rival firms and are nonsubstitutable, it seems unlikely that robots will soon replace these resources.

The intangible resources (reputational, organizational, and intellectual) form the acronym ROI, which makes you think of "return on investment," doesn't it? Indeed, building these resources to be VRHN will require an investment in the firm's people, that is, in its human stakeholders who include customers, employees, and suppliers. Reputation resides in the hearts and minds of customers, suppliers, and employees. Organization is made possible by employees and their relationships with suppliers and customers. And intellectual resources are obviously resident within and amongst the employees of the firm. Accordingly, the firm must invest in building relationships and trust with its employees, suppliers, and customers if it hopes to build VRHN resources and achieve SCA.

9. In Chapter 11 we examined the nonprice competition, and saw that the profit-maximizing rule was to increase quality, or build reputation or brand, or adjust any other nonprice strategic variable, to the point where the incremental cost of doing so is just equal to the incremental revenue from doing so.

So, the firm seeking sustainable competitive advantage must either already control resources that are VRHN in a tangible area (such as a patented technology, or an exclusive agreement with an important buyer or supplier) or build VRHN resources in the intangible areas, such as reputation, organizational efficiency, or intellectual and human resources.

Reconciliation With Porter's Five Forces

The resource-based view is commonly seen as a replacement for Porter's industry-based view in explaining why some firms make more profit than do others, but in fact the two views can be reconciled, as follows. Two of the five forces, namely barriers to entry and threat of substitutes, correlate directly with the two elements of the RBV's inimitability requirement, namely that resources be hard to copy and nonsubstitutable, respectively. The other three forces—few buyers, few sellers, and rivalry, are covered in the RBV by the requirement that the firm has the organizational capability, particularly management capability, to deal with the industry forces that might otherwise reduce its profitability. Whereas Porter was able to explain the differential performance of firms in terms of their effective use of strategies to reduce the impact of these five forces on the firm's profitability, the RBV explains the differential performance of firms on the basis of their possession (or not) of resources that are VRHN and which subsequently give the firm a product or service that is inimitable because the underlying resources are both hard to copy and nonsubstitutable.

12.4 Strategies to Ensure Inimitability

The RBV argues that if the firm is to avoid rivals competing away the above-normal profitability associated with its product(s), it must maintain the inimitability of at least one of its strategic resources. Thus, firms must implement strategies to, first, ensure that its strategic resources remain hard to copy and, second, to ensure that those hard to copy resources remain nonsubstitutable. We shall consider these in turn.

Strategies to Ensure Hard to Copy

If a resource is hard to copy and ownership of this resource forms the basis of the firm's sustainable competitive advantage the firm must implement strategies to ensure that the resource remains hard to copy. A first strategy is to lock in ownership or control of the resource so that the resource cannot move to a competing firm. If the resource is physical, such as land, buildings, or equipment, then this is a relatively simple matter of owning the deed—by purchasing it from the current owner if it is not already owned by the firm. If this is impossible, an alternative strategy would be to gain a long-term lease (e.g., five or more years, potentially renewable) and thereby lock in control of the resource for at least that long, giving the firm time to build other VRHN resources such as reputation and organizational efficiency.

If the resource is a technical one, such as a supply arrangement with the supplier of an indispensable (i.e., VRHN) raw material, the firm should similarly try to gain a **longer-term supply agreement**, preferably on an exclusive basis such that rivals cannot also gain access to that indispensable raw material. For important suppliers, a long-term supply agreement will serve to lock in an ongoing supply of critical raw materials or component parts. Note that such agreements also serve to reduce the cost uncertainty associated with future purchases of these materials and components and avoid the risk of sudden or large increases in the prices of those materials and components. Suppliers will usually be happy to sign into longer-term supply agreements at a price that is either less than or equal to the current purchase price because such agreements give them stability and predictability in their business.

