

# MONOPOLY PROFITS, EFFICIENCY PROFITS, AND TEACHING STRATEGIC MANAGEMENT

JAY B. BARNEY

University of Utah, Salt Lake City, Utah

ALISON MACKEY

Brigham Young University, Provo, Utah, and Westminster College, Salt Lake City, Utah

**Structure-conduct-performance (SCP) and resource-based logics are two prominent theoretical explanations within strategic management for how firms gain and sustain competitive advantages. Pedagogically, these two theories are often incorporated into a grand integrated framework that describes the strategic management process. However, in terms of their respective profit-generating mechanisms, these theories are largely contradictory, and integrating them into a single framework for teaching strategy is problematic. Firms that try to apply both approaches to profit generation at the same time within the same business are likely to be unsuccessful. We identify these contradictions in the profit-generating process between these two theories and specify the pedagogical implications of these contradictions. We then argue that strategic management pedagogy should consider acknowledging these fundamentally different models of profit generation and help students understand when one approach or the other applies.**

Among strategic management theories designed to explain how firms generate economic profits, two are particularly prominent: structure-conduct-performance (SCP) theory (Porter, 1980) and resource-based theory (RBT; Barney, 1991). It is not surprising, then, that much of the teaching of strategic management is organized around these two theories (see, e.g., Barney & Hesterly, 2014; Hill, Jones, & Schilling, 2014; Hitt, Ireland, & Hoskisson, 2014). SCP theory, with its focus on a firm's external threats and opportunities (Porter, 1980), seems like a natural tool for analyzing a firm's environment, and resource-based theory, with its focus on a firm's strengths and weaknesses (Barney, 1991), seems like a natural tool for analyzing a firm's internal characteristics. From a teaching point of view, at least, these two theories appear to be natural complements and are often incorporated into a grand integrated framework of the strategic management process, often depicted as in Figure 1.

However, from another point of view, these theories are largely inconsistent with each other and thus cannot easily be integrated into a single framework for teaching strategy. This inconsistency reflects the different profit-generating mechanisms in the two

theories. In SCP theory, firms generate profits by exercising market power in monopolies or oligopolies protected by high barriers to entry. In this paper, these kinds of profits are called *monopoly profits*.<sup>1</sup> In RBT, firms generate economic profits by exploiting rare and costly-to-imitate resources and capabilities that enable them to address customer needs more effectively and efficiently than competitors. In this paper, these are called *efficiency profits* (Demsetz, 1973).

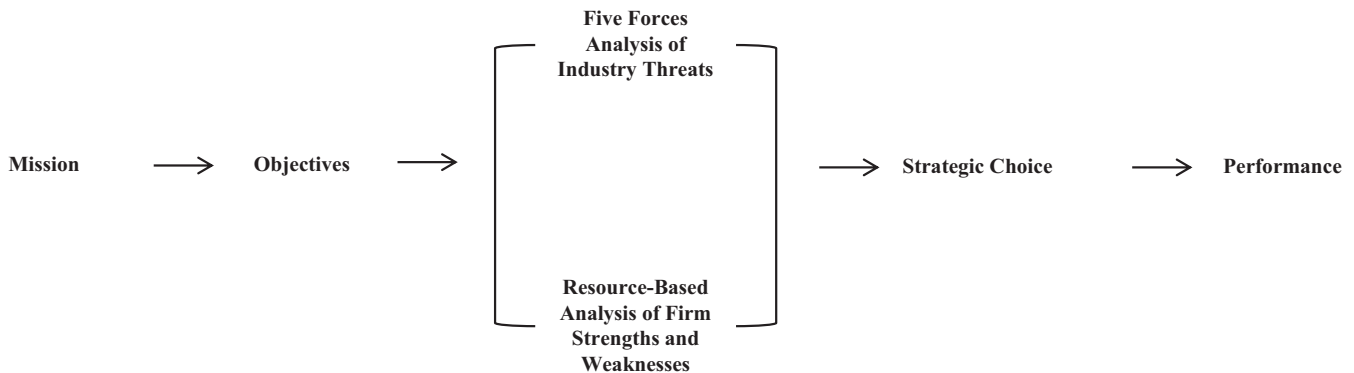
Although it is the case empirically that firms can generate either of these kinds of profits, firm strategies designed to generate monopoly profits are largely incompatible with firm strategies designed to generate efficiency profits, and vice versa. Firms that try to apply both approaches to profit generation at the same time within the same business are likely to be unsuccessful.<sup>2</sup> In this sense, these two theories, far from being complements, are, on the whole, substitutes.

<sup>1</sup> In this sense, *monopoly profits* can be understood as a category of profits that are generated when a firm is alone in an industry (a true monopoly) or when a small number of firms in an industry cooperate in setting prices (a colluding oligopoly), and when it is very costly for new firms to enter into an industry (high industry barriers to entry).

<sup>2</sup> One exception to this generalization is diversified firms, where one business unit may pursue strategies to generate monopoly profits, and another strategies to generate efficiency profits.

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**FIGURE 1**  
**Grand Integrated Framework of the Strategic Management Process**



And yet—even though many strategic management instructors identify these conflicting profit-generating mechanisms in class—the fiction that these two theories can be brought together in a grand integrated framework of the strategic management process continues. Thus, our purposes here are, first, to show that these two theories of profit generation are in fact largely incompatible, and second, to show that they have very different pedagogical implications. Rather than pretending that these conflicts do not exist, it might be preferable to acknowledge these different models of profit generation and help students understand when one approach or the other applies.

### DEFINING KEY TERMS

Before discussing these profit-generating models, it will be helpful to define terms they have in common. Both theories focus on how economic profits are generated. Such profits exist when a firm's revenues are greater than its costs. The theory of perfect competition suggests that, absent any impediments to competition, in the long run, firm revenues will equal firm costs. In this setting, firms earn zero economic profit (also known as a normal economic profit); that is, revenues just sufficient to cover a firm's costs. This logic is explained in more detail in the Appendix. Because both SCP and resource-based theory attempt to explain the generation of economic profits, they are both theories of imperfect competition (Connor, 1991; Mahoney, 2001; Mahoney & Qian, 2013).

