

Victor J. Cook, Jr.

Understanding Marketing Strategy and Differential Advantage

This article summarizes key concepts of marketing strategy and differential advantage, compares each concept with the comments of critics (see 2 preceding articles, this issue), and attempts to resolve the apparent differences of opinion.

THE relationship between marketing strategy, capital investment, and company performance is crucial to the success of every business operating in a competitive market. This relationship is as important to manufacturers of products as it is to producers of services in both consumer and business markets, domestic and foreign. In every language, in any competitive market, a marketing strategy drives investments in search of long-term growth in shareholder value. A marketing strategy is formulated with reference to market demand and competitive and company conditions. Successful capital investments in part depend on a firm's capacity to produce, promote, deliver, and price its products and services. A marketing strategy is the manner in which company resources are put at risk in the search for differential advantage.

Judging the intent of a strategy or the extent of its risk requires a conceptual framework capable of incorporating a wide range of current facts and opinions about future marketing events. The framework explicitly identifies the variables of interest and suggests

hypotheses about their behavior which may be submitted to empirical testing. One would hope the conceptual framework is sufficiently simple to be widely understood and sufficiently robust to stimulate debate. It is in the spirit of these expectations that I wrote the original paper on marketing strategy and differential advantage.

An Interpretative Comparison

This article compares key concepts on marketing strategy and differential advantage (Cook 1983) with the comments of critics. I label the comparison "interpretative" because it reflects my own understanding of the problems. Two fundamental issues are involved. One is theoretical, the other empirical. Eight concepts of marketing strategy and differential advantage are shown in Figure 1. A summary description of each concept appears in the column headed *Cook 1983*, followed by the comments of Parasuraman and Varadarajan (P&V 1985) and Chattopadhyay, Nedungadi, and Chakravarti (CNC 1985). An interpretative comparison of theoretical questions related to the first seven of these concepts is followed by a discussion of empirical questions concerning the case of USAUTO.

Victor J. Cook, Jr., is Associate Professor and Marketing Area Coordinator, The A. B. Freeman School, Tulane University. The author thanks Ed Strong and Marjorie Utsey for reviewing early drafts of this article.

FIGURE 1
Marketing Strategy and Differential Advantage: An Interpretive Comparison

	Cook 1983	Parasuraman and Varadarajan 1985	Chattopadhyay, Nedungadi, and Chakravarti 1985
Concept			
● Strategic Ambition	Symbolized as y in expression $e = ye^*$.	Cook ignores strategic variables.	Cook's " y " is merely a ratio of company spend vs. competition.
● Investment Variables	Product, promotion, place, and price variables.	Use selective high and low share strategies.	Authors replicate Cook's measures.
● Calibrating Ambition	Strategic multiples are:	Military analogy may be questioned.	Military analogy may be questioned.
Dominate	$y = 3.00$	Cook's 3:1 ratio is misleading and dangerous.	Carefully assess firm's advantages.
Attack	$y = 2.00$	—	—
Match	$y = 1.00$	—	—
Flank	$y = 0.33$	Why cost efficient?	—
Retreat	$y = 0.05$	—	Fragmented industry is not in retreat.
● Strategic Cost Function	$x' = y'/(1 + y')$ and $e' = (x'/(1 - x'))e^*$.	Cost function merely an artifact.	Just simple arithmetic.
● Differential Advantage	Linear: $da = x' - m1$ Nonlinear: $da = x'^B / (x'^B + (1 - x')^B) - m1$	Use attractions, not investments.	Cook's predictions are reversed.
● Market Response	$m1 = f(x')$	Response may be nonlinear.	Cook's linear results hold unequivocally.
● Marketing Risk	Root-mean $(x' - m1)^2$	—	Cook's measure not significant.
● Case of USAUTO	Illustration of theory.	Cook fails to include refinements.	Cook's correlations are weak.

Strategic Ambition and Investment Variables

The concept of strategic ambition was introduced to focus attention on the driving force behind marketing investments. Ambitions are expressed as spending on company specific strategic variables in relation to competitors and symbolized as y in the expression $e = ye^*$. Performance is measured by the net present value of market share from investments in a firm's capacity to produce, promote, distribute, and price its products:

If marketing expenditures represent true investment options, further inquiry must be made into the nature of these investments. What are the marketing investment options in product, promotion, place, and price and how are they measured? The payoff, the net present value of market share, is the output of a set of marketing strategies (Cook 1983, p. 70).

A partial list of the strategic variables and measures appeared in Table 3 (Cook 1983, p. 71). The

relationship between a strategy, investment costs of specific mix variables, and the impact on market share is described explicitly.