Particular employees may be critically important to the firm's competitive advantage due to their unique contribution to the corporate culture, to organizational efficiency, or to the production or selling efficiency of the firm. Examples might include Richard Branson, head of the Virgin Group of companies; particular programmers and idea generators within Google; and individual workers in any manufacturing or service firm. To avoid losing these employees, the firm must try to secure their services for the longer term, in some way. Paying them a good salary is a good start, but rivals can afford to pay them more than the market rate because they would bring with them valuable knowledge (and their departure might also cripple the focal firm). We know that employees gain both monetary income and (non-monetary) job satisfaction from the workplace, so making the firm a "good place to work" should be high on management's strategic agenda. In addition, giving employees an ownership share in the business (albeit small, and perhaps as annual bonuses) will serve to lock in those employees by shifting their mindset from simple employee to employee-owner of the firm and thereby inducing them to take actions that are in the best interest of the firm as well as in their own best interests (Douglas, 1989; Jensen & Meckling, 1976).[10]

Concerning customers, some customers are iconic, meaning they are seen by others as the most desirable customers to have, and accordingly their preference for the firm's product influences other customers to also buy from that firm. Association with **iconic customers** (e.g., official supplier to the New York Yankees) is important for building the firm's reputation—managers should turn the current customer agreement into an exclusive longer term contract if at all possible. But the firm should also try hard to keep its ordinary customers, since they are likely to re-purchase again and again, and also serve to promote the firm's product by word-of-mouth advertising. **Building a brand** should be a prime objective of the firm's managers—a brand can be viewed as a stock of knowledge about the firm and its products, and is especially important for experience and credence goods where information about product quality is relatively expensive.

10. Giving share parcels to employees may more effectively prevent their departure if there is a period that must elapse before the shares are "vested" in the employee—e.g., if the vesting period is two years, employees who leave the firm would forfeit all shares that were conditionally issued to them within the past two years. Note that sharing ownership of the firm with employees also serves to reduce the "principal-agent problem" whereby workers (the agents) take actions that are personally rewarding (such as loafing) but are not in the best interests of the firm (the principal).

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Frequent-flyer programs reward repeat customers for their cumulative purchases. Offering free flights and upgrades is a well-tested means of ensuring customer loyalty.

Promotional expenditures that serve to build knowledge or reinforce the opinion of buyers will serve to make the customer more likely to re-purchase the firm's product because the value proposition is relatively clear to the informed buyer compared to rival firms with less-developed brands that leave the customer unclear about the value proposition offered by those firms. A **frequent-buyer plan**, whereby the cumulative purchases of a repeat customer entitle the customer to a reward of some kind, such as free products or services, or a discount on future purchases, was first introduced by American Airlines and is now a well-tested means of ensuring customer loyalty. Frequent-buyer plans are usually offered as a deferred discount scheme where the discount on later purchases may be as high as 100% (e.g., after 10 haircuts at my barber, I will get the 11th one free). Indeed, frequent-buyer plans are ubiquitous now, the author having noted recently that one funeral company was offering discounts for prearranged funerals for the second and subsequent members of the same family who sign up at the same time.

Strategies to Ensure Nonsubstitutability

First, concerning the firm's technologies, and to insure against a rival firm coming up with a disruptive innovation that would allow that rival to offer a better value proposition to customers, the firm should implement strategies to find ongoing technological improvements in its current technological platform. This may require a formal research and development (R&D) program, or at least a system of incentives and rewards to encourage employees to develop and implement process and product improvements. By continually improving its technological platform, the firm makes itself "harder to catch up with" by rivals that have developed potentially disruptive technologies that are not yet of high enough quality or low enough price to become a superior value proposition for the firm's customers. For example, continuing improvements to the reciprocating motion automobile engine have allowed it to hold its place as the superior value proposition for the mainstream automobile market despite the advent of rotary engines and myriad other innovative engine designs. More recently, the development of electric cars and hydrogen-cell motors is proceeding apace, but continuing improvements to the power output, fuel efficiency, and pollution emissions, has served to keep the reciprocating motion engine as the industry standard. We should expect to see the value proposition of the electric and hydrogen motors to continually improve, of course, as their quality continues to rise (due to continuing R&D), their prices continue to fall (due to learning curve effects and economies of scale in production), and as fossil fuels become more expensive for the conventional engine.

