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Differentiation Versus Low Cost or Differentiation and Low Cost: A Contingency Framework

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In the policy literature there is an assumption that the generic business-level strategies of differentiation and overall cost leadership are generally inconsistent. Contrary to this view, this article presents a contingency framework in which differentiation can be a means for firms to establish an overall low-cost position and discusses that a combination of differentiation and low cost may be necessary for firms to establish a sustainable competitive advantage.

Porter's (1980, 1985) generic business-level strategies, overall cost leadership, differentiation, and focus have become a dominant paradigm in the business policy literature. According to Porter each of these represents "a fundamentally different approach to creating and sustaining a competitive advantage. . . . Usually a firm must make a choice between them or it will become stuck in the middle" (Porter, 1985, p. 17). Moreover, Porter stressed that "achieving cost leadership and differentiation are usually inconsistent, because differentiation is usually costly" (1985, p. 18).

Porter's model is flawed in two important respects. First, differentiation can be a means for firms to achieve an overall low-cost position. Hence, contrary to Porter's statement, cost leadership and differentiation are not necessarily inconsistent. Second, there are many situations in which establishing a sustained competitive advantage requires the firm to simultaneously pursue *both* low-cost and differentiation strategies because in many industries there is no *unique* low-cost position. Particularly in mature industries, it is common for many firms to have similar minimum-cost structures. Among such firms, those that successfully emphasize both differentiation and low cost will be rewarded by superior economic performance. In contrast, Porter's model categorizes such firms as "stuck in the middle" and predicts inferior economic performance for them.

Although Porter recognized that firms can pursue both low cost and differentiation successfully, he maintained that this could occur only in three circumstances: when all competitors are stuck in the middle, when cost is strongly affected by share or interrelationships, and when a firm pioneers a major innovation. Moreover, Porter viewed these circumstances as temporary. He argued that even in these circumstances the firm pursuing both low cost and differentiation is vulnerable to the emergence of a capable competitor that stresses *either* differentiation or low cost. In other words, Porter stressed that the combination of low cost and differentiation is unlikely to produce a sustainable competitive advantage.

In this article it is argued that the circumstances in which the simultaneous pursuit of differentiation and low cost make sense are common, depend on more factors than Porter highlighted, and may well lead to the establishment of a sustainable competitive advantage. Although Porter suggested that the combination of low cost

and differentiation is unlikely to generate a sustainable competitive advantage except in the most exceptional circumstances, the thesis advanced here is that the combination of both strategies often results in a sustainable competitive advantage.

The issues considered in this article are central to the whole debate on what, given specific circumstances, constitutes an appropriate business-level strategy. This debate is one of the most important in the business policy literature. Because Porter's model serves as a reference point for this field, the critical examination of his ideas gains added importance. By popularizing the idea that differentiation and low cost are normally incompatible, Porter's work may have served to misdirect both managers and researchers. This paper develops a framework that precisely identifies the contingencies under which the above propositions hold, one that can be used to guide managers and researchers.

Literature Review

Evidence suggests that Porter's conceptualization is oversimplified. Hall (1980), in a study of 64 companies in eight major industries, found that many of the most profitable firms had achieved *either* the lowest cost or the most differentiated position within their industry, a finding that supports Porter's position. However, Hall also observed that a minority of the most successful firms simultaneously pursued both a differentiation and a low-cost strategy, suggesting that the two strategies are not necessarily inconsistent. A study by White (1986) of 69 business units produced similar findings. White found that 19 of the 69 units had a competitive advantage based on a combination of both low cost and differentiation. Moreover, his results suggest that business units that successfully combined both low cost and differentiation had the highest return on investment.

Similarly, a PIMS study by Phillips, Chang, and Buzzell (1983) found a significant and positive relationship between "relative product quality" and "relative market position." In other words, there was a significant and positive relationship between differentiation and market share. Because increased market share enables the firm to reap scale economies, this study suggests that differentiation may be one way of establishing an overall low-cost position.

