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Strategic Adaptability and Firm Performance: A Market-Contingent Perspective

The authors test the proposition that the effectiveness of a particular strategic orientation—reactor, defender, analyzer, and prospector—is contingent upon the dynamics of the market. In mildly volatile markets, analyzer organizations are found to outperform other organization strategy types. However, in more volatile markets, the strategy-performance alignment is less clearly determined by the market environment.

THE problem of balancing the benefits and costs of adaptability is fundamental to business strategy (Abernathy and Wayne 1974; Miles 1982; Miles and Snow 1978; Weick 1979). At one extreme, the organization can maintain an external focus, with an accompanying ability to adapt to market change, but at significant cost. At the other extreme, by focusing on a narrowly defined product-market, the organization can focus internally, but with an accompanying risk of failing to adapt when market change occurs.

Weick (1979) summarized the inherent tradeoff between an internal and an external focus by noting that “adaptation precludes adaptability” (p. 135), that is, organizations fitted to a specific niche may be unable to adapt to change whereas organizations designed for change may not fit any particular niche. These countervailing factors are fundamental to business strategy (Abernathy and Wayne 1974; Miles 1982).

Adaptive capability has been related in organiza-

tion theory to the concept of organizational slack, which Bourgeois (1980, p. 30) defines as:

... that cushion of actual or potential resources which allows an organization to adapt successfully to internal pressures for adjustment or to external pressures for change in policy, as well as to initiate changes in strategy with respect to the external environment.

Miles (1982, p. 250), in his analysis of the cigarette industry’s adaptation to changing market conditions, demonstrated that cultivating the loyalty of consumer and other constituencies and developing managerial skills that fit “strategic alternatives for organizational coping” are forms of slack or adaptive capability that can be strategically valuable to the organization. Similarly, Chakravarthy (1986) uses a theory of organizational effectiveness based on development of slack resources to discriminate between “excellent” and “non-excellent” firms.

The adaptive organization has been characterized as deliberately inefficient. Efficiency is associated with a narrow scope of activities and attention, with little variation in standard practice. Adaptive capability, in contrast, has been associated with the “wandering organization” (Zammuto 1982), using “voluntary elaboration of process” (Weick 1977, p. 222) and involvement of the “nonright type” individual (Cameron and Whetten 1983, p. 257) to arrive at variations of standard practice.

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The concept of marketing adaptiveness is a useful organizational counterpart to environmental dynamism. A firm may develop the capability to adapt to market shifts by conducting long-range market scanning, monitoring customers, cultivating customer loyalty through appropriate marketing programs, engaging in product development, monitoring competitors' pricing, building an extensive distribution network, developing promotional programs, screening and training personnel, and lobbying various levels of government for action (or inaction) favorable to the firm. However, though these actions increase the ability of the firm to adapt to changes in the market, they are also costly. Because building market-adaptive capability into a firm is expensive, it seems reasonable to expect that the level of this capability will vary, depending on the strategy of the firm.

Miles and Snow (1978), in their typology of organization strategies (reactor, defender, analyzer, and prospector), postulate that the more active a firm is in its pursuit of new product-market opportunities, the more adaptive capability it will build into its tactical base.¹ In the Miles and Snow typology, the firm that attempts to be the most active in seeking new markets (a "prospector") is hypothesized to have the greatest adaptive capability. As we detail subsequently, the reactor-defender-analyzer-prospector typology can be viewed as an ordinal array in terms of the extent to which firms in these categories develop adaptive capability to respond to the market.

The study we report tests the proposition that the performance of various organizational strategy types, where strategy is conceptualized in terms of the market responsiveness inherent in the external-versus-internal tradeoff, is contingent on the dynamics of the market in which the organization operates. The premises underlying the proposed relationship among market dynamics, organization strategy, and performance are: (1) the level of market effort is related systematically to the level of market adaptation required by a firm's strategic orientation and (2) the payoff on a given strategy is contingent upon the match between the adaptive content of the strategy and the dynamics of the market.

Organization Strategy and Market Adaptability

The Miles and Snow (1978) strategy typology—reactor, defender, analyzer, prospector—captures the

¹In reference to the typology of organization strategies proposed by Miles and Snow (1978), the terms "organizational strategy," "organization strategy type," "strategic orientation," and "strategy type" are used interchangeably here.

business-level strategic tradeoff between external and internal orientation. These four strategy types, which are based on the firm's product-market orientation, constitute a continuum of increasing adaptive capability ranging from the reactor (with relatively little adaptive capability) to the prospector (with the highest level of adaptive capability).

The reactor is assumed to lack adaptive capability because, in the absence of a strategic orientation, it fails to develop the mechanisms needed to sense and respond to (or precipitate) changes in the market. This condition results from (1) lack of a clearly articulated strategy by top managers, (2) lack of appropriate linkages between strategy and the organization's structure and processes, and (3) a tendency for managers to maintain the organizational status quo despite environmental change (Miles and Snow 1978).