In both theories, a firm is said to have a competitive advantage when it generates a larger economic profit (either monopoly or efficiency-type economic profits) than at least some other firms in its industry

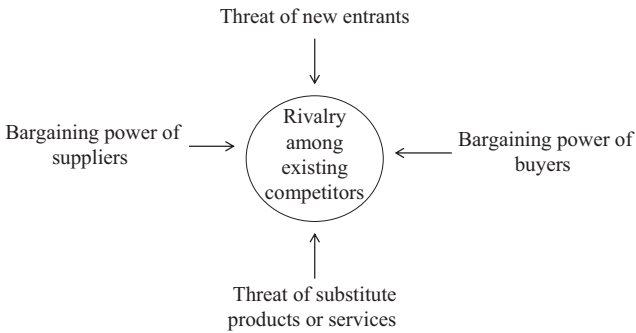
(Peteraf & Barney, 2003).<sup>3</sup> This implies that more than one firm in an industry can have a competitive advantage. A firm has a sustained competitive advantage when the economic profits it is generating are not competed away by rivals, new entrants, or other competitors pursuing similar strategies. Of course, sustained competitive advantages do not last forever. Changes in consumer tastes, technology, or many other factors can turn what was a source of a sustained competitive advantage into a source of zero economic profits, or even economic losses. However, in this setting, a firm's advantage is replaced, not competed away by others engaging in similar strategies.<sup>4</sup>

<sup>3</sup> Strictly speaking, a true monopolist cannot have a competitive advantage defined this way because, by definition, there are no other firms in its industry. Thus, a true monopolist is said to have a competitive advantage because it generates more economic profit than firms not operating in a monopoly setting.

<sup>4</sup> This is an ex post definition of competitive advantage, in that it equates "competitive advantage" with "economic profit." The cause of competitive advantages/economic profits in this ex post definition are a firm's "comparative advantages." The comparative advantage of firms that generate monopoly profits is that they operate in the industries they do; the comparative advantage of firms that generate efficiency profits is that they control rare and costly-to-imitate resources or capabilities that enable them to more efficiently and effectively address customer preferences. Some strategic management textbooks adopt an ex ante definition of competitive advantage, i.e., a firm has a competitive advantage which, in turn, enables it to generate an economic profit. However, these two approaches to defining "competitive advantage" are easy to reconcile when recognizing that "comparative advantages" in ex post definitions are equivalent to "competitive advantages" in ex ante definitions. The term "competitive advantage" throughout this paper will be used in the ex post sense defined here.

FIGURE 2

**The Five Forces Framework for Analyzing the Attractiveness of an Industry.** From *Competitive Strategy: Techniques for Analyzing Industries and Competitors* by Michael E. Porter. Copyright © 1980 by The Free Press. Reprinted with the permission of The Free Press, a division of Simon & Schuster, Inc. All rights reserved.



Firms that generate an economic profit will often be able to generate higher levels of economic return for their owners, including shareholders. However, just because a firm is able to generate an economic profit, it does not follow that it will always be able to appropriate all, or even some, of this profit for its owners (Coff, 1999; Castanias & Helfat, 1991). This is true for both monopoly and efficiency profits (Becker & Olson, 1992; Becerra, 2009; Barney, 2017). Although we focus here on the pedagogical implications of the two competing theories of profit generation, the pedagogical implications of alternative models of profit appropriation are also an important—and somewhat neglected—consideration in teaching strategic management (Brandenburger & Stuart, 1996; Barney, 2017).

### COMPETING THEORIES OF ECONOMIC PROFIT IN STRATEGIC MANAGEMENT

The field of strategic management is populated by several theories of how imperfect competition can lead to firms generating economic profits (Mahoney & Qian, 2013). As suggested earlier, two of these have risen to prominence, especially in teaching strategic management: SCP theory and resource-based theory.

#### Profit Generation in SCP Logic

The structure-conduct-performance (SCP) paradigm is a theoretical framework originally developed in economics (Mason, 1939; Bain, 1956, 1968) but later popularized within strategic management by Porter (1979, 1980, 1985) and others (Harrigan, 1981). The

SCP framework was originally developed as a policy tool to identify industries within which perfect competition dynamics were *not* unfolding and, thus, industries that might be targets for government regulation designed to increase their competitiveness (Porter, 1981).

The theory of economic profits in SCP logic begins with the assertion that industry structure (*S*, i.e., the number of competing firms in an industry, barriers to entry into an industry, and so forth) determines firm conduct (*C*, i.e., the strategies a firm chooses) in that industry which, in turn, determines firm performance (*P*). Industry structures that are less competitive (i.e., few rivals, high barriers to entry) enable firms to choose strategies (these will be identified later) that can generate economic profits.

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Porter (1980) took the original policy objectives of SCP logic and “turned them upside down” by observing that firms that operate in less competitive industries could earn economic profits. He also developed what became a widely popular tool for evaluating the potential of an industry’s structure to enable firms in that industry to earn these profits; namely, the “Five Forces model.” This model is presented in Figure 2. According to the Five Forces model, firms looking to earn economic profits should either (1) operate in or enter into “attractive industries,” that is, industries with structural attributes conducive to firms in those industries earning economic profits—and/or (2) engage in actions that turn less attractive into more attractive industries. In either case, firms should not engage in strategies that make an industry less attractive.

Describing the attributes of a *very* attractive industry reveals the underlying profit-generating mechanism in the Five Forces model. Such an industry would have no rivalry (i.e., there would be one firm, or a very small group of colluding firms); there would be high barriers to entry (and thus, no new entrants); and there would be no close substitute products, no powerful suppliers, and no powerful buyers. Thus, this framework suggests that the most attractive industries are either monopolies, or colluding oligopolies (when there are a few firms in an

**TABLE 1**  
**Strategic Options Consistent With SCP Theory's Model of the Generation of Economic Profits**

Strategic Objective:		
To Create an "Attractive Industry"		
Consolidation	Reduce the number of firms competing in an industry	Reduces rivalry
To Maintain an "Attractive Industry"		
Consolidation (to realize economies of scale)	Reduce operating costs	Raises entry barriers
Invest in excess manufacturing	Sends signal of willingness to retaliate if entry occurs	Raises entry barriers
Standard setting	Establishes costly to realize standard for operating in an industry	Raises entry barriers
Encourage government regulation	Establishes noneconomic criteria for entry	Raises entry barriers
Preannounce new products	Helps maintain intrahomogeneity; steers sales away from new entrants	Reduces rivalry, raises entry barriers
Limit pricing	Set prices low enough to discourage entry, but not so low as to eliminate incumbent firm profits	Raises entry barriers
Vertical integration	Forward or backward	Eliminates powerful suppliers or buyers

industry). In these kinds of industries, firms can set prices above the competitive level and there is no competitive response by other firms because (a) they do not exist (i.e., the firm is a monopolist); or (b) there are agreements among firms in an industry that prevent a response (i.e., there is collusion); and (c) other firms find it too costly to enter into the industry (i.e., it is protected by high barriers to entry). The Appendix shows in more detail how economic profits are generated in this setting.

### Strategic Implications of the SCP Model of Profit Generation

Given that firms can generate economic profits in "attractive" industries, a natural question for strategic management scholars is "What strategies can firms pursue to exploit this apparent opportunity?" The most obvious of these strategic options—that firms should enter and operate only in attractive industries—turns out to be limited in some important ways. Because by definition, "attractive" industries have relatively few firms operating in them, if a firm successfully enters into an "attractive" industry, it is likely to make that industry less "attractive," by, for example, making it more difficult to maintain collusive arrangements in that industry (Scherer, 1980). Moreover, because attractive industries are protected by high barriers to entry, the cost of entering these industries is likely to be very high, often greater than the revenues that could be obtained upon entry, especially because successful entry may itself reduce the attractiveness of an industry. In this setting, firms that choose to enter into

"attractive" industries may find that they will earn no economic profits from doing so.