However, not all studies addressing the issue of generic business-level strategy have raised critical questions about Porter's scheme. In a study of the U.S. paint industry, Dess and Davis' (1984) findings were generally consistent with Porter's contention that commitment to at least one of the three generic strategies will result in higher performance. The extent to which Dess and Davis' study can be generalized, however, is limited by the small sample size ($n = 22$) and the narrow focus of their study.

Similarly, Hambrick (1983) examined high-profit strategies in mature capital goods industries and concluded that Porter's strategic types were well represented amongst high-profit clusters of firms. However, his findings also suggest that "the characteristics of an environment limit the range of *maximally feasible strategies*, such as that it simply is not accurate to say that all generic strategies are equally viable within an industry" (Hambrick, 1983, p. 702). Thus, although Hambrick did not observe mixed differentiation and low-cost strategies within the industries he examined, it is possible that within a different industry environment they would be found.

Combining Differentiation and Cost Leadership

Investment expenditure aimed at differentiating a product has *two* effects upon demand. The first is to create brand loyalty, decreasing the price elasticity of demand for the firm's product. The second is to broaden the appeal of a product, enabling the firm to capture more of the market at a given price and to increase the volume sold. This is particularly true when differentiation involves *breadth* of product line, but it also can be true for a single product. These effects are illustrated in Figure 1. Differentiation decreases elasticity of demand and the firm's demand curve