The defender deliberately reduces adaptive capability (and costs associated with such capability) by selecting a stable and narrowly defined market domain, which enables the defender organization to emphasize operating efficiency. An advantage of the defender's efficiency-based strategy is reduced operating cost. However, a corresponding risk of such a strategy, with its internal focus, is that the nature of the market will change (see Abernathy and Wayne 1974; Henderson 1984). Because the defender deliberately limits adaptive capabilities, it is unlikely to notice market change or to be able to adapt to change if it is noticed (Miles and Snow 1978).

The analyzer maintains a stable domain, wherein it can operate with relative efficiency, but also attempts to identify (through market scanning and research) emerging opportunities. Because it is often "second in" to new product-markets, with the advantage of observing and learning from the new product problems of other firms, the analyzer often achieves above-average new product success rates (Miles 1982).

The prospector focuses on identifying and capitalizing on emerging market opportunities, thus placing its primary emphasis on researching and communicating with the market. Because of its external orientation, the prospector tends to maintain (and bear the costs inherent in) extensive capabilities for responding to market change (Miles and Snow 1978).

Hypothesized Relationships

Organization Strategy–Marketing Tactics Congruence

Contingency theory postulates that the effectiveness of the organization depends on the congruence between elements of the organizational subsystem and the demands of the environment (macrocongruence), as well as the congruence of these subsystem elements

among one another (microcongruence).² Day and Wensley (1983) termed the contingency approach a fruitful area for further research in marketing, a characterization that is affirmed by several more recent studies (e.g., Ruekert, Walker, and Roering 1985; Walker and Ruekert 1987). Furthermore, though not always explicitly identified, the contingency approach is inherent in much of marketing theory (see Zeithaml, Varadarajan, and Zeithaml 1988).

The contingency approach, which has gained general acceptance in organizational studies, is seen by some researchers as interacting with the managerial choice perspective. Weick (1979) notes that actors "enact" their environments by isolating ("bracketing") specific experiences for attention. Further, Bourgeois (1980, 1984), Child (1972), Galbraith (1977), and Pfeffer and Salancik (1978) note that decision makers may be able to select and, particularly in large organizations, influence their environments. Child (1972) and Bourgeois (1984) note that managers also are free to use slack resources to "satisfice" or accept less-than-optimal performance.

Hrebiniak and Joyce (1985) attempt to reconcile environmental "determinism" and strategic "choice" by positioning them as separate variables. They note four basic situations: (1) low environmental determinism and high strategic choice, which they consider compatible with the Miles and Snow prospector strategy type, (2) high environmental determinism and low strategic choice, compatible with the defender strategy type, (3) low environmental determinism and low strategic choice, compatible with the reactor strategy type, and (4) high environmental determinism and high strategic choice, compatible with analyzer strategy types. This reconciliation of the "determinism"- "choice" strategic perspectives suggests that the firm's freedom to respond may vary with the type of environment, which in turn indicates a need to understand the alignment between environment and strategic options.

Development of a contingency perspective of marketing requires demonstration of (1) congruence between organization strategy and marketing tactics and (2) maintenance of this relationship in different environmental states (Fry and Smith 1987). That is, one must demonstrate that various strategy types conduct their marketing activities in distinctly different ways and that this distinctiveness is maintained in more as well as less volatile markets.

The congruence between organization strategy and marketing tactics can be examined in two ways—by examining the strength of the relationship between organization strategy and marketing tactics and by com-

paring the mean level of marketing activity across strategy types. Examining the strength of the relationship entails ranking the strategy types in terms of their inherent adaptive capability. This approach is supported theoretically by the framework underlying the Miles and Snow (1978) strategy typology, which is developed in terms of adaptive capability. That is, the Miles and Snow typology inherently ranks the reactor-defender-analyzer-prospector as increasingly adaptive strategy types. If marketing is accepted as an adaptive, boundary-spanning function, the level of marketing activity can be expected to increase in this strategic order.

Prior studies lend preliminary support to the proposition that the mean level of marketing effort increases from the reactor to defender to analyzer to prospector strategy types. McDaniel and Kolari (1987) found that, for 15 of 16 marketing variables reported, the mean was higher for analyzers than for defenders; for 14 of 16 marketing variables the mean was higher for prospectors than for analyzers. The results suggest a positive correlation between the level of marketing effort and the reactor-defender-analyzer-prospector strategy types, ranked ordinally by adaptive capability.

Hambrick (1983a) noted that the significantly higher product R&D effort and marketing effort expended by prospectors is supportive of the image of prospectors as organizations that attend closely to the output task and devote more resources than defenders to developing more new products. Meyer (1982), who examined market strategy in defender, analyzer, and prospector hospitals, found that a panel of independent health care professionals rated the defender, analyzer, and prospector hospitals as low, medium, and high, respectively, on boundary spanning. Similarly, defender, analyzer, and prospector organization administrators rated the importance of the environment and benefits from change as low, medium, and high, respectively.