My critics argue the concept of strategic ambition is of limited value. One claims the concept "ignores the possible impact of contingency variables . . ." (P&V 1985, p. 125). These authors suggest a need to express "selective strategies for competing" by high and low share businesses in stagnant industries and hostile environments. I agree with the need to specify selective strategies. Table 3 (Cook 1983, p. 71) suggested how to express strategic variables in specific terms. The "leading books and articles . . . do not appear to treat investments per se as ambition" (P&V 1985, p. 126) because the concept was only recently introduced into the literature.

In their paper, CNC (1985) argue the "strategic marketing ambition concept is merely a ratio specifying how much the target firm chooses to spend vis-à-vis its competitors" (p. 130). This is precisely the

idea. Ambition must somehow be mapped onto investments. A capital outlay today increasing a firm's capacity to produce, promote, or deliver utility to consumers five years in the future is the essence of ambition. The concept of strategic ambition incorporates the effects of competition on a firm's expectations and investment costs (Caves 1984). A competitive advantage must be expressed as *some* function of a firm's resources to its rivals. For example, Apple Computer, Inc. should have in part based its decision to invest in Macintosh production capacity on IBM's capacity to produce PC Jr's. Frito-Lay should have carefully assessed its investments in salesforce capacity with reference to Nabisco's cookie selling capacity. The concept of expressing a firm's strategic ambition as the ratio of its spending to competitors' on specific mix variables formalizes an implicit relationship. CNC offer no alternative, but replicate my Table 3 measures in their analysis of the case of USAUTO (CNC 1985, Table 2).

Calibrating Ambition

Ambition drives current capital outlays in search of future ROI, share of market, and cash flow. Calibrating ambition is the first step in understanding strategy. I suggested three points of reference:

Dominate is the most ambitious strategy short of monopoly. At the other extreme, a retreat strategy invests at the rate implied by a strategic multiple approaching zero. In the midrange of ambition, a match strategy is, by definition, investing at a rate that matches or equals competitive resource deployments. The strategic multiple is therefore equal to 1.0 with a match strategy (Cook 1983, page 70).

Should a firm wishing to dominate its competition establish a 3:1 strategic multiple? P&V think not and CNC echo that "the relevance of military analogies" may be questioned. All five authors argue for a "careful assessment of a firm's resources, strengths and weaknesses, and competitive advantages" (P&V 1985, p. 124) based on "empirical efforts in the substantive marketing arena" (CNC 1985, p. 130). I could not agree more. The calibration of strategic ambition should be tested in the marketing arena. Military analogs only offer reference points as hypotheses.

How big an advantage is required to dominate a market? The 3:1 ratio is only one point of reference. P&V offer no alternate hypothesis to my calibration of a dominate strategy at 3:1 and suggest no reason why it is misleading or dangerous. They fail to indicate whether the calibration of ambition would be less misleading and more benign were it greater or less than 3:1.

Alternate hypotheses on the calibration of a dominate strategy can be proposed. The 3:1 calibration may be arguable because it understates the ambition of innovators. These adventurous companies may enter a

market with a hundred to one ratio of ambition. Consider Chester Carlson's investments in electrostatic imaging in relation to competition. Compare Edwin Land's investments in self-developing film relative to Kodak. Calibrate the ambitions of both these entrepreneurs as infinite, and one begins to appreciate the resources needed to fund their strategies. A firm in an established, growing market may commit resources at a ten to one ratio or more, in anticipation of dominating the market. Perhaps the strategic multiple necessary to dominate a market should be set higher than 3:1 in the pre-introduction and growth stages of the product life cycle. Neither paper comments on my calibration of the match strategy at 1:1, apparently accepting this relationship and thereby agreeing a ratio of dominance must be greater than one to one. P&V are concerned with the hypothesis that a flank strategy is most cost efficient, though they seem to accept its calibration at 0.33.

Does limited ambition on an industrywide scale always signal retreat? The differences in market structure which CNC argue may "impact . . . the competitive stance implied" by my calibration of ambition are entirely consistent with the levels of investments associated with a retreat strategy. The authors agree a 5% share of investments is evidence of retreat from a single, large competitor. They argue the same 5% share of investments is inappropriately labeled a retreat strategy if the firm faces 19 equally small competitors. CNC (1985) conclude "consistent application of (the) framework would view every firm in this industry as in retreat" (p. 130). This is one conclusion to be drawn. No single competitor has taken market leadership. Fragmented industries like these are local markets in home construction, auto parts, and medical service. As CNC correctly suggest, there are important strategic differences when the average spending level of many rivals is uniformly limited. This signals a weakness in the market and an opportunity for the aggressive firm.