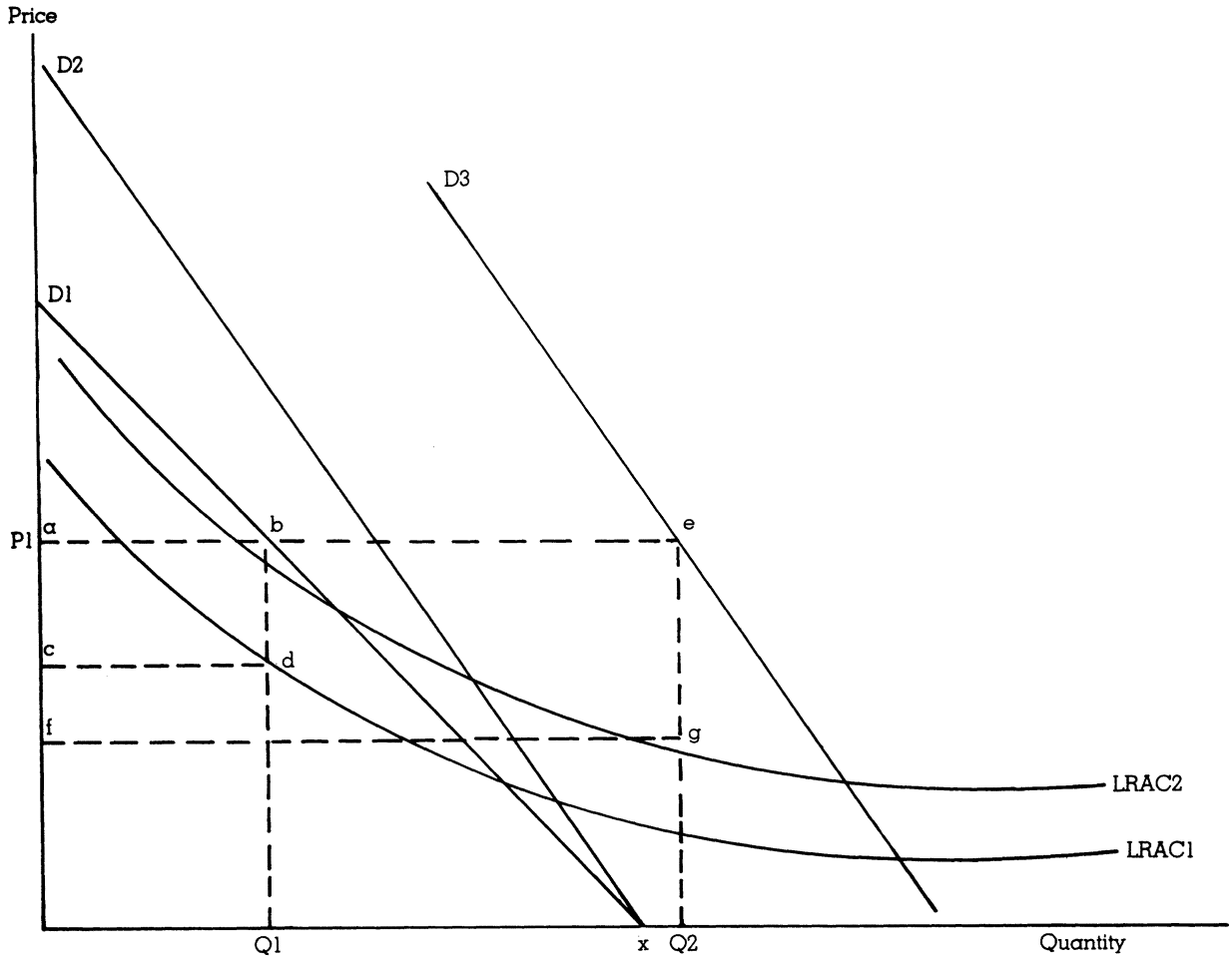

***Figure 1.* The effect of differentiation upon demand, costs, and profits.**

pivots about x from D1 to D2. It also broadens the appeal of a product, shifting the demand curve from D2 to D3.

The immediate effect of differentiation will be to increase unit costs. However, if costs fall with increasing volume, the long-run effect may be to reduce unit costs. Three sources of declining costs can be identified: learning effects, economies of scale, and economies of scope. The relevance of each is discussed in detail later. Whether differentiation is consistent with establishing an overall low-cost position depends on the extent to which costs decline with increasing volume.

For example, consider Figure 1: initially the firm is charging a price P1 and selling a quantity Q1. Increased expenditure on differentiation shifts the demand curve from D1 to D3. The increased expenditure also shifts the long-run average cost curve from LRAC1 to LRAC2. Initially, at a price P1, the firm would have been making a profit equal to **abcd.** If the firm holds the price constant, then as a consequence of the expenditure on

differentiation, the quantity sold increases from Q1 to Q2. The profit now earned by the firm is equal to **aefg**. Clearly **aefg** > **abcd**; profit has increased by an amount equal to **aefg** − **abcd**. The major reason for increased profit is that the LRAC curve is shown to decrease significantly over the range of output considered due to scale economies. In short, differentiation allows the firm to attain a low-cost position.

The situation discussed here will not always hold. The ability of differentiation to help the firm achieve a low-cost position depends on two factors: the extent to which expenditure on differentiation significantly increases demand, shifting the demand curve to the right, and the extent to which significant reductions in unit costs arise from increasing volume. Both of these factors are situation dependent, and they form the basis for the contingency framework discussed here.

Differentiation and Demand: Contingencies

The impact that differentiation has on demand depends on three major contingencies: the ability of the firm to differentiate its product, the competitive nature of the product market environment, and the commitment of consumers to the products of rival firms.

Ability of the Firm to Differentiate Its Product

The ability of the firm to differentiate its product is itself a function of two contingent factors: product characteristics and user characteristics. Any product can be viewed as a bundle of different characteristics or attributes (Lancaster, 1966). Attributes can be varied in quantity and/or combined in different ways to differentiate a product. The number of attributes inherent in a product creates scope for differentiation. Relatively homogeneous products, such as bulk chemicals, have few attributes and offer little scope for differentiation. More complex products, such as motor cars, contain many attributes and offer greater scope for differentiation.

However, there is not a direct linear relationship between number of attributes and opportunities for differentiation. Even a homogeneous product can be differentiated if the product has different uses, if it is sold to different user groups, if the psychosocial characteristics of consumers within or across user groups are diverse, or if a combination of these conditions exists. In short, the *diversity* of user characteristics is of critical importance. For example, it is common to find firms differentiating their product between industrial and domestic users. Similarly, it might be possible to successfully differentiate a relatively homogeneous product if the psychosocial characteristics of consumers within a given user group are diverse.

Competitive Nature of the Product Market Environment

The competitive nature of the product market environment moderates the relationship between differentiation expenditure and demand. There are two critical and significant contingent factors: market structure and the stage of product market evolution (Hofer, 1975). Industrial organization economics sees market structure as a key determinant of competition. Other things being equal, oligopolistic markets tend to be characterized by substantial nonprice competition (by attempts to differentiate the product). A major reason for this is the fear of price wars in circumstances in which conditions of oligopolistic interdependence apply.