However, two other strategic options may hold more potential for generating economic profits: Strategies a firm can pursue to turn a less attractive industry into a more attractive industry, and strategies a firm can pursue to maintain the attractiveness of an industry. Examples of specific strategies that might be able to accomplish these objectives are summarized in Table 1.

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*"Because by definition, 'attractive' industries have relatively few firms operating in them, if a firm successfully enters into an 'attractive' industry, it is likely to make that industry less 'attractive.'"*

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**Creating an attractive industry.** Unattractive industries are industries that have high levels of rivalry (both from current competitors and from those that provide substitute products or services); low cost of entry (should profits in this industry ever emerge); and suppliers and/or buyers with significant bargaining power (Porter, 1980). To make these industries attractive, firms must engage in strategies that reduce rivalry, increase barriers to entry, and reduce the bargaining power of buyers and/or suppliers.

One way that firms could accomplish this is through industry consolidation. Consolidation, by definition, reduces the number of firms in an industry, reducing the threat of rivalry. Moreover, when consolidation exploits economies of scale, it can also increase a barrier to entry into an industry

(Scherer, 1980; Barney, 2014).<sup>5</sup> Of course, because consolidation strategies often involve acquisitions, they are not without risks. In particular, empirical research on returns to acquisitions suggests that, on average, acquisitions create economic value, but that most—indeed, almost all—of this value is appropriated by the owners of the acquired firms (Jensen & Ruback, 1983). This suggests that a firm may successfully consolidate an industry, only to discover that the cost of doing so insures that this firm does not generate an economic profit.

**Maintaining an attractive industry.** Most of the strategies listed in Table 1 focus on how a firm in an industry can maintain its attractiveness. The main issue here is the threat of new entry: The economic profits earned by incumbent firms in an “attractive” industry should lead firms not in that industry to attempt to enter. Thus, incumbent firms will need to invest to maintain the high barriers to entry that help make an industry attractive.<sup>6</sup>

Prior work in SCP theory has identified several possible barriers to entry, in addition to economies of scale. These include product differentiation (aimed at differentiating the products sold in an industry from the products sold by potential entrants into an industry); cost differences independent of scale (e.g., low-cost access to critical raw materials for all incumbent firms); government policies that limit entry, and contrived deterrence (e.g., engaging in activities that punish new entrants if they decide to enter; Barney, 2014). Note, however, that—with

the exception of attempting to realize economies of scale—none of these strategies help a firm address its customer’s preferences more efficiently or effectively. Rather, they are designed to reduce the threat of new entry.<sup>7</sup>

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### Profit Generation in Resource-Based Theory

Whereas explanations of the generation of monopoly profits builds on SCP logic, explanations of the generation of efficiency profits builds on resource-based theory and Ricardian economics (Ricardo, 1817).<sup>8</sup> Although both theories build on models of imperfect competition, SCP logic identifies low rivalry and high barriers to entry as the most important competitive imperfections in markets, whereas Ricardian economics and resource-based theory identify resources that are inelastic in supply as the most important competitive imperfections in markets. How inelastic supplies can be a source of economic profits is discussed more formally in the Appendix.

Ricardo’s analysis initially focused on one particular “original, unaugmentable gift of Nature;” namely, fertile land. Ricardo observed that land varies in its fertility, and that increasing the fertility of land is difficult—especially with the technologies that were available in Ricardo’s day. Thus, from Ricardo’s point of view, the supply of land of various levels of fertility is fixed, at least in the short-to-medium term. This means that even if there was increased demand for more fertile land, more fertile land would not be supplied; thus, fertile land can be said to be inelastic in supply.

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<sup>5</sup> In order for economies of scale to act as a barrier to entry, the volume of production at which they are fully realized must be relatively large compared to the size of an industry’s revenues. When this is the case, new entrants competing on cost will have to enter an industry at this same scale—at which point supply will be greater than demand and prices will fall for incumbents and a new entrant—or at smaller scale—where excess demand will no longer be an issue, but a new entrant will have much higher costs. Since neither of these options is attractive, potential new entrants will either not enter, or have to engage in costly alternatives to enter (e.g., increase industry demand, significantly differentiate their product).

<sup>6</sup> In general, the higher the profits generated by incumbent firms in an “attractive” industry, the more these incumbent firms will have to invest in barriers to entry to maintain their attractiveness. In some settings, the cost of maintaining an industry’s attractiveness could rise to equal the profits generated by operating in that industry. On balance, firms in this setting would not earn an economic profit, even if they were operating in a very “attractive” industry.

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<sup>7</sup> Note also that none of these strategies either exploit or increase the level of firm heterogeneity in an industry. Such heterogeneity makes it more difficult for firms in an oligopoly to maintain collusive arrangements (Scherer, 1980). Thus, while firms looking to enhance barriers to entry may engage in product differentiation, that differentiation should focus on how the products produced by incumbent firms are superior to substitutes offered by those outside an industry.

<sup>8</sup> Some resource-based theorists prefer to derive the theory from work by Penrose (1955), others from work by Demsetz (1973).

**TABLE 2**  
**The VRIO Framework (Barney, 1995) Is a resource of capability . . .**

Valuable	Rare	Costly-to-imitate*	Organized	Competitive implications
No	—	—	No	Competitive disadvantage (Economic loss)
Yes	No	—	↑	Competitive parity (Zero economic profit)
Yes	Yes	No	↓	Temporary competitive advantage (Economic profit)
Yes	Yes	Yes	Yes	Sustained competitive advantage (Economic profit)

\* Resources or capabilities may be costly-to-imitate when they are socially complex, path dependent, or causally ambiguous.

Of course, farmers use this land to grow crops, say, wheat. When the market price for wheat is very low, only the most fertile land (i.e., the land with the lowest cost of producing wheat) will be put under cultivation. If the market price for wheat increases, then production with the most fertile land will continue, but in addition, less fertile land will also be cultivated.<sup>9</sup>

Now consider the performance of two farmers, one with more fertile land that can produce a bushel of wheat for \$8 and one with less fertile land that can produce a bushel of wheat for, say, \$12. At a market-determined price of \$15 a bushel, the first farmer earns an economic profit of \$7 per bushel and the second, \$3 per bushel. Thus, the first farmer has a competitive advantage over the second farmer.

In traditional economic logic, the profits earned by the farmer with more fertile land should lead other farmers to enter this market, obtain more fertile land, and begin production. Moreover, this will occur as long as any farmer with more fertile land is earning an economic profit. However, in this simple model, all the land that can be used to produce wheat in a way that generates at least zero economic profits, given the market-determined price, is already in production. There is no fertile land left that is not already in production and, by definition, more fertile land cannot be created. Thus, not only does the farmer with more fertile land earn an economic profit and have a competitive advantage, this advantage is sustained.