Because the value proposition of substitute technologies is likely to continue to rise over time, the firm using an older technology should watch out for the advent of potentially disruptive new technologies and carefully monitor the development of these technologies. Strategically, the firm has several options. First, it could wait and see, and then attempt to take over one of the firms with the new technology if and when the new technology offers a competitive value proposition. Second, it could conduct its own R&D to learn all it can about the new technology to prepare to switch to that technology if and when it becomes the better value proposition. Third, it might set up a new division that focuses on developing the new technology and gaining real production and marketing experience in the same market as the parent firm that continues to supply its product based on the older technology. In effect the firm is "hedging its bets." At some point, when the new technology is ready to dominate, the parent firm will shift over to the newer production process and decrease its involvement with the older technology. As an example, an electricity company that has historically generated electricity from coal-burning power plants has set up separate divisions to develop solar power generation, windmill farms, and tidal power generation. It is developing the capacity to shift its resources into whichever of these alternatives replace coal-burning power stations as the most efficient source of electrical power.

Finally, the firm might undertake R&D to discover for itself a disruptive innovation that would potentially replace the technology that it currently utilizes. This allows the firm to be there at the start of the development process and move down the learning curve ahead of its rivals and, thus, be the technology leader with consequent reputational and organizational benefits. At some point, the firm's sales of the product deriving from the new technology will eat into its sales of the product deriving from the old technology, a process known as cannibalizing its sales. It is better that the focal firm cannibalizes its own sales and thereby retains its existing customers (for future sales as well) rather than to lose them to another firm that will introduce the new product if the focal firm does not. Managers must realize that if there is a superior technology emerging they must get involved with the new technology and cannibalize their own sales or someone else will do it for them. Table 12.3 shows a variety of strategic initiatives the firm's managers might undertake to ensure that they gain and maintain inimitability of their strategic resources.

Table 12.3: Maintaining the inimitability of the firm's strategic resources

Resource	A selection of strategies designed to build or maintain resource inimitability
Physical	• Own assets rather than rent or lease them—if unable to buy, secure long-term leases • Arrange an option to purchase land or buildings that may be required to maintain inimitability
Reputational	• Build trust and respect among customers, employees, and suppliers so that they prefer to deal with your firm • Continually initiate nonprice strategic initiatives that serve to build the perception of quality in the firm's products • Develop brand equity via high-quality products, financial strength, and the practice of corporate social responsibility
Organizational	• Through effective leadership, build a corporate culture and workplace environment that gives high utility to employees • Develop and maintain production and selling methods and routines that are highly efficient and effective
Financial	• Amass sufficient internal cash reserves to ensure against business shocks • Set up access to overdraft (debt) funding at low rates, in case it is needed • Be ready to trigger new bond (debt) or stock (equity) issues for additional funding
Intellectual	• Hire well-educated and well-trained employees and offer ongoing training programs • Encourage and reward employees who contribute exceptional performance • Offer share parcels to VRHN managers and employees
Technical	• Seek exclusive supply agreements or licences for critical inputs • Gain intellectual property protection (utility patents, design patents, brand names, copyrights) • Conduct R&D to find sustaining technological improvements or disruptive innovations that can gain intellectual property protection

Strategies to Reduce Resource-Based Risk

From the beginning of this book, we have emphasized that the firm's managers must make decisions in the context of risk and uncertainty. Risk and uncertainty mean that projected revenues might overstate actual revenues, or that projected costs might understate actual costs. If managers can reduce risk they will be able to improve their decision making, since the estimates of future revenues and costs will tend to fall within a narrower band of outcomes the more risk can be reduced. Thus, strategies to reduce risks should be considered by the firm's managers. In an earlier section, we have already considered Porter's strategies to deal with risks associated with Porter's five forces of the business environment that operate to reduce the firm's profitability. In the remainder of this chapter, we will focus on strategies to reduce risk associated with the inimitability of the firm's resources.

First, there is a risk that firms may lose the VRHN status of a resource that they own or control. The firm may believe that it gains sustainable competitive advantage based on the ownership or control of a VRHN resource, but the risk exists that the resource will in fact be copied or substituted for by a rival firm. For example, a lawnmower manufacturer that has an exclusive agreement with Briggs & Stratton to provide its highly reliable small engines, may feel that it has a VRHN technical resource based on that agreement. But, suppose a rival lawnmower manufacturer develops its own engine over many years to the point that comparative testing by the *Consumer Reports* organization reports that the rival motor is as powerful, economical, and quiet as the Briggs & Stratton engine. Alternatively, suppose another lawnmower manufacturer strikes a deal with the Honda Motor Company for the exclusive use of Honda small engines to propel its lawnmowers. Again, a rival has come up with an effective substitute for the Briggs & Stratton engine and can compete on a roughly equal basis for lawnmower sales, with each firm claiming to have a very efficient small engine driving their lawnmower.