There is empirical support for this proposition. The evidence suggests that an inverted-U-shaped relationship exists between a major determinant of market structure, concentration ratios, and differentiation. Cable (1973) and Sutton (1974) both found an inverted-U-shaped relationship between advertising to sales ratios and concentration ratios for samples of consumer goods industries (in consumer goods industries, advertising tends to be the most obvious expression of differentiation). Advertising intensity reached a peak in oligopolistic and duopolistic markets, before declining in monopolistic markets. Thus, the evidence suggests that often differentiation intensity is greatest in oligopolistic markets.

However, although efforts to differentiate appear to be greatest in oligopolies, it does not follow that differentiation has the greatest impact on quantity demanded within oligopolistic markets. Indeed, within *established* oligopolies, the opposite may hold. Given an absence of significant price competition, differentiation may be necessary simply to maintain current levels of demand. Differentiation effort by major players may cancel each other's effort. Hence, differentiation will not increase market share enough to enable the firm to realize substantial cost economies.

By way of contrast, in fragmented markets, differentiation can have a substantial impact on quantity demanded, thereby enabling the firm to realize cost economies. In fragmented markets, an absence of major players means that the canceling out effect does not apply. Thus, other things being equal, as we move from fragmented to oligopolistic markets, the impact differentiation expenditure has on demand declines.

There is a difference, however, between an established oligopoly in which market shares are stable and opportunities for expanding volume are limited and an oligopoly that is experiencing rapid growth. This brings us to the second contingency, the stage of product market evolution. Although the stage of product market evolution and the product life cycle (PLC) are *not* the same (a product or a product group may have its own life cycle within a more broadly defined product market), the two concepts are closely related, and often they are treated as synonymous for analytical purposes. Hofer (1975) suggested that the product life cycle may be the most important contingency variable in formulating a business strategy. There is evidence to support his idea (Anderson & Ziethaml, 1984; Hambrick & Lei, 1985; Macmillan, Hambrick, & Day, 1982), although it is questionable whether the product life cycle is *the most important* contingency variable (Hambrick & Lei, 1985).

PLC concepts suggest that competitive forces will be weaker in emerging or growth markets than in mature or declining markets, where growth is either slow or negative. Therefore, in growth markets, successful differentiation is likely to have a positive impact on volume and, hence, on the ability of the firm to realize scale economies. Conversely, in slow or negative growth markets, one firm's expansion must take place at the expense of another firm's market share. This intensifies competitive forces, makes expansion more difficult, and attenuates the ability of the firm to increase volume and realize cost economies through differentiation.

The impact that the product market environment has on the ability of the firm to expand demand through differentiation is summarized in Figure 2. This predicts that the impact that differentiation expenditure has on demand will be greatest in fragmented market structures characterized by high growth (Cell 1), and it will be least in low-growth oligopolistic markets (Cell 4).

Commitment of Consumers to the Products of Rival Firms

The costs of switching products and consumer brand loyalty for the products of rival firms are other factors that determine the extent to which differentiation can be used to increase demand. If the costs to users of switching to the firm's product are high, the impact that differentiation has on demand will be attenuated. The costs of switching products are likely to be greater when users have molded operations to a competitor's product and must bear reorganization or adaptation costs to switch to the firm's product. For example, Apple Computers faced a formidable problem switching personal computer users from the IBM PC to the Macintosh because of their high level of dependence upon PC-based software, applications, and networks.

Consumer loyalty for the products of rival firms is likely to be a function of many of the factors already discussed. Of particular importance, however, is the stage of product market evolution. As noted, efforts to differentiate peak within mature oligopolistic markets; therefore, other things being equal, consumer loyalty for the

Stage of Industry Evolution		Fragmented	Oligopoly
	High Growth Stage	Cell 1 High Impact	Cell 2 Medium Impact
	Low Growth Stage	Cell 3 Medium Impact	Cell 4 Low Impact

Market Structure

***Figure 2.* The impact of the product market environment on the ability of differentiation to increase demand.**

products of rival firms will be greatest at this stage. In addition, if the industry's product is perceived by consumers as a commodity (it has few attributes), then brand loyalty is likely to be lower.