Hambrick (1982) found the frequency of interest in, and hours of, entrepreneurial scanning to be significantly greater in prospector organizations than in defender organizations in the insurance industry. Snow and Hrebiniak (1980) examined the relationship among organization strategy, distinctive competence, and performance in four industries. They found that top managers in prospector organizations perceived marketing and marketing-related competencies to be among their four highest rated strengths to a greater degree than did managers in other strategy types. Hence:

H_{1a}: The level of marketing effort is related positively to the level of adaptive capability inherent in the strategy of the firm.

H_{1b}: There are significant differences in the mean level of marketing activity among organization strategy types.

²See Burrell and Morgan (1979) for an overview of contingency theory.

Prior to construction of any contingency theory, the subsystems of the organization must be shown to be congruent and this congruence must be robust to different environmental states. Congruence is a necessary but insufficient basis for establishing a contingency theory (Fry and Smith 1987). One must also demonstrate that the system has the potential for multiple states while maintaining congruence. In this vein, we seek to extend the finding that marketing tactics are congruent with the strategic orientation of the firm by examining the strategy-tactics relationship under different environmental conditions. Hence,

H₂: The organization strategy–marketing tactics relationship is not affected by level of market volatility.

Organization Strategy and Firm Performance

Though Miles and Snow (1978) suggested there would be no significant differences in performance among the strategy types, Bourgeois (1980) hypothesized that the relationship between performance and adaptive capability (which Bourgeois relates to organization slack) would be positive, up to a point, then negative; in other words, a curvilinear relationship was hypothesized (see Figure 1). Snow and Hrebiniak (1980) reported the highest mean performance among analyzers, with defenders and prospectors at substantially lower and approximately equal levels (see Figure 1). If the strategy types were arrayed ordinally in terms of increasing adaptive capability, it would follow that, in general, the optimal performance would occur in the organizations that balance adaptive and efficiency

needs—the analyzers. This situation can be expected because, though the reactor (and, to a lesser extent, the defender) will not adapt to market change as well as the analyzer and prospector types, the prospector must pay for its adaptive capability with inefficiency. Hence,

H₃: The relationship between organization strategy and performance is curvilinear, with optimal performance occurring in organizations that balance efficiency and adaptive requirements (i.e., the analyzers).

Organization Strategy, Market Volatility, and Firm Performance—A Contingency Perspective

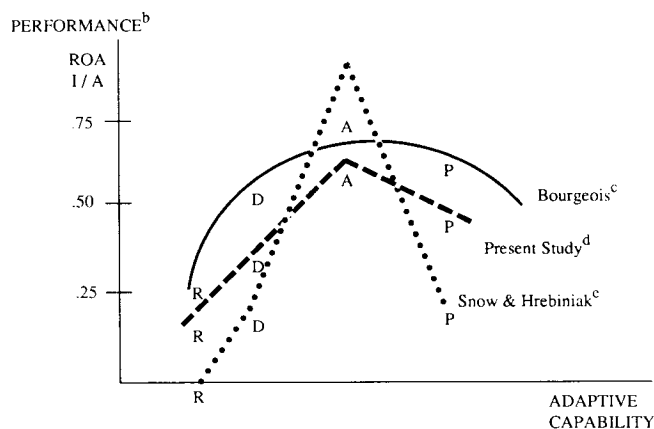
Though *in the aggregate* the analyzer strategy is proposed to be the most effective, the level of adaptive capability needed by the organization to achieve superior performance can be expected to depend on the level of environmental dynamism. In a *strongly positive volatile market* (i.e., a market growing strongly but at an uneven rate), opportunities for the organization are expanding. Further, in such markets, if the firm does not actively increase slack, the ratio of adaptive capabilities to externally available resources will decrease automatically. Therefore, the greater the adaptive capability inherent in an organization's strategy (the prospector), the more effective its performance is expected to be. In *moderately volatile markets*, an organization can be expected to be rewarded for balancing adaptive capability (to take advantage of opportunities) with efficiency requirements. In such markets, the analyzer strategy can be expected to be more effective. In a *negatively volatile market*, opportunities for the organization are generally declining. Further, the ratio of operating costs associated with adaptive capability to externally available resources will increase automatically in such markets if the firm does not actively reduce such costs. Such markets therefore can be expected to systematically reward strategies that emphasize efficiency—defender strategies. This expectation is consistent with research results indicating that banks producing superior performance in recessionary environments maintain relatively lower operating costs and are less “loaned up” than other banks (Ford and Olsen 1978).

Hence, the following propositions suggest a contingency view of the relationship among market volatility, organization strategy, and performance.

H₄: Market volatility moderates the relationship between organization strategy and performance.

- a. In markets characterized by high positive volatility, organization performance is related directly and positively to the adaptive capability inherent in organization strategy. Prospectors outperform other organization strategy types.
- b. In markets characterized by mild positive volatility, the relationship between organization strategy and organization performance is curvilinear, with optimal performance occurring in analyzer organizations.