Notice that in this situation no farmers are engaging in activities designed to reduce the threat of entry from new farmers. Indeed, each of the farmers in this example are choosing to produce that quantity of wheat that maximizes their profits (by producing a quantity such that marginal revenue equals marginal costs) and

are being as efficient as they can be in producing wheat, given the fertility of their soil. Economic profits in this setting reflect the fact that some farmers simply have more fertile soil than others, and that the amount of fertile soil for growing wheat is inelastic in supply.<sup>10</sup>

Rumelt (1984), Wernerfelt (1984), and Barney (1986a, 1986b, 1991) used these ideas to develop what was initially known as the resource-based view of the firm.<sup>11</sup> Rather than assuming—as most economists do—that very few resources are inelastic in supply, these theorists speculated that many resources and capabilities that enable firms to choose and implement their strategies may be heterogeneously distributed across firms, and that these differences may last over time.

Just as the Five Forces framework helped translate SCP logic into a form amenable for teaching and application, Barney's (1995) VRIO framework translates resource-based logic into a form that is amenable to teaching and application.<sup>12</sup> This framework is reproduced in Table 2.

The logic in the VRIO framework is widely known and will only be briefly reviewed here. This framework

<sup>10</sup> The observation that such fertile land will usually have been purchased led to the development of strategic factor market theory (Barney, 1986a).

<sup>11</sup> The term "view" is an unfortunate by-product of the title of Wernerfelt's 1984 paper. Certainly, this logic is every bit as much a theory as is SCP logic.

<sup>12</sup> In Barney (1991), the model that links resources and capabilities, on the one hand, and types of competitive advantage, on the other, focused on the value, rarity, inimitability, and nonsubstitutability (VRIN) of these resources and capabilities. For teaching and application purposes, Barney (1995) changed the acronym to VRIO: valuable, rare, costly to imitate, and appropriately organized. In this revised model, imitation could occur in two ways: through direct duplication and through substitution. Organization was added as a variable in the model to emphasize the importance of strategy implementation. Despite these apparent differences, these two frameworks are theoretically equivalent.

<sup>9</sup> To simplify, assume that land can be used to grow wheat, and nothing else. This is an unrealistic assumption in the case of farming, but is less unrealistic for the kinds of resources and capabilities that are examined in resource-based theory.

takes resources and capabilities as its unit of profit generation, or bundles of resources and capabilities, that enable a firm to choose and implement strategies (Barney, 1991). The unit of profit appropriation is the firm (but see Barney, 2017).

Resources and capabilities have been defined in a variety of ways. For example, some authors define *resources* as the fundamental financial, physical, individual, and organizational capital attributes of a firm (Wernerfelt, 1984); *capabilities* as organizational routines and processes that enable firms to use their resources in conceiving of and implementing strategies (Prahalad & Hamel, 1990; Stalk, Evans, & Shulman, 1992); and *dynamic capabilities* as organizational routines and processes that enable firms to combine resources and capabilities in new ways (Leonard-Barton, 1992; Teece, Pisano, & Shuen, 1997). No matter how these terms are defined, their ability to be sources of competitive advantage depend on their value, rarity, inimitability, and whether a firm is organized to realize their economic potential. Thus, for example, if all a firm's competitors had the same resources, those resources could not be a source of competitive advantage, even if they were economically valuable, because they were not rare. The same applies to capabilities and to dynamic capabilities.

The VRIO model evaluates each of a firm's resources and/or capabilities with regard to its economic value (the question of value, V), rarity (the question of rarity, R), inimitability (the question of imitation, I), and whether its economic potential is realized through coordinated organizational structures and processes (the question of organization, O). Valuable resources and capabilities enable a firm to choose and implement strategies that reduce its costs or increase its revenues compared to what would be the case if this firm did not possess access to these resources or capabilities.<sup>13</sup> Resources and capabilities that are not valuable are a source of competitive disadvantage. However, valuable and common

resources are only a source of competitive parity; that is, zero economic profits. Valuable and rare resources are a source of (temporary) competitive advantage, but these advantages can be competed away. Valuable, rare, and costly-to-imitate resources are a source of sustained competitive advantage; that is, economic profits larger than others in a firm's industry that are not competed away.

Organization in the model acts like an adjustment factor: Very efficiently organized firms may gain competitive advantages despite not having rare or costly-to-imitate resources or capabilities, while inefficiently organized firms can lose some of the economic profits their rare and costly-to-imitate resources could have generated.

An obvious question emerges out of this framework: "Why is it sometimes costly-to-imitate another firm's valuable resources?" This is equivalent to asking: "Why are some resources inelastic in supply?"

Different authors have provided different answers to this question (e.g., Lippman & Rumelt, 1982; Barney, 1986b; Dierickx & Cool, 1989; Barney, 1991), but most of these explanations tend to focus on the socially complex, path-dependent, or causally ambiguous nature of these resources and capabilities.<sup>14</sup> These kinds of resources and capabilities are often tacit, intangible, and may even be taken for granted in an organization. Note that these characteristics of at least some resources and capabilities are inherent in their nature. They are not the result of actions taken by firms to increase their inimitability artificially.<sup>15</sup>

<sup>14</sup> Unfortunately, Priem and Butler (2001) failed to recognize these independent variables in explaining why some resources may be costly to imitate, and thus incorrectly concluded that resource-based theory was tautological.

<sup>15</sup> Rumelt (1984) distinguished between profit-generating opportunities facing firms and "isolating mechanisms" that make it difficult for all firms to equally exploit these opportunities. Although very consistent with the spirit of resource-based theory, this distinction can create the impression that firms should invest in isolating mechanisms, in the same way that they can invest in barriers to entry in SCP logic. Resource-based theory acknowledges that firms can make such investments (e.g., by investing in patents) but emphasizes those attributes of resources and capabilities that make them inherently difficult to imitate. Thus, for example, rather than focusing on patenting, resource-based theory would focus on the differential ability of firms to engage in the innovations that could lead to patentable technologies.

<sup>13</sup> Some have confused resources and capabilities that create value (by increasing revenues or decreasing costs) with resources and capabilities that generate economic profits (e.g., Priem & Butler, 2001). A firm might use a resource or capability to increase its revenues, but if the cost of increasing these revenues equaled the value of these increased revenues, the firm would generate only normal economic profits (Barney, 1986a). The rarity and non-imitability characteristics of a resource or capability are a way to determine how likely it is that the cost of choosing and implementing a strategy will be less than the value of the revenue increase or cost reduction associated with implementing that strategy.



### Strategic Implications of RBT's Model of Profit Generation

What are the strategic implications of resource-based theory and the VRIO framework? Resource-based theory suggests that firms should identify rare and costly-to-imitate resources and capabilities they possess and then use those resources and capabilities to choose and implement strategies that will satisfy customer preferences. To the extent that these strategies actually do satisfy customer preferences, the resources and capabilities used to choose and implement these strategies are valuable; that is, they increase revenues or decrease costs compared to what would be the case if a firm did not use these resources and capabilities to choose and implement their strategies. And because they are rare and costly-to-imitate, they can be a source of sustained competitive advantage. Finally, firms will need to ensure that they are organized in a way to efficiently realize the potential of their strategies.