Potential to Reduce Costs

Apart from demand, for differentiation to be a means of establishing a low-cost position, there must be a significant decline in costs while output increases. Only when the increase in costs due to differentiation is outweighed by cost reductions associated with expanding volume can differentiation be seen as a way of achieving a low-cost position.

In this connection, three sources of cost economies are relevant: economies due to learning effects, economies of scale, and economies of scope. Both economies due to learning effects and economies of scale have been identified as major underlying components of the experience curve phenomenon (Amit, 1986; Hall & Howell, 1985). To a large extent, the significance of cost leadership as an independent strategy is based on the presumption that the experience curve declines *continually* with accumulated output over time, a view popularized by the Boston Consulting Group (BCG) (1971).

Economies Due to Learning Effects

Researchers often assume that learning effects persist over time (Boston Consulting Group, 1971). However, evidence suggests that learning effects are greatest during the start-up period associated with a new plant or process (Alchian, 1963; Baloff, 1966; Hall & Howell, 1985) and that they decline and die out once a certain cumulative output is reached. Any observed cost decline in an experience curve after such a point, therefore, must be due to effects other than those associated with learning (e.g., economies of scale).

Given the nature of learning effects, the two major determinants of their importance are the age and the complexity of the manufacturing or service process used by an organization. The potential to realize learning effects will be greater in the case of a new process than in the case of an established process. Similarly, the more complex or variable a process, the greater the learning effects.

These factors are summarized in Figure 3. Learning effects will be most significant in the case of new and complex processes. In these circumstances, investment in differentiation to increase market share will have the greatest downward impact on unit costs. Learning effects also

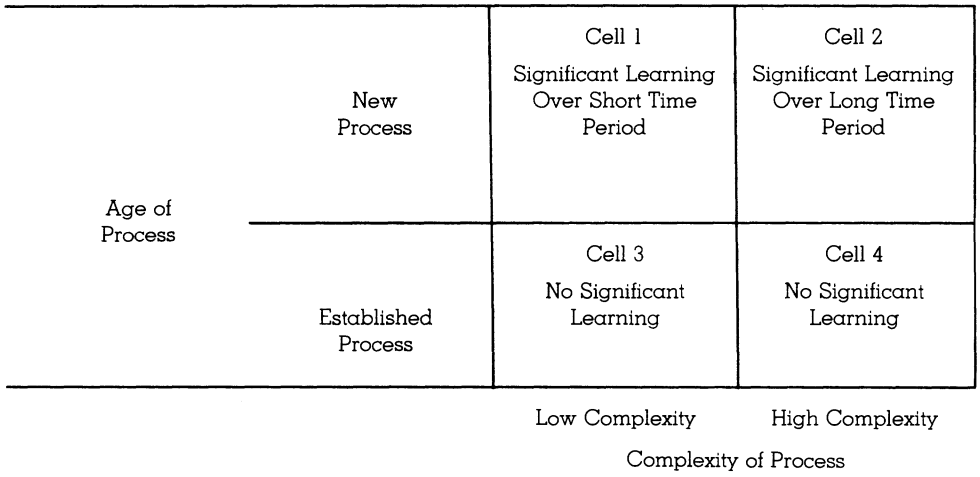

***Figure 3.* Learning effects and process.**

will be significant in the case of new processes, even if they are routine and involve low variability. However, in this case, the duration of the learning period will be shorter. If a process has been long established, learning effects will be negligible no matter how complex or variable the process.

Economies of Scale

After learning effects have been exhausted, further experience effects can be reaped only from economies of scale. There are two sources of scale economies: the plant level and the firm level. The concept of minimum efficient scale (MES) defines the minimum plant size necessary to realize plant-level scale economies. Empirical evidence suggests the following about the attainment of plant-level scale economies (Pratten, 1971; Scherer, Beckenstein, Kaufer, & Murphy, 1975; Silberston, 1972; Walters, 1963). First, once MES is reached, little in the way of additional cost reductions from plant-level scale economies is possible. Second, in many industries, the cost disadvantages of operating at substantially less than MES are slight. Third, in many industries, MES is reached at low levels of market share.