Similarly, the firm may have a VRHN location that allows it to earn superior profits but over time a rival may be able to purchase or lease space in an adjacent building and thus copy the firm's locational advantage. Alternatively, that part of the city may decline while a new suburb rises in commercial prominence; in this case, the firm's location loses its convenience for customers who now prefer to shop in another location.

Even intellectual property protection is not immune to this risk of replacement by an alternative. A firm may have a patent on its VRHN technology but then see a rival firm offering a product that does the same thing for customers using a different technological platform. For example, while *Segway* reportedly has 32 patents on the technology involved in its batteries, gyroscopes, and computer code, rival personal transportation vehicles (PTVs) exist that seem to violate none of those patents, having "invented around" them. For example, adding a third or fourth wheel to the PTV avoids the need for a gyroscope to stabilize the vehicle, and alternative control mechanisms can be used to make the PTV go forward, backward, or turn corners.

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Managers of a firm must make conscious strategic decisions regarding surveillance of technologies, research and development, rival firm strategies, customer behavior, and macroeconomic conditions.

Another category of resource-based risks are those VRHN resources that are expected but never materialize, such as reputation or organizational efficiency that was expected to follow the firm's best efforts to build these into VRHN resources. The firm's plans to expand production (on the basis of lower costs and increased demand due to an enhanced reputation) may come unstuck if these resources are not developed into VRHN resources.

Thus, managers of the firm must be forever vigilant and keep themselves aware of new technology and resource developments. This may require conscious strategic decisions to be made regarding surveillance of technologies, research and development, rival firm strategies, customer behavior, macroeconomic conditions, and so on. The firm's strategy to attain its objectives must include much more than simply maximizing its profit in the short run: It must initiate both price and nonprice strategies designed to maximize its ENPV over the time horizon envisioned by the managers of the firm and its shareholders.

Summary

In this chapter, we have been concerned with strategic decision making by the firm's managers. Looking out beyond the present period to their time horizon, managers must make pricing and nonprice decisions that maximize the expected net present value (ENPV) of the firm over that time horizon, which will usually mean sacrificing immediate profit in favor of later profits. They must also sacrifice monetary profit in favor of nonmonetary rewards relating to societal welfare and environmental protection, to the extent that their shareholders, customers, and employees demand, or the government obligates, that the firm must focus on the triple bottom line outcomes relating to economic, social, and environmental variables.

Accordingly, we defined sustainable competitive advantage (SCA) in terms of the triple bottom line outcomes that are preferred by the firm's shareholders. Shareholders have a major influence on the extent to which profit is sacrificed to gain beneficial social and environmental outcomes, since they can sell stock in companies that are insufficiently concerned with social and environmental outcomes (thus pushing stock prices down) and buy into other firms that pay more attention to the triple bottom line. We noted that Porter (1985) suggested that firms need to follow a definitive strategy if they are to gain SCA and he introduced three main competitive stances that the firm might adopt, namely the low-cost firm, the differentiating firm, or the focus firm. Later Porter (1985) suggested five industry forces that operate to reduce the profit (or EPVC) of the firm. These five forces are (a) limited number of buyers; (b) limited number of suppliers; (c) low barriers to the entry of new firms; (d) high incidence of substitute products; and (e) high potential for rivalry. Strategies to reduce each of these risks to the firm's future profitability were listed and it was suggested that managers of the firm must think ahead and take decisive action if they are to attain SCA in the longer term.

Next, we considered the resource-based view (RBV) that shifted the focus from industrywide conditions to the resources that are internal to the firm. These include physical, reputational, organizational, financial, intellectual, and technical resources used by the firm. Resources that are valuable, rare, hard to copy, and nonsubstitutable (VRHN) are called strategic resources and are the basis for the firm's SCA if and only if the firm also possesses the organizational and management capability to properly exploit and manage the strategic resources. We found that the intangible resources, namely reputation, organization, and intellectual resources, have the greatest potential for being VRHN in the medium to longer term, by which time the firm's initial competitive advantages due to physical, financial, and technical resources were likely to have been copied or invented around by rivals.