FIGURE 1
Relationship Between Adaptive Capability, Strategy Type, and Firm Performance^a



^aR is reactor, D is defender, A is analyzer, and P is prospector.

^bROA is return on assets. I/A is income/assets.

^cGeneral nature of relationship between organization slack and performance proposed by Bourgeois (1981).

^dFindings of present study for mean ROA by strategy type.

^eFindings of Snow and Hrebiniak (1980) for mean income/assets by strategy type.

- c. In markets characterized by negative volatility, organization performance is related negatively to the level of adaptive capability inherent in organization strategy. Defender organizations outperform other organization strategy types.

The Model

The interrelationship among the primary elements of our study—market volatility, organization strategy type, marketing tactics, and organization performance—are represented in terms of a generalized moderating effects model (see Boal and Bryson 1987). In terms of this model, the effect of organization strategy and marketing tactics on performance cannot be known without also knowing the environmental context (see Figure 2).

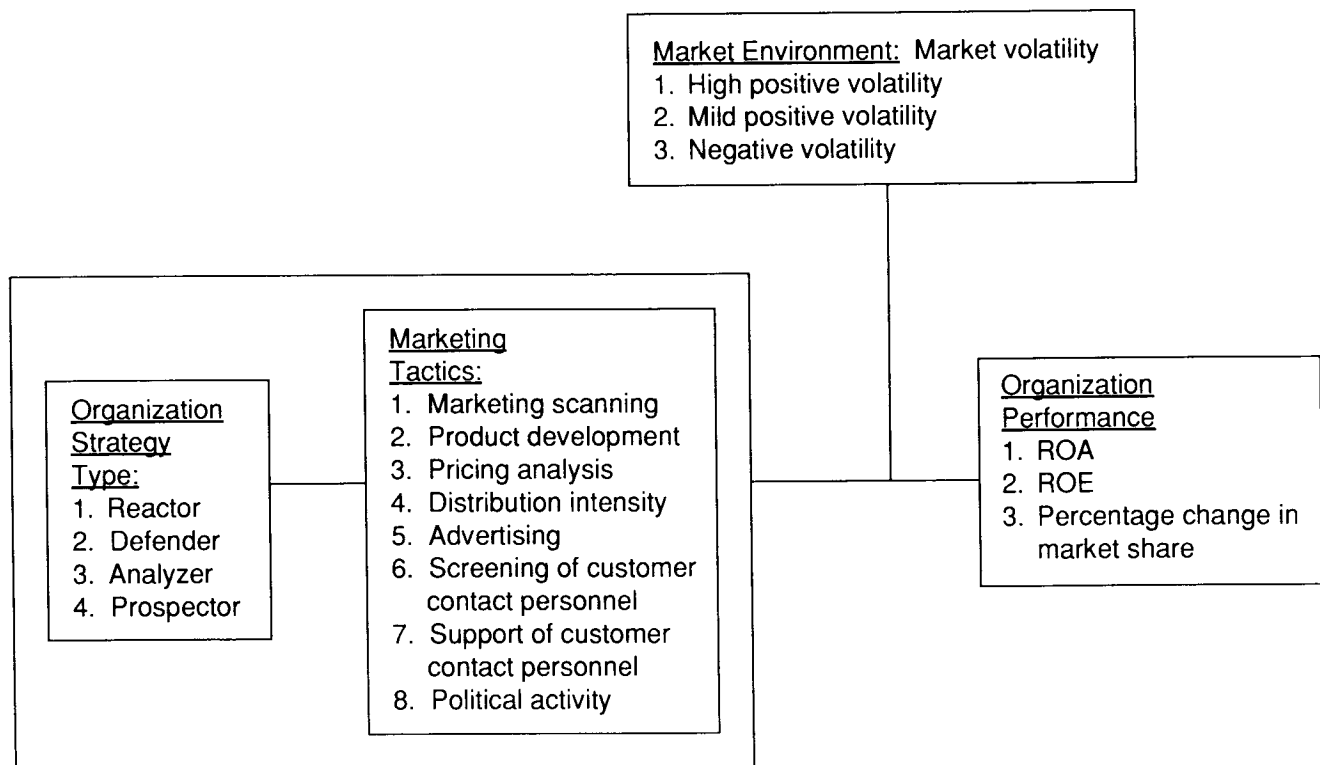
Sample Selection and Research Design

The banking industry was selected for study because it satisfies the need for multiple markets (characterized by different levels of market volatility) while providing a single context within which questions can be framed. Within the banking industry, the study was confined to banks operating in the seven states that have unit banking laws (so that individual unit performance, organization strategy, and marketing tac-

tics could be associated with individual markets). States with unit banking laws restrict banks to a single primary location, though they permit the use of auxiliary teller operations (including automated teller machines) within a limited geographic area (Roussakis 1984). Consequently, banks operating in states with unit banking laws report operating results that pertain largely to the single geographic market area where they are located (in contrast to banks operating in states that allow branching, which consolidate reports for diverse markets). The study was restricted to one industry because it was useful to frame questions that would have a common meaning among the respondents and common measures of performance (consistent with the approach suggested by Harrigan 1983). Single-industry studies are characteristic of a large body of research in the strategy literature because they provide some degree of control over environmental peculiarities that confront individual organizations (Harrigan 1983; Snow and Hambrick 1980). These constraints enhance the internal validity of the study, but reduce the extent to which the findings can be generalized to other environmental contexts.