For example, Table 1 summarizes some of the results of a study by Scherer et al. (1975). This shows that MES, as a percentage of the market, was less than 5 percent for all but two of the industries examined, suggesting that there are only limited plant-level scale economies associated with pursuing volume. Moreover, the cost disadvantages of operating at one-third of MES were less than 10 percent for the majority of industries that were considered. In order to put plant-level scale economies in perspective, consider that a 10 percent cost disadvantage often can be overcome just as easily through more efficient management as by increasing operating scale.

The limited extent to which plant-level scale economies can be used and the asymptotic nature of learning curves suggest that the experience curve, as defined by the BCG, does not continually decline: Instead, it bottoms out. After it bottoms out, expanding output will not produce further cost reductions. In this connection, Hall and Howell (1985) argued that the BCG's demonstrations of continually declining experi-

Table 1
Minimum Efficient Scale (MES), Market Share, and Cost Disadvantages of Operating at Less than MES

Industry	MES as % of U.S. Market	% Increase in Costs at 1/3 MES
Brewing	3.5	5.0
Cigarettes	6.5	2.2
Fabrics	0.2	7.6
Paints	1.4	4.4
Petroleum Refining	1.9	4.8
Shoes	0.2	1.5
Glass Bottles	1.5	11.0
Cement	1.7	26.0
Steel	2.6	11.0
Bearings	1.4	8.0
Refrigerators	14.1	6.5
Storage Batteries	1.9	4.6

Note. From *The Economics of Multiplant Operations* (pp. 80, 94) by F. M. Sherer, A. Beckenstein, E. Kaufer, and R. D. Murphy, 1975, Cambridge, MA: Harvard University Press. Copyright 1975 by Harvard University Press. Reprinted by permission.

ence curves can be largely explained by spurious correlations. If the experience curve does bottom out, the potential for using differentiation to achieve a low-cost position would be limited to situations in which new processes are being introduced.

However, this view ignores the impact that volume has on firm-level scale economies. Firms can exploit firm-level scale economies in marketing, buying, distribution, finance, and so forth as well as economies from multiplant operations (Prais, 1976; Scherer et al., 1975). Unfortunately, there is little evidence about the significance of firm-level scale economies. In one such study, Prais (1976) showed that the cost of capital for large firms is markedly lower than for smaller enterprises, suggesting that substantial financial economies exist at the firm level. Prais attributed this to the reduced risk that investors attach to lending to very large firms.

More generally, Scherer et al. (1975) compiled evidence (interviews) on the number of multiplant operations at MES a firm must have in order to realize firm-level scale economies. This evidence indicates that when firm-level scale economies are accounted for, the requisite market share necessary to realize the majority of cost saving does increase markedly in some industries, but not at all in others. For example, in Table 1, the output necessary in the beer industry to reach MES was only 3.5 percent of the U.S. market. However, Scherer et al. found that for this industry to realize firm-level scale economies, between three and four MES plants were needed and a 10–14 percent market share. Given that the average market share of the three leading firms at the time of the study was 13 percent, this suggests that scope existed for medium-sized firms to use differentiation as a means of expanding volume to realizing firm-level scale economies, thus matching dominant firms in terms of cost position. On the other hand, no significant firm-level scale economies were identified for some of the industries in Table 1 (e.g., paints, cement, ordinary steel, batteries). This suggests that many firm-level scale economies are industry dependent. Hence, the ability of the firm to use differentiation to establish a low-cost position depends on the extent to which firm-level scale economies can be realized within that industry.

Economies of Scope

For a range of goods, economies of scope imply a potential for sharing resources, which reduces the economic cost of producing them (Teece, 1980). This is relevant to the present debate because a common differentiation strategy involves the manufacture of a product line that serves several market segments. Economies of scope can reduce the costs of differentiation by product line. In terms of Figure 1, the rise in the LRAC curve due to differentiation would be attenuated. Indeed, in extreme cases, the LRAC curve might fall due to economies of scope. If this occurred, differentiation would then be *the* way of establishing a low-cost position.