Strategic Cost Function

The game of poker offers an analog for understanding the relationship between strategic ambition and marketing costs. If the richest player in a game has a \$5 reserve for the last call in a pot worth \$3, he can buy the table and dominate the play. The poorest player with the same reserves has little influence over the last call with a pot worth \$1,000. He will be forced to fold even with a winning hand. The outlays required to sustain a strategy change with the value of the table stakes. The strategic marketing cost function formalizes this concept:

A marketing strategy consists of ambitions calculated to achieve specific shares of (market) deployments in

product, promotion, place, and price. Identify these shares of marketing investments by the vector x' and recognize that it has at least four dimensions in marketing strategy corresponding to each mix element. The share of strategic investments implied by a firm's marketing ambition is calculated from the expression $x' = y'/(1 + y')$ (Cook 1983, page 71).

A firm's ambition is expressed as a ratio of its costs to those of its designated competitors. Dominating a market at a three to one multiple translates into owning an average of 75% of market investments in the capacity to produce, promote, and distribute the product or service. The strategic cost function is a powerful demonstration of the theoretical relationship between the *firm's costs* and the *investments of competitors*, for any level of ambition. The simplicity of the arithmetic (CNC 1985, p. 130) is one of its virtues. P&V term the strategic cost function "merely an artifact of the way Cook defines x and y and says nothing about a firm's market share vis-à-vis its strategic marketing investments" (P&V 1985, p. 125). A *cost function* should not be expected to say anything about market share. Demand is a question of market response.

Differential Advantage and Market Response

The concept of differential advantage was introduced into the marketing literature by Alderson (1957) as the dynamic force behind competitive markets:

Absolute advantage . . . is not enough if all competitors live up to the same high standard. What is important in competition is differential advantage. . . . it is the unending search for differential advantage which keeps competition dynamic. A firm which has been bested by competitors according to certain dimensions of value in products or services always has before it the possibility of turning the tables by developing something new in other directions. The company which has the lead is vulnerable to attack at numerous points (p. 101-102).

My article gave formal expression to Alderson's concept:

Differential marketing advantages are the keys to success. If x' is (a vector of) the firm's share of strategic investments and $m1$ is its share of market quantity, the differential advantages are calculated by subtraction: $da = x' - m1$ there is a persistent tendency for long run share of market to follow the differentials associated with strategic commitments (Cook 1983, p. 74).

Differential advantage is the *difference between a firm's capacity to supply products and market demand* for its output. When a firm finds its shares of industry capacity to produce, promote, deliver, and price its products are below its current share of market, $m1$ will be "pulled down." This pattern of strategic response is called "harvesting." When the firm's shares

of strategic marketing capacity exceed its current share of unit sales, $m1$ will be "pulled up" in search of a new balance in consumer preferences. This pattern of strategic response is known as "building." When strategic shares and market share are equal, the firm is in equilibrium, a pattern called "holding."

CNC agree my linear results hold unequivocally, but take issue with my assertion that a firm's shares of strategic investments (x') will tend to pull share of market ($m1$) up or down regardless of the response function one assumes. The authors claim "in many instances the direction of adjustment may be exactly the reverse of that predicted by Cook" (CNC 1985, p. 132). They present an example designed to illustrate this conclusion. The result of CNC's example, a negative differential with an *increase* in market share, is compelling on its face. It does, however, contain one error in logic. The shift from a linear to a nonlinear response function requires a like shift from a linear to a nonlinear differential advantage. CNC demonstrate my predictions reverse when one combines a *nonlinear* response function with a *linear* expression of differential advantage.

The computation of differential advantage must be consistent with the market response function. The expression for nonlinear differential advantage is: $da = x'^B/(x'^B + (1 - x')^B) - m1$. CNC will find that the tendency for strategic shares to pull market share in the direction of their expected value holds for any response function if they frame the differential expression properly. The nonlinear differential in CNC's example is +0.04 for Firm 1. As to which is the general and which the special case in CNC's Figure 1, I leave it to the reader's judgment. The uncertainties of competitive response, the discontinuity or capital outlays, and abrupt changes in primary demand may lead some to prefer the linear solution as a first approximation.