Fifty standard metropolitan statistical areas in seven unit banking states were examined. Volatility of total deposits in each market during the period 1981–1985

FIGURE 2
Relationship Among Market Environment, Organization Strategy Type, Marketing Tactics, and Performance



was measured by the coefficient of variation of first differences. This procedure resulted in a measure of volatility unique to each market, depending on the extent to which the market was changing at an irregular rate. Markets growing rapidly and irregularly were assigned high positive values and markets declining at an irregular rate were assigned negative values. The 50 markets then were arrayed by level of volatility. Ten of the markets were used in a pilot study. Of the remaining 40 markets, a total of 31 markets were selected for use as subsets representing high positive, mild positive, and negative market volatility. (Specifically, high positive volatility ratings were those greater than 1, ranging up to 5.5, mild volatility ratings were in the range 0 to 1, and negative volatility ratings ranged from 0 to -10.5). In all cases, with the exception of one large market, all area banks were included in the sample frame. In the one exception, a systematic random sample of banks was selected. The resultant sample frame consisted of 560 banks. Questionnaires with accompanying cover letters were mailed to the CEOs of the banks, followed by reminder postcards and second letters (together with a copy of the questionnaire). In all, 333 usable responses were obtained, a 59% response rate. A chi square test comparing the asset sizes confirmed that banks responding to the survey were not significantly different from nonrespondents ($\chi^2 = 2.34$, $\chi^2_{cv} = 7.81$, $p < .05$).

Measurement

Market volatility. Volatility refers to the extent to which the pertinent environmental elements have a random pattern over time (Bourgeois 1985). Several approaches have been used to measure objective (as opposed to perceived) market volatility (Dess and Beard 1984; Snyder and Glueck 1982; Tosi, Aldag, and Storey 1973). Most of these approaches use variation about some mean (coefficient of variation) or about a regression line (error variance). The approach we used is the coefficient of variation of first differences, computed as the square root of the sum of the squared deviations of year-to-year differences in sales from the average of those differences, divided by that average.

This approach results in a unique objective measure of the volatility in each market designed to capture irregular change in the market. It is an improvement over earlier measures in that it identifies market change objectively and results in a unique, interval-level measure of volatility.

It is important to distinguish between the objective measure of market change used in our study and subjective measures of market uncertainty. Bourgeois (1980) distinguishes between these two approaches to environmental measurement, noting that, though both are valid, they are measures of different constructs.

Specifically, subjective measures of perceived market uncertainty may be a function of personal, organizational, and environmental characteristics.

Organization strategy type. The respondents were asked to identify the strategy of their organization in terms of the four generic strategies of the Miles and Snow typology. This self-typing approach to identification of strategy has been used in several studies (McDaniel and Kolari 1987; Snow and Hrebiniak 1980).³ Of the total of 333 responding banks, 54 were identified as prospectors, 87 as analyzers, 157 as defenders, and 31 as reactors. Four respondents did not answer this question.

Marketing tactics. Eight tactical marketing constructs were considered: market scanning, product development, pricing analysis, distribution intensity, advertising, screening of customer contact personnel, support of customer contact personnel, and political activity. With the exception of product development and distribution intensity, all measures consist of multiple items, behaviorally anchored where possible. Because of variation in the number of items per measure, the scaled measures are expressed in terms of the proportion of aggregated points to the total points available for that scale, so that the value for each marketing tactic ranges from 0 to 1. Details of scale values are reported in the Appendix.

Screening and support of contact personnel were included as marketing variables on the basis of findings (and growing consensus) that service interactions, and the buyer/seller interaction in particular, are a critical part of the service exchange (Gronroos 1983; Parasuraman, Berry, and Zeithaml 1983). Political activity is included as a variable pertaining to marketing because it is part of the exchange system (Bagozzi 1974) and a critical marketing function (Kotler 1986; Zeithaml and Zeithaml 1984). Political activity is especially important in the publicly regulated banking industry. Political activity was measured by asking the executives about the frequency with which members of the bank's top management team met with members of city and state governmental authorities and regulatory authorities.

Performance. Three measures of performance were used: (1) percentage change in share of total bank deposits in the market for the 1983-1985 period, (2) return on assets for 1986, and (3) return on equity for 1986. Market-share-related performance was measured as percentage change in market share, which is supported by Buzzell and Wiersema (1981) on the grounds that it allows the comparison of gains by both

³See Snow and Hambrick (1980) for a discussion on the limitations of the self-typing approach.

small and large firms by taking into consideration their beginning positions.⁴ Deposits for individual banks by market reported in the 1983 and 1986 editions of *American Bank Directory* were used to calculate percentage change in market share. Return on assets (ROA) was computed as the income (or loss) before extraordinary items and other adjustments, annualized and then divided by average total assets. Return on equity (ROE) was computed as the income (or loss) before extraordinary items and other adjustments, annualized and then divided by average total equity. Both financial measures were obtained from Sheshunoff Rating Services, Inc. (1986).