Unfortunately, although theory about economies of scope has been well developed, there

have been no attempts to systematically test for economies of scope. It is not possible, therefore, to reach any conclusions concerning their overall significance. All that can be said at this juncture is that for firms whose differentiation strategy involves manufacturing a product line, economies of scope are a potentially important determinant of the extent to which differentiation can be used to establish a low-cost position.

Bringing the Concepts Together

By pulling together the concepts discussed so far, some general conclusions can now be reached about the issues raised at the beginning of this article. First, the contingencies under which it might be feasible to use differentiation as a means for achieving a low-cost position can be identified. Second, it is now possible to show when a sustained competitive advantage might be based on the simultaneous and continuous implementation of both low-cost and differentiation strategies.

Differentiation to Achieve Low Cost

Differentiation is most consistent with achieving a low-cost position under the following circumstances: when the firm's ability to differentiate the product is high, when consumers' commitment to the products of rival firms is low, when market growth is high, when market structure is fragmented, when the production process is new and complex, when economies of scale (particularly firm-level) are present, and when economies of scope exist. It is not necessary that all of these contingencies exist concurrently for the strategy to succeed. However, some contingencies are critical if the strategy is to work. Specifically, if the firm's ability to differentiate the product is low, if switching costs are high, if the production process is well established, and if economies of scale and scope are negligible, the strategy will not work. Thus, at a minimum, it must be possible to differentiate the product, switching costs must be reasonable, and there must be the potential for cost reduction from some source, whether it is from learning effects, economies of scale, or economies of scope.

It is also possible to identify specific industry environments within which the strategy is more likely to succeed. The importance of high market growth and a fragmented market structure on the demand side and learning effects on the cost side suggest that differentiation can be a strategy for achieving a low-cost position in emerging industries. As markets mature, differentiation becomes less relevant for a firm to achieve a low-cost position. Typically, in mature markets, growth is low, the structure is oligopolistic, brand loyalty is well established, and processes are well developed. These factors attenuate the impact of the strategy. However, even in mature markets, opportunities may arise for a firm to use differentiation in order to achieve a low-cost position: Technological change that leads to new processes can make learning effects significant again. If this occurs, the firm may use differentiation to facilitate movement down the new experience curve to a position of competitive advantage.

Simultaneous Emphasis on Differentiation and Low Cost

When the firm uses differentiation to achieve a low-cost position, it is emphasizing both strategies. However, this is not the only situation in which differentiation and low cost are emphasized simultaneously. The firm may stress both differentiation and low cost even when the impact that differentiation has on demand is negligible and when the firm has already achieved a low-cost position. This occurs when the low-cost position gained by the firm is *not* unique.

A presumption underlying the notion of a low-cost strategy is that it is possible for a firm to become *the* overall cost leader in an industry. In other words, that there is a unique cost leadership position that can be occupied by only one firm at any given time. This presumption is based upon the notion of a continually declining experi-

ence curve. But, in many situations, the continually declining experience curve is fiction: Learning effects die out, plant-level scale economies can be exhausted, and firm-level scale economies seem to be industry dependent. This suggests that in many industries there is no potential for a firm to gain a unique overall low-cost position. A more realistic view is that there is some threshold level of market share necessary in order for a firm to gain all substantial economies from learning and scale effects. Moreover, this threshold level might be relatively low, such that several firms in an industry could have a minimum-cost position. Hence, there may be a group of firms in an industry that have realized significant economies from scale and learning effects. If this is the case, then how can individual firms in the low-cost group establish a sustainable competitive advantage over other firms in this group?

One way by which individual firms in the low-cost group could still gain additional cost economies, despite the exhaustion of scale and learning effects, is through differentiation by product line to achieve economies of scope. As noted above, in extreme cases, economies of scope may be substantial enough to produce a downward shift in the firm's LRAC curve. However, an overall low-cost position created in this way is still not unique. By similarly differentiating their product lines, other firms also could benefit from the same economies of scope. Soon the competitive advantage of the firm would be eroded, and the problem of how to sustain a competitive advantage would remain.