We reconciled the RBV with Porter's industry-based view by noting that two of Porter's five forces (barriers to entry and substitutes) were covered by the hard to copy and the nonsubstitutable conditions of the RBV, while the other three forces (few buyers, few sellers, and rivalry) were subsumed under the RBVs requirement that the firm must possess the organizational capability to properly manage the situations it will face in the marketplace (i.e., the O in VRIO).

Acknowledging that the essence of the problem of gaining and maintaining SCA is to ensure that the firm gains and maintains VRHN resources, we concluded the chapter with a discussion of selected strategies that a firm might use to make its resources hard to copy and nonsubstitutable. Finally, we considered risk-reducing strategies suggested by the resource-based view of the firm.

Questions for Review and Discussion

1. Explain the relationship between sustainable competitive advantage and the profit-maximization objective of the firm.
2. What is the relationship between the triple bottom line and sustainable competitive advantage?
3. Under what circumstances is a low-cost strategy likely to be the best strategy to attain sustainable competitive advantage?
4. Under what circumstance is a differentiation strategy likely to be the best strategy for the pursuit of sustainable competitive advantage?
5. What pricing strategies are likely to best complement (a) a low-cost strategy; and (b) a differentiation strategy?
6. What advertising and promotional strategies are likely to best complement (a) a low-cost strategy; and (b) a differentiation strategy?
7. How might product design changes be consistent with (a) a low-cost strategy; or (b) a differentiation strategy?
8. Recall as many strategies as you can that might be used to reduce the threat to profitability posed by Porter's Five Forces.
9. Outline the "resource-based-view" and state how it may be reconciled with the five forces approach.
10. How might the firm ensure that its strategic resources remain, or become, valuable, rare, and inimitable?

Decision Problems

1. Dixieland Ice Cream's profit rate has been declining over the past three years and is below average in the ice cream industry. Management has asked you to advise them how profitability might be increased. Your investigations reveal that although the employees work hard, their productivity is low because of inefficient older equipment. Product quality also tends to vary between batches as a result of the older equipment. Market research shows that consumers tend to regard Dixieland as "just another ice cream" without any distinctive qualities. Dixieland's ice cream is marketed in all major supermarkets and is priced in the middle of the range of ice cream prices in those supermarkets. Dixieland's relatively low advertising budget is largely spent on joint promotions with supermarket chains when Dixieland's product is placed on sale by the supermarkets.

Dixieland's rivals include several firms like itself, competing only in the southeastern states, and other larger firms who compete nationally. Some firms specialize in higher quality ice creams, with creamier taste, chunks of real fruit, and so on. These premium ice creams are sold in ice-cream parlors as well as in supermarkets and attract a higher price. An ice cream parlor typically uses a single brand of ice cream and will insist on a brand that is of consistent quality, although not necessarily the highest quality.

a. Discuss the changes to its production facilities that Dixieland would need to make to pursue (a) a low-cost strategy; or (b) a differentiation strategy.
b. What price and quality strategies do you suggest that would allow Dixieland to offer a better value proposition to consumers?
c. What advertising and promotional strategies would you recommend Dixieland should implement as part of a differentiation strategy?
d. What suggestions do you have for its distribution strategy?

2. The Kia Motor Company builds passenger cars in Korea and at other locations globally. In the past decade it has enjoyed increasing market success with its range of passenger cars that include micro, mini, small, mid-size, and large cars. In many ways these cars are quite similar to several other brands of Korean and Japanese cars. Recently Kia has become concerned about the invasion of the passenger car market by new Asian brands coming out of Malaysia, India, and China, in particular. Kia predicts that price competition will intensify in Asian markets, but also in North American and European markets for small fuel-efficient cars that are fun to drive. It is also concerned that the lower cost of labor in these emerging Asian economies will give these new brands a cost advantage and will allow them to reduce prices to levels that Kia would find unprofitable. As a result of these concerns, Kia is considering moving up market to the high-quality and luxury end of the market, and wants to be recognized as the "Mercedes Benz of Asia."

   a. In what ways might Kia differentiate itself from the other Asian cars that are already available and that will become available during the next decade?
   b. Suggest a differentiation strategy for Kia that would allow it to achieve its "Mercedes" objective, paying attention to each of the four Ps.
   c. Is it feasible that Kia might follow a low-cost firm strategy even though its labor costs per hour are higher than those in India and China? Please explain your answer.