Collectively, the three measures capture dimensions of financial performance (ROA and ROE) and operational performance (percentage change in market share). Venkatraman and Ramanujan (1986) argue that these are two separate domains, the financial measures reflecting "fulfillment of the economic goals of the firm" (p. 803) and operational measures reflecting "key operational success factors that might lead to financial performance" (p. 804).

ROA and ROE are predominant measures of financial performance in studies relating planning process and strategy content to organizational performance (see Shrader, Taylor, and Dalton 1984). The advantages of using ROA and ROE are that (1) as ratios, they make possible the comparison of organizations of different sizes and (2) they are often publicly reported. The disadvantage of these and other accounting-based rates of return is that they may vary from the economic rate of return (Benston 1985; Fisher and McGowan 1983; Jacobsen 1987; Salamon 1985). However, despite this disadvantage, no preferable alternative measure of profitability is available for empirical work (Long and Ravenscraft 1984). Further, this disadvantage may be minimized in our study in that (1) the study was conducted in a single industry, rather than across different types of industries, producing a situation especially conducive to financial comparisons (Price and Mueller 1986) and (2) banking industry financial reporting is especially well regulated (Roussakis 1984) and standardized through the Uniform Bank Performance Report and other mechanisms (Garcia 1985). The relevance of ROA and ROI in assessing financial performance in the banking industry is discussed by Reed et al. (1976).

Evidence of a relationship between market share and financial performance (Buzzell and Gale 1987) and between market share and *stability* of financial performance (Jacobsen 1988) suggests that market share

is a reasonable business goal. Indeed, in developing a dynamic model of a marketing system, Lambin (1972) positions market share as a factor preceding profit. The relationship between marketing effort and market share is specified in attraction models (Lilien and Kotler 1983; Moriarty 1975; Weiss 1968).

Results

Organization Strategy Type and Marketing Tactics

We tested the hypothesis that organization strategy type is related to marketing tactics by using a nonparametric test of correlation (Spearman's correlation coefficient) and analysis of variance. The results are generally supportive of the hypothesized relationship. Specifically, the results (Table 1) reveal significant positive correlations between organization strategy type and each of the marketing variables with the exception of pricing analysis, for which the correlation is positive but not statistically significant.

The congruence between organization strategy type and marketing tactics is supported also by the results of the analysis of variance reported in Table 1. The F-statistics resulting from these analyses are significant (at a .1 level or better) for all marketing variables but distribution. When this analysis is extended to control for size of the business (measured in terms of assets), these general relationships hold with minor exceptions. Significant differences between organization strategy types are found for all marketing variables (including distribution) with the exception of advertising and customer contact personnel screening.

A Duncan's test of differences among pairs of means reveals a general hierarchical ordering. In particular, more adaptive strategy types are accompanied by higher levels of marketing effort. For example, market scanning and product development efforts are greater for prospectors than for analyzers, for analyzers than for defenders, and for defenders than for reactors. These differences are not statistically significant in every case, but the pattern persists across all marketing tactics (Table 1).

Organization Strategy-Marketing Tactics Congruence

If the relationship between strategy type and marketing tactics were to be affected by level of market volatility, the effect should be indicated by an interaction between strategy and volatility. Hence the variation in marketing tactics for different organization strategy types and different market environments was examined. Specifically, each marketing tactics variable examined was treated as a dependent variable. The results of analysis of variance for each of the marketing

⁴See Buzzell and Wiersema (1981) for discussion on the merits of using percentage change in market share $MS_t - MS_{t-1}$ as a performance measure in comparison with point change in market share $(MS_t - MS_{t-1})$.

TABLE 1
Tests of Marketing Tactics and Performance by Organization Strategy Type

Variable	Spearman Correlation with Organization Strategy Type ^a	Mean Value by Organization Strategy Type				ANOVA F-Statistic	F-Statistic Controlling for Firm Size	Significantly Different Pairs of Group Means ^b
		Reactor	Defender	Analyzer	Prospector			
Marketing Tactics								
Market scanning	.18 ^c	.22	.24	.28	.36	4.19 ^c	2.58 ^d	P>A P>D P>R A>D A>R
Product development	.30 ^c	.39	.45	.52	.57	11.14 ^c	9.20 ^c	P>D P>R A>D A>R D>R
Pricing analysis	.07	.68	.75	.76	.76	2.37 ^a	2.02 ^e	P>R A>R D>R
Distribution intensity	.16 ^d	-.55	.04	.30	1.27	1.83	2.18 ^e	P>R
Advertising	.11 ^e	.17	.15	.17	.24	2.02 ^a	1.60	
Customer contact personnel								
Screening	.16 ^c	.08	.14	.14	.23	2.12 ^a	1.31	P>A P>D P>R A>R D>R
Support	.13 ^d	.46	.64	.63	.68	5.83 ^c	5.79 ^c	P>R A>R D>R
Political activity	.13 ^d	.33	.36	.36	.45	2.86 ^d	2.21 ^e	P>A P>D P>R
Performance^f								
ROA	.04	.04	.38	.64	.53	1.31	.70	
ROE	.05	5.00	7.10	8.00	6.80	.24	.39	
PCMS	-.01	2.00	1.90	1.60	.70	1.70	1.93	