A partial answer to this dilemma is found in Hambrick's (1983) suggestion that three dimensions underlie Porter's scheme: efficiency, differentiation, and scale/scope (the third dimension should probably be scale/scope/learning). Even when economies from scale, scope, or learning have been exhausted, a firm can still become a cost leader simply through efficiency. However, efficiency is not so much a strategy as a function of the skill with which a firm manages the process of converting inputs into outputs. Efficiency is sustainable, but it is also imitable. Management skills are not firm-specific; they can be bought on the open market. Although a firm can gain a competitive edge by being more efficient, efficiency, over the long run, can be matched by other firms.

By way of contrast, differentiation creates something that is specific to the firm. It creates brand loyalty for consumers that, once established, can take on the characteristics of a durable asset. Therefore, because differentiation is based upon firm-specific skills and creates a durable asset, it is more difficult to imitate. Hence, differentiation can form the basis of a sustainable competitive advantage when all significant cost economies have been exhausted.

In sum, it is suggested that once a firm *has achieved a minimum-cost position*, and efficiency among competing firms is equal, it can gain a sustainable competitive advantage only through some form of differentiation. The extent to which it is possible for a firm to do this without simultaneously jeopardizing the advantages of a minimum-cost position depends on how price-sensitive consumers are (the extent to which brand loyalty effects outweigh price effects). For industries in which price sensitivity is low, successful differentiation, and the extra price it entails, will not jeopardize market share sufficiently to threaten the firm's minimum-cost position.

Thus, for a group of firms that has achieved minimum costs, a sustained competitive advantaged might be based on both differentiation and maintaining a minimum-cost position. Anecdotal evidence suggests that this is the case for many mature oligopolistic industries. In the auto industry, for example, major firms have differentiated their products and at the same time have not jeopardized their low-cost position. Indeed, once differentiation becomes an industry norm, then failure to differentiate by a firm may result in a declining market share and the loss of scale economies. Hence, differentiation may become the way a firm maintains its scale economies and safeguards its market share. Far from being incompatible, the simultaneous pursuit of both

differentiation and low cost may be necessary to both establish and maintain a sustained competitive advantage.

Conclusion

This article has developed a framework that identifies the contingencies under which differentiation and low-cost strategies are compatible. These contingencies and the relative importance they hold for firms are summarized in Table 2. Two main conclusions follow from the discussion presented here. First, differentiation can be a way of achieving a low-cost position. Second, because there often is no unique low-cost position, a firm may have to base its sustainable competitive advantage on the simultaneous and continuous pursuit of both low cost and differentiation.

Table 2 suggests two major industry environments within which differentiation might be used to achieve a low-cost position. The first environment is within emerging industries that are characterized by high growth, that have significant learning and scale economies, and that have the potential to differentiate the product. The second environment is within mature industries that are experiencing significant technological change because the implied change in process gives rise to new learning economies. More generally, the simultaneous pursuit of differentiation and low-cost strategies is most likely to be consistent with superior performance in mature industries where all experience curve economies have been exhausted and several firms have achieved a minimum-cost position.

Some important implications for managers and researchers follow from these conclusions. Managers need to recognize that differentiation can be a way of achieving low cost and that a sustainable competitive advantage frequently involves the simultaneous pursuit of differentiation and low-cost strategies. The contingency framework that is developed here and summarized in Table 2 provides the basis for identifying when these two conditions hold. In addition, researchers need to consider how the simultaneous pursuit of both strategies might have an impact on the firm's profitability. Table 2 can provide the beginning point for such future empirical research.

Table 2
A Summary of the Important Contingencies Affecting the Compatibility of Differentiation and Low Cost

Major Contingency	Secondary Contingencies	Comments
Ability to differentiate	User characteristics Product characteristics	Diversity of users necessary for differentiation.
Commitment of users to products of rival firms	Switching costs Brand loyalty	Brand loyalty greatest in mature oligopolies.
Product market environment	Market structure Product market evolution	High growth state of PLC most important secondary contingency.
Learning effects	Age of process Complexity of process	Age of process very important: New processes imply significant learning.
Economies of scale	Plant level Firm level	Plant level often exhausted at low market share; firm level may be more significant.
Economies of scope		Dependent upon breadth of product line. May be important.

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