Note that resource-based theory does not imply that firms should seek to enter “attractive” industries, make less “attractive” industries more “attractive,” or engage in activities designed solely to maintain industry “attractiveness” by increasing barriers to entry. Indeed, the theory suggests that the “attractiveness” of an industry cannot be evaluated independently of the resources and capabilities that firms possess as they compete in that industry.

For example, when Wal-Mart entered the discount retail market in the United States, it was apparently a very “unattractive” industry, with numerous competitors, many close substitutes, powerful suppliers, and powerful buyers (i.e., buyers with low switching costs). However, by leveraging its unique logistics capabilities, Wal-Mart was able to find a way low cost way to satisfy retail customers. These logistics capabilities were rare when they were first implemented by Wal-Mart and have been very difficult for other discount retailers to imitate (Ghemawat, 1986). What was apparently an “unattractive” industry turned out to be a place where Wal-Mart could create and sustain a competitive advantage.

Resource-based logic can be applied to any of a wide variety of strategies available to firms. For example, this logic explains when cost leadership, product differentiation, or focus can be sources of sustained competitive advantage (Porter, 1980). It can also be used to explain when flexibility, vertical integration (Barney, 1999), strategic alliances, diversification (Bettis & Prahalad, 1986), mergers and acquisitions (Barney, 1988), and global strategies can

all be sources of sustained competitive advantage (Barney, 2014).

### PEDAGOGICAL CONFLICTS BETWEEN THE TWO THEORIES OF PROFIT GENERATION

The conflicts between SCP-based theories of profit generation and resource-based theories of profit generation are reasonably clear: The former focuses on how firms generate monopoly profits, the latter on how firms generate efficiency profits. The different strategic implications of these models are also reasonably clear: SCP-based strategies focus on creating or maintaining the “attractiveness” of an industry, while resource-based strategies focus on leveraging socially complex, path-dependent, causally ambiguous, tacit, or intangible resources and capabilities to satisfy customer preferences in ways other firms find difficult to imitate. Even when a single strategy is discussed in both models—for example, product differentiation, the nature and purpose of this strategy is very different. In SCP logic, firms invest in product differentiation to increase the cost of entering into an industry; in resource-based logic, firms invest in product differentiation to make their products or services distinctive from their competitors’ and more attractive to customers.

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*“SCP-based strategies focus on creating or maintaining the ‘attractiveness’ of an industry, while resource-based strategies focus on leveraging socially complex, path-dependent, causally ambiguous, tacit, or intangible resources and capabilities to satisfy customer preferences in ways other firms find difficult to imitate.”*

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Indeed, there seems to be only a single strategy that is consistent with both theories of profit generation: Consolidation of an industry to realize economies of scale. Consistent with SCP logic, in some circumstances, consolidation that realizes economies of scale can act as a barrier to entry, preventing firms from entering into an industry despite economic profits being generated in that industry. Consistent with resource-based logic, consolidation that realizes economies of scale may enable a firm to address customer preferences—in this case, preferences for lower prices—more efficiently than would otherwise be the case.

However, even this apparent overlap between the two theories can break down. In SCP logic, consolidation to realize economies of scale has two effects: reducing the number of firms competing in an



industry and increasing the cost of entry into an industry. In this setting, the few remaining firms in an industry might begin colluding and raise the price of their product or service above the competitive level, knowing that doing so would not lead to competitive entry. Such actions would not address the preferences of customers for low price products or services, which is the primary objective of realizing economies of scale according to resource-based logic.

All this said, in a class, is it possible to ignore these theoretical nuances, and use Porter's framework to analyze threats in an industry and resource-based logic to analyze the strengths and weaknesses of a firm? That is, is it possible to retain the grand integrated framework of the strategic management process around which so much of strategic management's pedagogy is organized? It turns out this can be done in at least two ways. However, each alternative violates fundamental assumptions of one of these two theories.

First, rather than use Porter's Five Forces framework to identify more or less attractive industries, the five forces in the model can be used simply to identify competitive threats in an industry. Several other models of these threats are also in the strategic management literature (see, e.g., Aguilar, 1967), but the five forces identified by Porter are both reasonably inclusive and well understood. In this approach to retaining a grand integrated framework of the strategic management process, neutralizing threats in a firm's environment is one way that the strategies that firms choose can create value, the first step in conducting a VRIO analysis of a firm's resources and capabilities. Application of SCP logic to identify a firm's opportunities—a less developed part of Porter's framework—could be used to identify a second way that strategies that firms choose can create value, again, the first step in conducting a VRIO analysis.

Of course, this approach to keeping the grand integrated framework of the strategic management process in place relegates SCP logic to the role of identifying environmental threats (and opportunities) in a traditional SWOT analysis. Useful, perhaps, but this ignores the rich theoretical and practical implications of SCP's model of monopoly profits. This seems like a high cost for maintaining what, after all, is only a broad organizing framework for teaching strategic management.

Second, this grand integrated framework could be maintained by ignoring resource-based theory's model of sustained competitive advantage, and instead, focus on how a firm's resources and capabilities enable a firm to create a more attractive industry. Porter (1985) seemed to be moving in this direction

with his introduction of value chain analysis, but the specific links between value chain activities and industry attractiveness were never fully articulated.

Indeed, the strength of "strengths" (and the weakness of "weaknesses") would be quite counterintuitive in this approach. For example, because cost homogeneity across firms in an industry facilitates tacit collusion (Scherer, 1980), a firm strength would be when a firm's costs are similar to other firms in an industry (i.e., not rare). In the same way, because high levels of product differentiation among firms in an industry makes collusion more difficult (i.e. increased rivalry) while high product differentiation between firms in an industry and firms outside an industry increase barriers to entry, a firm strength would ironically be the ability to differentiate one's products in ways that make them similar to other firms in the industry but very different than firms outside the industry (Scherer, 1980). This is what the establishment of industry standards can do (Bain, 1968; Friedman & Thisse, 1993).

But, as was the case with relegating the SCP model to identifying threats rather than industry attractiveness, using the resource-based model to identify strengths (and weaknesses) in a traditional SWOT analysis dismisses the rich theoretical discussion of the generation of efficiency profits that underlies this perspective, a heavy price to pay to maintain an organizing framework.

In principle, there is a third way to maintain the grand integrated framework: to ignore both theoretical arguments altogether and, instead, focus on simply identifying a firm's strengths and weaknesses and opportunities and threats without reference to any model of economic profits. This of course returns strategic management teaching to the "comparative list making" exercise that dominated SWOT thinking in the 1970s and is still practiced in some circles.