^aOrganization strategy types arrayed ordinally, by adaptive capability:

1. Reactor—lowest adaptive capability
2. Defender—limited adaptive capability
3. Analyzer—moderate adaptive capability
4. Prospector—highest adaptive capability

^bResults based on Duncan's multiple range test ($p \leq .05$).

^c $p \leq .01$.

^d $p \leq .05$.

^e $p \leq .1$.

^fROA is return on assets; ROE is return on equity; PCMS is percentage change in market share.

tactics variables, by organization strategy type (reactor, defender, analyzer, prospector) and degree of market volatility (high positive, mild positive, negative), are summarized in Table 2.

The lack of a significant strategy-volatility interaction (see Table 2) in any of these models suggests that the organization strategy–marketing tactics relationship is robust to market volatility. Further, in only two instances (distribution intensity and personnel testing) is market volatility a significant factor in explaining variation in marketing tactics. The effect of

volatility on personnel testing is especially pronounced. In particular, all strategy types increased testing of customer contact personnel in negative volatility environments.

Organization Strategy and Firm Performance

On the basis of the adaptive capability inherent in each of the strategic types, we hypothesized (H_3) that, in the aggregate, optimal performance would occur in organization strategy types that balance adaptive capability with the need for efficiency (analyzer). Though the pattern of mean financial performance by strategy type is in conformity with the hypothesized curvilinear relationship (see Figure 1), the difference between the analyzer and other strategy types is not statistically significant (Table 1).

Market Volatility, Organization Strategy, and Firm Performance

A clearer depiction of the strategy-performance relationship can be obtained by examining variables that “specify” the nature of the relationship. The purpose of this specification process is to identify contingent associations that clarify the true relationship (Rosenberg 1968). We hypothesized that the relationship between strategy and performance is affected by the level of market volatility. That is, certain strategies work better in certain types of markets than do other strategies.

This specification process is conducted by examining (1) whether the proposed moderator variable (market volatility) interacts with the predictor (orga-

TABLE 2
Analysis of Variance: Marketing Tactics by Organization Strategy Type and Market Volatility^a

Dependent Variable	Full Model	Organi- zation Strategy Type	Market Volatility	Strategy-
				Volatility Interaction
Market scanning	1.77 ^d	3.55 ^b	1.63	.93
Product development	5.66 ^b	11.07 ^b	.04	.66
Advertising	1.44	1.99	.45	1.54
Pricing	.92	2.28 ^d	.93	.23
Distribution intensity	2.51 ^c	1.89	4.19 ^c	.99
Customer contact personnel				
Screen	2.25 ^c	2.35 ^d	5.95 ^b	.96
Support	2.63 ^b	5.92 ^b	1.09	1.49
Political activity	1.14	2.64 ^c	.47	.61

^aCell entries are F-statistics.

^b $p \leq .01$.

^c $p \leq .05$.

^d $p \leq .1$.

TABLE 3
Analysis of Variance: Firm Performance
by Organization Strategy Type
and Market Volatility^a

Performance ^b	Full Model	Organization Strategy Type	Market Volatility	Strategy-Volatility Interaction
ROA	2.47 ^c	1.48	3.88 ^d	2.49 ^d
ROE	1.66 ^e	.20	3.08 ^d	1.93 ^e
PCMS	47.78 ^c	3.01 ^d	242.78 ^c	5.39 ^c

^aCell entries are F-statistics.

^bROA is return on assets; ROE is return on equity; PCMS is percentage change in market share. See Table 3 for mean performance of various organization strategy types.

^cp ≤ .01.

^dp ≤ .05.

^ep ≤ .1.

nization strategy type) and (2) whether it is related to the predictor and/or criterion variable (performance). This process follows a general approach suggested by Sharma, Durand, and Gur-Arie (1981). The approach (moderated regression analysis) was adapted in light of the ordinal nature of the strategy variable.

An analysis of variance was conducted modeling performance (ROE, ROA, and percentage change in market share) as a function of the organization strategy type, volatility category, and the volatility-strategy interaction. As summarized in Table 3, in each case volatility is related significantly to the performance variable and the volatility-strategy interaction is significant. This finding suggests that market volatility is a "quasi"-moderator of the strategy-perfor-

mance relationship in that it modifies the form of the relationship between the two.