Marketing Risk

A final step in understanding marketing strategy calls for a measure of marketing risk. Intuitively, equating long run market share with anticipated capacity share incurs less specific risk than either building or harvesting strategies. "The variance in x' about $m1$ suggests a useful measure of strategic marketing risk" (Cook 1983, p. 74). CNC's (1985) confusion of nonlinear market response with linear differentials led them incorrectly to conclude "the riskiness of a particular configuration of strategic mix expenditures has more to do with the variability associated with market response . . . than with the variance of investment shares around $m1$ " (p. 135). Both market response and share of strategic investments have an impact on marketing risk. The measurement of specific risk in marketing decisions is an important topic for future research.

The Case of USAUTO

To illustrate the method of analysis, I presented a brief account of the competitive battle between USAUTO and its foreign rivals, FORNAUTO, in 1975. In that account I suggested "no matter what its intentions may have been, USAUTO was harvesting on its product, promotion, and place investments in the model year 1975" (Cook 1983, p. 74). I noted as well that "in the last ten-day reporting period of 1981, FORNAUTO had achieved nearly a 36% share of market. No doubt the underlying investment strategies of these two world class rivals have been transformed as well" (Cook 1983, p. 74).

CNC attempted to test the validity of these concepts of marketing strategy and differential advantage with the methods of analysis illustrated in the case of USAUTO. CNC's test compared their estimates of 1975 disaggregate company differential advantages with their estimates of changes in company market shares between 1975 and 1981. CNC (1985) concluded "the correlations on which (Cook's) interpretation was based are weak when examined at the level of individual firms" (p. 134). I have three substantive objections to this conclusion.

First, one cannot predict the sign and magnitude of changes in market share between 1975 and 1981 without measuring the changes in strategic investment shares (x') over the intervening years. The underlying patterns of strategic investments for each company could easily have changed in seven years. CNC did not consider this possibility in their empirical test.

Second, questions of measurement error are significant in testing hypotheses about USAUTO. The relevant levels of aggregation are arguable. Should shares of strategic investments be based on the entire industry, on companies, on divisions, or on market segments? The question of market definition has far-reaching theoretical and empirical implications. What rules did CNC use to account for captive imports over the seven-year interval? The industry's own conventions change over time. Errors in the classification of company sales will contaminate the dependent variables in CNC's correlation analysis.

Measurement errors also creep into the independent variables. Are median prices weighted by market segment volume? If not, CNC's estimate of AMC's price differential in 1975 would be overstated. How were the number of dual (foreign and domestic) dealerships separated? Is the inclusion of only one variable from each marketing mix factor sufficient for a balanced test? Questions of measurement error should be in the forefront of careful hypotheses testing, not left to the reader's imagination.

Finally, I neither inferred causation from correlational data nor offered the analysis of USAUTO as proof

of the theory's validity. The case was based on widely available evidence (Star et al. 1977) and used to illustrate the application of theory. I selected USAUTO because it was a source of public data on primary demand and each of the four strategic mix elements for all major competitors. Correlational analyses were not necessary to illustrate the theory. A rigorous econometric test of the hypotheses, based on a complete set of USAUTO data, would be welcome. CNC's attempt to test the theory on two incomplete data points is inconclusive.

Conclusions

A marketing strategy is the manner in which company resources are put at risk in the search for differential advantage. The sources of differential advantage are investments in product, promotion, place, and price variables to maximize the net present value of market share. A conceptual framework is needed to integrate these concepts into a comprehensive planning sequence. This article develops an understanding of such a framework, as presented in my earlier article on marketing strategy and differential advantage.

Current capital outlays to sustain long run future demand are the essence of ambition. Calibrating strategies clarifies the effect of a firm's investments on the achievement of its ambitions. It also assists in comparison of alternative current strategies among firms and over time. Strategic ambition motivates the behavior of both high and low share firms in many different environments.

The strategic cost function enables management to calculate the cost of achieving its ambitions conditioned on anticipated competitive investments in the capacity to produce, promote, and deliver its products to designated market segments. The firm can then compare this cost with the value of resulting market share to select an optimal long run strategy. A differential advantage exists when the share of a firm's investments in a strategic factor exceeds its share of market. Long run market shares tend to be pulled up or down in the direction of strategic differential advantages. This tendency persists for all response functions when both the market response and differential expressions are correctly specified. The riskiness of a strategy is suggested by the variability of a firm's investment shares relative to its share of market.

The case of USAUTO demonstrates the way in which management can apply the conceptual framework to industry data to generate operationally meaningful results. "Management . . . should calculate coldly the differential advantages implicit in their own product, promotion, place, and price strategies" (Cook 1983, p. 75). That marketing scholars can use these concepts to direct scientific discussion was shown by this exchange.

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