3. Richard Koster and Associates is a law firm in Silicon Valley that is involved in all kinds of civil and criminal law prosecutions and defenses. Currently, Richard feels that he and his partners are spread too thinly over too many areas of law because they spend too much time reading across diverse areas of law to adequately prepare their cases. As a result, his law firm is not very profitable, and he would like to earn more money. Richard has asked you to advise him on a competitive strategy that would allow greater profitability. In discussions with Richard, you find out that he is strongly opposed to "ambulance chasing;" he does not like dealing with criminals; and finds divorces extremely unsettling. On the other hand, he enjoys property transactions, antitrust proceedings, and dealing with immigrants who are seeking permanent resident status. In the latter area, he has an advantage over many other attorneys in that before he finished his law degree, he worked inside the federal

department responsible for immigration, permanent residence, and visas, and still has many contacts there. In Silicon Valley, there are many high-tech firms, as well as the many universities and colleges, who seek Richard's assistance in gaining visas for foreign nationals with special technical knowledge and expertise.

a. Which of the generic competitive strategies should Richard and his partners adopt, and why, in your opinion?
b. Advise Richard on the price, quality, promotion, and distribution strategies that he should adopt to complement his choice of generic competitive strategy.
c. What strategic resources does Richard currently have, or could he subsequently build, that would ensure that his law services will be hard to copy and nonsubstitutable?

4. Fisher Tools has developed a new product and has asked your advice as to the appropriate competitive strategy it should follow to earn a high profit from this product over a prolonged period. The new product is a paint applicator that continuously feeds paint under pressure through a tube from the paint container to the roller, allowing painting jobs to be completed more quickly and with less drips and spills. The paint container could be pressurized by an inexpensive hand pump or by a more expensive system involving a bottle of compressed air. At present, the competition for the new product consists of conventional paint brushes, rollers, and spray guns and a few other continuous feed roller systems that are not well developed and are messy to use.

   a. Discuss the type of product and its implication for the choice of competitive strategy.
   b. What strategic resources does Fisher currently control, or could control, that would allow it to gain sustainable competitive advantage?
   c. Suggest a competitive strategy that should provide competitive advantage for Fisher Tools, and explain your reasoning.

5. Getaway Island Tours (GIT) operates a vacation planning and travel booking agency and is finding this business less and less profitable in recent years due to the advent of the Internet and the consequent availability of online booking for vacations and travel. It has been specializing in winter vacations in the Caribbean islands and Mexican resorts. Its personnel have visited almost every hotel and resort in these areas and have built very good relationships with the hotel and restaurant providers. Most customers seem to want the cheapest vacation they can get, however, with only the discerning few willing to pay for customized advice to find a vacation package that best suits their needs and preferences. A recent market survey indicates that special interest groups, such as golfers, sailors, and scuba divers tend to be among the latter category of vacationer and tend to show more willingness to spend money to reduce the risk of a bad experience while on vacation.

   a. Discuss the various ways that GIT could differentiate its vacation and travel packages.
   b. How can GIT compete with Internet providers of vacation and travel advice? Should it get into that business?
   c. What generic competitive strategy should GIT adopt, and what price, quality, promotion, and distribution strategies would facilitate pursuit of that strategy?
   d. How do you suggest that GIT build up and maintain strategic resources that will allow it to gain sustainable competitive advantage?

Key Terms

building a brand A product differentiation strategy that strives to build customer preference for the firm's product by associating the firm's brand with high-quality products, management integrity, financial soundness, and corporate social responsibility. The brand is effectively a stock of knowledge and beliefs held by the consumer about the firm and its products.

buyers The consumers or customers that purchase a particular good or service at a given price.

competitive strategy An internally consistent set of decisions designed to achieve the firm's objectives.

corporate social responsibility The responsibility held by managers of the firm to ensure that their decisions take into account not only profitability but also the impact of their decisions on social welfare and the natural environment.

differentiating firm A firm that strives to gain competitive advantage by producing a product that is different from those supplied by rivals. The differentiating firm seeks to have its product recognized as better serving the target customer's preferences.

differentiation strategy A strategy that seeks to produce goods or services that are seen as being of higher quality by target customers, so that these customer will be willing to pay a higher price for it.

external effects The external social and environmental impacts associated with the firm's production that are caused by the firm, where the firm does not take responsibility for these impacts.

financial resources The fiscal resources, including cash and other liquid assets, held by the firm, and the firm's ability to generate cash flow internally from operations and to raise new capital relatively quickly and cheaply.