### THE TWO THEORIES AS SUBSTITUTES

Rather than holding out hope that these two very different theories of how economic profits are generated can somehow be integrated into a single overarching framework, perhaps a more reasonable approach would be to recognize that the two models of profit creation are appropriate in very different settings. In this context, faculty face the tasks of helping students identify when one model of profit generation is more appropriate than the other, and then applying the right model appropriately.

Consider, for example, the following case<sup>16</sup>: A firm operates in a consumer goods industry. It has one major competitor and together these firms have over 90% of the North American market. One firm dominates the eastern part of North America, the other the western. Both of their products are seen as very high quality, and as much higher quality than other products sold in the market. They both have strong brand names. Consumers have few choices but to buy the products made by these firms, or by their competitors. The prices of the products sold by these two firms is substantially higher than the prices of products sold by their considerably smaller competitors: as much as 10 times higher. Finally, the products are manufactured with widely available supplies and sold through fragmented retail stores. If asked to give strategic counsel to this firm, which model of profit generation should be applied, the SCP-based model or the resource-based model?

In this situation, and setting aside ethical concerns (discussed later), the attributes of this industry (e.g., low rivalry, high barriers to entry, no close substitutes, no powerful suppliers, no powerful buyers) suggest that a SCP-based approach would probably make more sense. In this case, strategies identified in Table 1 designed to maintain the attractiveness of an industry—a two-firm oligopoly probably engaging in tacit price collusion—seem likely to have a more positive impact on firm performance than strategies derived from resource-based theory.

Indeed, both the large firms in this industry were behaving exactly how SCP logic would suggest: They expanded manufacturing to realize economies of scale (which acted like a barrier to entry); they expanded capacity before increased demand (a form of contrived deterrence); and while they engaged in product research and development, they introduced new products only several months after announcing that they would be doing so (giving their competitor enough time to develop similar products, and maintaining homogeneity within the industry). And, neither firm ever reduced its prices!

Strategies derived from resource-based theory would have significantly disrupted this industry. For example, instead of slow and steady R&D, resource-based theory would have each firm exploit their unique resources and capabilities to develop new, highly innovative products. This increased competition might ultimately have created efficiency profits, but at the cost of the monopoly profits these firms were currently enjoying.

Consider a different set of facts: Southwest Airlines operates in a very competitive industry.<sup>16</sup> In fact, since the industry was deregulated, every major airline in the US except Southwest has declared bankruptcy—some more than once. Southwest's operational strategy focuses on using a single type of aircraft (Boeing 737s); landing in smaller airports and not providing food service (except peanuts or pretzels and drinks); point-to-point flights, fast turnarounds, and so forth. Through the 1990s and 2000s, most of Southwest's major competitors—including United, Delta, and American—opened up divisions that imitated most of these operational strategies. None were as successful as Southwest.

In addition to its operational strategies, Southwest has adopted a set of principles for managing its people. Emphasizing fairness, loyalty, and a commitment to teamwork that is reinforced from the very top to the very bottom of the organization every day, Southwest's culture is an example of a socially complex resource that—most observers agree—enables them to reduce the cost and increase the quality of their service. None of Southwest's competitors have, to this point, been able to imitate Southwest's culture. However, new entrants—without legacy cultures—seem to have been able to imitate Southwest's culture or build their own value-enhancing cultures.

If asked to give strategic counsel to Southwest, which model of profit generation should be applied: SCP-based logic or resource-based logic? Given that Southwest appears to have a source of sustained competitive advantage in a very competitive market—its unique culture—resource-based theory seems like the more reasonable choice.

What specific strategic advice might be given? First, do not change Southwest's operational strategy. Although this does not appear to be a source of sustained competitive advantage, it may have some important complementarities with Southwest's culture, for example, their ability to use teamwork to turn planes around quickly. Second, do not mess up the culture at Southwest. Invest in it, protect it, and nurture it. Finally, incumbent airlines do not appear likely to emerge as a major competitor for Southwest. However, new entrants may. Where are new entrants in Southwest's niche likely to enter? Where Southwest is currently not strong. Historically, Southwest's presence is weakest in the northeastern and southeastern parts of the US. Southwest might want to consider aggressively growing in these markets, to try to foreclose new entry. This aggressive growth has to be balanced against any risks to its culture that might come with rapid expansion. Alternatively, Southwest might

<sup>16</sup> The facts in this example come from Heskett (2002). These facts reflect T's strategic position in 2002.

choose to not expand and then purchase a new entrant and absorb the risks of integrating the new entrant's culture with Southwest's culture. All these alternatives are consistent with the observation that Southwest is generating efficiency profits in the U.S. airline industry. Applying SCP logic in this context would have Southwest focusing less on protecting and leveraging its unique culture, and more on how Southwest could begin tacitly colluding with other U.S. airlines.

### WHEN TO APPLY POSITIONING AND RESOURCE-BASED THEORIES OF ECONOMIC PROFIT

Developing a general theory of when SCP-based logic or resource-based logic will be more useful in providing strategic guidance to a firm is beyond our scope here. Such a theory seems likely to depend, at least, on how likely it is that a firm will be able to engage in activities that generate either monopoly or efficiency profits.

If monopoly profits seem within the grasp of a firm—if, for example, there are a small number of firms competing in an industry, if they are characterized by cost and product homogeneity, if barriers to entry exist in an industry, and so forth—then SCP logic seems likely to be the more relevant model. If efficiency profits seem within the grasp of a firm—if, for example, a firm possesses unique socially complex resources and capabilities developed over long periods of time that are difficult for competitors to understand and describe that it can use to implement cost reducing and/or revenue enhancing strategies—then resource-based logic seems likely to be the more relevant model.

At least two other possibilities may also exist: It may be the case, for example, that neither monopoly profits nor efficiency profits are within the grasp of a firm. In these settings, neither theory of economic profits may be relevant. Strategic management does not have a “rule for riches:” a theory or set of theories that will lead to economic profits no matter what setting a firm is in. Some firms cannot expect to gain expected economic profits, although they can always be lucky (Barney, 1986a).

It may also be the case that a firm has both monopoly and efficiency profits within its grasp. As suggested earlier, it is not unusual for a diversified firm to have monopoly opportunities in some of its businesses and efficiency opportunities in others. Some have suggested, for example, that Microsoft acts both as a quasimonopolist and an efficient competitor in its different businesses (cf., Liebowitz & Margolis, 1999). However, the case being considered here is when monopoly and efficiency profits are both

possible within a *single business*. In this setting, strategic recommendations from both models will have to be evaluated in terms of their likely impact on firm performance and sustained competitive advantage.

### ETHICAL CONSIDERATIONS

Thus far, the choice between applying SCP logic's model of economic profits or resource-based logic's model of economic profits has been treated as an analytical choice, devoid of any moral or ethical implications. This is not the case.