five forces The five forces, identified by Michael Porter, that potentially restrain the firm's profitability in a given market, these being fewness of sellers, fewness of buyers, low barriers to entry, availability of substitutes, and competitor rivalry.

focusing firm A firm that, rather than seeing the market as a whole, chooses to focus on a segment of the market, such as a geographic area or a niche market for a particular variant of the product.

frequent-buyer plan An agreement between the seller and the customer that repeat purchases of a product will accumulate to entitle the customer to a reward of some kind, such as free goods or services, or discounts on future purchases.

hard to copy In the resource-based view, a resource is hard to copy if it cannot be replicated by rivals with relatively little delay and with relatively low cost.

iconic customers Customers that are well-known and respected in the market such that their purchase of your product sends a positive signal of endorsement to other customers.

longer-term supply agreement An agreement between a supplier and a buyer made for the long-term supply of a given resource or product, which serves to reduce the uncertainty that would otherwise surround availability and price of that resource or product.

low-cost firm A firm that has relatively low costs of production compared to other firms in the industry, for any particular output and quality level.

low-cost strategy A business approach that seeks to minimize its costs of administration, production and marketing, striving to be as lean as it can be without compromising the level of quality it chooses to produce and be known for.

monopsony A market structure that only has one buyer for a given good or service, such the Co-operative Marketing Board for agricultural products in some areas that require farmers supply all their production to a central marketing agency.

nonsubstitutable In the resource-based view, a resource is nonsubstitutable if it cannot be replaced by a technologically different resource that serves the same production purpose. An example of substitutability is steel replacing wood as a construction material.

oligopsony A market structure with relatively few buyers, which facilitates their collusion or conscious parallelism, and may thereby allow them to set a higher price for their product.

organizational resources The people, systems, and procedures that a firm has in place to allow the firm to organize the production and sale of its product, causing costs to be reduced (for a given quality) or quality to be increased (for a given cost).

physical resources The plant, place of business, factory equipment, vehicles, and other tangible resources that a company has that enable it to run its business.

PROFIT An acronym that stands for physical, reputational, organizational, financial, intellectual, and technical and represents the various types of resources that companies use.

rare In the resource-based view, resources are rare if they are in such limited supply that they cannot be utilized by competing firms. The unavailability of a resource to others causes it to be a barrier to the entry of new firms into the market.

reputational resources In the resource-based view, these are an intangible resource relating to the company's prior fair dealing, product quality, management integrity, corporate social responsibility, and financial strength that are encapsulated in the firm's brand name(s).

resource-based view A theory that argues that sustainable competitive advantage for the firm derives from its control of resources that are valuable, rare, hard to copy, and nonsubstitutable and where the firm has the organizational capability to effectively utilize its resource advantage.

rivalry The extent to which competing firms pay attention to each other's strategic variables (e.g., the four Ps) and adjust these relative to those of their rivals. Rivalry arises due to recognition of mutual dependence in oligopoly markets.

strategic resource A resource that is valuable, rare, hard to copy, and nonsubstitutable. For example, a strategic resource might be a patent on a new technology, a location that is superior to all others, or a brand name that connotes high quality (e.g., Mercedes-Benz).

suppliers Individuals or firms that supply goods or services to a given product market, or that supply resources (labor or materials) to a resource market.

sustainability The ongoing ability of firms and industries to achieve triple bottom line outcomes that are acceptable to society.

sustainable competitive advantage A competitive edge that one firm has over the others in its market, due to control of inimitable strategic resources that allows the firm to continue to achieve extraordinary triple bottom line outcomes.

technical resources A company's resources of a technical or intellectual nature that include various types of agreements and legal contracts, such as intellectual property protection (patents, licenses, trademarks, registered designs, copyrights, and trade secrets) and other supply or endorsement arrangements.

valuable A feature of a resource that ensures it contributes significantly to the firm's ability to make profits and to achieve desired social and environmental objectives.

VRIO An acronym that signifies that a resource is valuable, rare, and inimitable, and that the firm has the necessary organizational competency to take advantage of these resources.

Postscript

And so we come to the end of the book, and your course in Managerial Economics. I hope you have found it interesting and instructive and that you will find it useful both in your career as a manager and in making personal decisions in your life. Best wishes for the future!