In particular, monopoly profits generated through the application of SCP logic are inconsistent with social welfare (Barney, 2002). Collusion that reduces supply below demand, and thereby raises prices, creates a social “dead weight loss” equal to the value of the products consumers do not buy because prices are too high (Church & Ware, 2000). Hoping to avoid these collusion strategies is what motivated the founders of the SCP model to develop this perspective in the first place. By turning the SCP framework “upside down,” the search for attractive industries where monopoly profits can be generated is generally inconsistent with social welfare. Put differently, teaching students how to generate collusive profits can be seen as unethical.

Efficiency profits, on the other hand, are perfectly consistent with social welfare (Demsetz, 1973). Firms with special skills that are inelastic in demand may be able to charge relatively high prices for their products or services, but customers will be happy to pay this higher price for the features part of this product or service because of a firm's special capabilities. This is the case, even though this firm will be generating economic profits. Moreover, less skilled firms are likely to be able to produce less special products—at lower prices—for consumers who prefer these products. Put differently, teaching students how to generate efficiency profits can be seen as ethical.

Note that this ethical critique of SCP logic only applies to using the Five Forces model to create monopoly profits. It does not apply to using this framework as a descriptive list of factors to consider when analyzing a firm's strategy. Only when SCP logic is the primary driving force behind a firm's theory of profit generation do social welfare losses emerge.

### THE VALUE OF STRATEGIC MANAGEMENT WITHIN MANAGEMENT EDUCATION

In addition to ethical considerations in teaching strategic management, sometimes practical considerations

arise. Namely, students sometimes question why they need to learn strategic management if they never intend to be top executives or run their own businesses. Indeed, even if students aspire to these positions, they are not likely to hold them for many years. Why study strategic management now?

First, understanding strategic management can give students tools needed to evaluate strategies of firms that may employ them. Career opportunities within firms are influenced by the advantages firms may be able to yield over their competition. Firms undertaking strategies unlikely to generate any advantages over competitors typically cannot offer the same career opportunities to their employees as firms generating such advantages. Understanding the strategy a firm is pursuing is critical for students in evaluating career opportunities with potential and current employers.

Second, understanding the strategy a firm is undertaking and one's personal role in implementing that strategy is critical for career success. For example, various firm functions (e.g., accounting, marketing, operations) play different roles depending on the type of strategy the firm is pursuing. Behaving as if a firm is pursuing a cost leadership strategy when it is in fact pursuing a product differentiation strategy could reduce one's effectiveness in helping to implement the firm's strategy.

Finally, students will often find themselves working for smaller and entrepreneurial firms in which many employees—not just the senior management—are intimately involved in the strategic management process. Students choosing to work in such firms could certainly be an integral part of the strategic management team, choosing and implementing strategies to try and generate competitive advantage. Familiarity with the concepts and analytical tools of strategic management could turn out to be very helpful in such circumstances.

## CONCLUSION

The grand integrated framework around which teaching of strategic management has been organized for at least 2 decades—presented in Figure 1—has served the field well. However, this framework has not kept up with theoretical developments in strategic management. In particular, the notion that SCP-based models of industry threats can be used in conjunction with resource-based models of firm strengths and weaknesses ignores the conflicting models of profit generating embedded in each theory. We suggest that a more reasonable pedagogical approach would be to see these theories as substitutes, not complements, and to identify the

conditions under which each would be more or less applicable in providing strategic guidance to a firm.

## REFERENCES

- Aguilar, F. J. 1967. *Scanning the business environment*. MacMillan.
- Bain, J. S. 1956. *Barriers to new competition*. Cambridge, MA: Harvard University Press.
- Bain, J. S. 1968. *Industrial organization*. New York: John Wiley & Sons.
- Barney, J. B. 1986a. Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, 32(10): 1231–1241.
- Barney, J. B. 1986b. Organizational culture: Can it be a source of sustained competitive advantage? *Academy of Management Review*, 11(3): 656–665.
- Barney, J. B. 1988. Returns to bidding firms in mergers and acquisitions: Reconsidering the relatedness hypothesis. *Strategic Management Journal*, 9: 71–78.
- Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17(1): 99–120.
- Barney, J. B. 1995. Looking inside for competitive advantage. *The Academy of Management Executive*, 9(4): 49–61.
- Barney, J. B. 1999. How a firm's capabilities affect boundary decisions. *Sloan Management Review*, 40(3): 137–145.
- Barney, J. B. 2002. Strategic management: From informed conversation to academic discipline. *The Academy of Management Executive*, 16(2): 53–57.
- Barney, J. B. 2014. *Gaining and sustaining competitive advantage*. Upper Saddle River, NJ: Pearson.
- Barney, J. B. 2017. Why resource-based theory's model of profit appropriation must adopt a stakeholder perspective. Working paper, Department of Entrepreneurship and Strategy, Eccles School of Business, the University of Utah.
- Barney, J. B., & Hesterly, W. 2014. *Strategic management and competitive advantage: Concepts and cases*. Pearson. Upper Saddle River, NJ.
- Becerra, M. 2009. *The theory of the firm for strategic management: Economic value analysis*. Cambridge: Cambridge University Press.
- Becker, B. E., & Olson, C. 1992. Unions and firm profits. *Industrial Relations*, 31(3): 395–415.
- Bettis, R., & Prahalad, C. K. 1986. The dominant logic: A new linkage between diversity and performance. *Strategic Management Journal*, 7(6): 485–501.
- Brandenburger, A., & Stuart, S. 1996. Value-based strategy. *Journal of Economics & Management Strategy*, 5(11): 5–24.
- Castanias, R., & Helfat, C. 1991. Managerial resources and rents. *Journal of Management*, 17(1): 155–171.

- Church, J. R., & Ware, R. 2000. **Industrial organization: A strategic approach**. Boston: Irwin- McGraw Hill.
- Coff, R. 1999. When competitive advantage doesn't lead to performance. *Organization Science*, 10: 119–133.
- Connor, K. R. 1991. A historical comparison of resource-based theory and five schools of thought within industrial organization economics: Do we have a new theory of the firm? *Journal of Management*, 17(1): 121–154.
- Demsetz, H. 1973. Industry structure, market rivalry, and public policy. *The Journal of Law & Economics*, 16(1): 1–9.
- Dierickx, I., & Cool, K. 1989. Asset stock accumulation and sustainability of competitive advantage. *Management Science*, 35(12): 1504–1511.
- Friedman, J. W., & Thisse, J. F. 1993. Partial collusion fosters minimum product differentiation. *The Rand Journal of Economics*, 24(4): 631–645.
- Harrigan, K. R. 1981. Barriers to entry and competitive strategies. *Strategic Management Journal*, 2(4): 395–412.
- Heskett, J. L. 2002. Southwest Airlines 2002: An industry under siege. Harvard Business School Case Study #803133.
- Hill, C. W., Jones, G. R., & Schilling, M. A. 2014. **Strategic management: Theory: An integrated approach**. (11th ed.), Stamford, CT: Cengage Learning.
- Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. 2014. **Strategic management: Concepts and cases: Competitiveness and globalization**. (11th ed.), Cengage Learning, Stamford, CT.
- Ghemawat, P. 1986. Wal-Mart stores discount operations. Harvard Business School Case No. 9-387-018.
- Jensen, M., & Ruback, R. 1983. The market for corporate control: The scientific evidence. *Journal of Financial Economics*, 11: 5–50.
- Leonard-Barton, D., 1992. Core capabilities and core rigidities. *Strategic Management Journal*, Summer Special Issue: 111–126.
- Liebowitz, S. J., & Margolis, S. E. 1999. **Winners, losers & Microsoft; Competition and antitrust in high technology**. Oakland, CA: Independent Institute.
- Lippman, S. A., & Rumelt, R. P. 1982. Uncertain imitability: An analysis of interfirm differences in efficiency under competition. *The Bell Journal of Economics*, 13: 418–438.
- Mahoney, J. T. 2001. A resource-based theory of sustainable rents. *Journal of Management*, 27(6): 651–660.
- Mahoney, J. T., & Qian, L. 2013. Market frictions as building blocks of an organizational economics approach to strategic management. *Strategic Management Journal*, 34(9): 1019–1041.
- Mason, E. S. 1939. Price and production policies of large-scale enterprises. *The American Economic Review*, 29: 61–74.
- Penrose, E. 1955. The limits to the growth and size of firms. *The American Economic Review*, 45(2): 531–545.
- Peteraf, M. A., & Barney, J. B. 2003. Unraveling the resource-based tangle. *Managerial and Decision Economics*, 24(4): 309–323.
- Prahalad, C. K., & Hamel, G. 1990. The core competence of the corporation. *Harvard Business Review*, 68(3): 79–91.
- Porter, M. E. 1979. How competitive forces shape strategy. *Harvard Business Review*, 21(38): 21–38.
- Porter, M. E. 1980. **Competitive strategy: Techniques for analyzing industries and companies**. New York: Free Press.
- Porter, M. E. 1981. The contribution of industrial organization to strategic management. *Academy of Management Review*, 6: 609–620.
- Porter, M. E. 1985. **Competitive advantage: Creating and sustaining superior performance**. New York: Free Press.
- Priem, R. L., & Butler, J. E. 2001. Is the resource-based “view” a useful perspective for strategic management research? *Academy of Management Review*, 26(1): 22–40.
- Ricardo, D. 1817. **Principles of political economy and taxation**. London: J. Murray.
- Rumelt, R. P. 1984. Toward a strategic theory of the firm. In R. Lamb (Ed.), **Competitive Strategic Management**: 556–570.
- Scherer, M. F. 1980. **Industrial market structure and economic performance**. Boston: Houghton Mifflin.
- Stalk, G., Evans, P., & Shulman, L. 1992. Competing on capabilities: The new rules of corporate strategy. *Harvard Business Review*, 70: 57–69.
- Teece, D. J., Pisano, G., & Shuen, A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7): 509–533.
- Wernerfelt, B. 1984. A resource-based view of the firm. *Strategic Management Journal*, 5(2): 171–180.



**Jay Barney** is a Presidential Professor of Strategic Management and the Pierre Lassonde Chair of Social Entrepreneurship at the University of Utah. He received his doctorate from Yale University. His research focuses on the relationship between costly-to-copy firm skills and capabilities and sustained competitive advantage as well as entrepreneurship.

**Alison Mackey** is a visiting scholar at Brigham Young University (Provo, Utah) and a faculty research fellow at Westminster College (Salt Lake City, Utah). Mackey completed her doctorate at The Ohio State University. Her research interests include strategic human capital, labor markets, and corporate social responsibility.



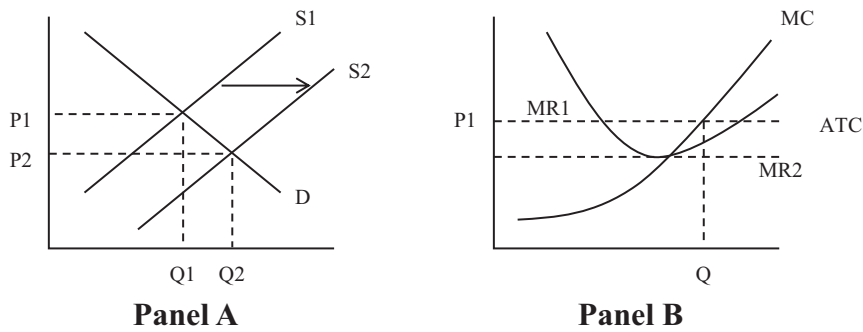
APPENDIX

In this Appendix, each major theoretical conclusion in the paper is demonstrated in a more rigorous manner.

A. Firms earn zero economic profits when industries are perfectly competitive (e.g., when there are large numbers of competing firms, there are no barriers to entry, and firm resources are elastic in supply).

Explanation:

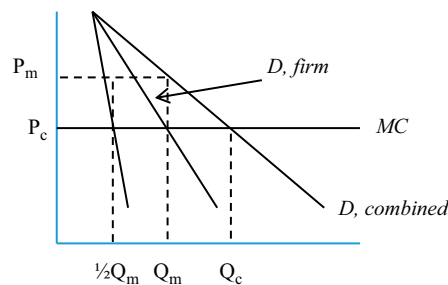
If firms in an industry are making economic profits, entry will occur in the long run. This causes the industry supply curve (Panel A) to shift to the right (from  $S_1$  to  $S_2$ ) and the market price to fall (from  $P_1$  to  $P_2$ ). New firms enter as long as there are economic profits to be made—as long as price exceeds average total cost (ATC) in Panel (B). Once firms are operating at the lowest point on their ATC curve, economic profits reach zero and entry stops.



B. Firms can earn positive economic profits when they collude to reduce supply below demand.

Explanation:

An industry has two “identical” firms (i.e., they sell identical products and face identical demand and cost conditions). Because one firm’s demand curve,  $D_{firm}$ , represents one-half of market demand, it is the same as the combined marginal revenue curve for the two firms. If these two firms collude and act as a monopoly, together they produce  $Q_m$  and charge a price  $P_m$ . This result is achieved if each firm selects its profit-maximizing output, which equals  $1/2 Q_m$ . This solution is inefficient; the efficient solution is price  $P_c$  and output  $Q_c$ , found where the combined market demand curve  $D_{combined}$  and the marginal cost curve  $MC$  intersect. The firms earn the profits from restricting the supply in the market below the competitive level.



**C. Firms can earn positive economic profits when resources are inelastic in supply.**

**Explanation:**

Resource heterogeneity may reflect superior productive factors enjoyed by some firms (e.g., productive land, patents, highly talented and skilled managers, etc.). If these factors are inelastic in supply (i.e., quasifixed and cannot be expanded rapidly in the short run), then inferior productive factors will be brought into production as well to meet unmet demand. However, firms with more productive inputs; that is, superior resources that are inelastic in supply will have lower average costs than other competing firms. If these “low cost” firms are able to sell at the market price, they will earn positive economic profits (shaded area below) because of their lower average cost curve.