This finding was examined in detail to test the idea that firms following organization strategies with high adaptive capability will perform better in markets characterized by high positive volatility (H_{4a}), firms pursuing strategies with moderate adaptive capability will perform better in markets characterized by mild positive volatility (H_{4b}), and firms pursuing strategies with little adaptive capability will perform better in markets characterized by negative volatility (H_{4c}). These hypotheses were tested on the basis of Spearman correlations, ANOVA, and Duncan's mean comparisons (Table 4).⁵ H_{4a} is not supported. Spearman correlations between organization strategy and financial performance in high positive volatility markets are not statistically significant. Contrary to *a priori* expectations, defenders and reactors outperformed other strategy types in these irregularly growing markets, with prospectors demonstrating the lowest mean performance. The mean values for change in market share of the various organization strategy types are also not consistent with *a priori* expectations. On average, reactors and defenders outperformed other strategy types.

H_{4b} is supported for financial measures. F-statistics computed through an ANOVA procedure are significant for models with both ROA and ROE as dependent variables (see Table 4). The relationship

⁵As a caveat, cells with fewer than 20 observations are identified in Table 4.

TABLE 4
Test of Performance Results by Organization Strategy Type and Level of Market Volatility

Dependent Variable ^b	Level of Market Volatility ^b	Mean Performance Organization Strategy Type ^c				Spearman Correlation with Organization Strategy Types ^d	F-Statistic	F-Statistic Controlling for Firm Size	Significantly Different Pairs of Group Means ^e
		R	D	A	P				
ROA	++	.42	.58	.27	-.04 ^f	-.07	.80	.86	—
	+	-.79 ^f	-.04	.77	.69	.23 ^g	4.45 ^g	4.63 ^h	R-D,R-P,D-P,D-A
	-	1.22 ^g	.80	.73	.99 ^g	-.12	.32	.33	—
ROE	++	6.10 ^g	7.88	1.27	-.03 ^f	-.04	.88	.98	—
	+	-1.30 ^f	3.86	10.65	9.05	.22 ^h	2.70 ⁱ	2.92 ⁱ	R-D,R-P,R-A,D-P,D-A
	-	16.65 ^g	11.11	9.61	10.64 ^g	-.14	.44	.45	—
PCMS	++	.39 ^g	.19	.11	.13 ^g	.28 ⁱ	.29	.35	—
	+	.64 ^f	.54	.21	.32	-.01	.73	.35	—
	-	7.51 ^g	5.78	7.14	2.64 ^g	-.20	4.37 ^h	4.29 ^h	P-D,P-A,P-R

^aROA is return on assets; ROE is return on equity; PCMS is percentage change in market share.

^b++ = high positive market volatility

+ = moderately positive market volatility

- = negative market volatility

^cR is reactor; D is defender; A is analyzer; P is prospector.

^dOrdinally arranged in terms of their adaptive capability.

^eResults based on Duncan's multiple range test (p ≤ .05).

^fN < 20.

^gN < 10.

^hp ≤ .01.

ⁱp ≤ .05.

persists even after controlling for firm size. Consistent with *a priori* expectations, analyzers financially outperformed the other strategy types in this type of market. Further, Duncan's means comparisons reveal reactor strategies to be clearly inferior. When percentage change in market share is used as the dependent variable, the mean value of percentage change in market share for the analyzer group is lower than that for the other organization strategy types. However, the overall F-statistic is not significant.

H_{4c} is not supported for the financial measures but receives some support for the market share measure. As hypothesized, defenders did better financially than analyzers in this environment, but the differences are not statistically significant. For market share change, the results reveal significant differences, with the reactors and analyzers outperforming the other strategy types.

The primary focus of our study is differences in the performance of firms using different strategies *within* the same type of environment (i.e., negative, mild positive, and strong positive volatility). Furthermore, the nature of the performance measures limits their usefulness for making comparisons *across* types of environments. In particular, the finding (Table 4) that firms in negative volatility markets generally outperformed those in the mild and strong positive volatility markets requires explanation and exemplifies the problem of comparing across environments. Plausible explanations may be (1) the limitations of the cross-sectional design and (2) inherent differences in measures of performance for growing versus declining markets.

First, because of the cross-sectional nature of the study, respondents in erratically declining markets may represent firms that have survived the period of decline. This possibility is consistent with the substantial gains in market share reported by the respondents in negative volatility markets (Table 4). As reflected by the financial performance measures, firms surviving the period of erratic market decline may have benefited from consolidation of their markets and reduced competition (Levitt 1965). Erratic growth markets, in contrast, may attract new and perhaps marginal participants, with an accompanying increase in competition and decrease in return.

Second, differences between declining and growing markets in the levels of expenses incurred and investment in assets could result in substantial discrepancies between accounting and economic return (Benston 1985; Fisher and McGowan 1983). In growing markets, firm expenses and investments tend to increase with increased interfirm competition for sustainable market position (Day 1981). Marketing expenses increase as firms increase efforts to create brand preference (Anderson and Zeithaml 1984; Kotler 1988;

Levitt 1965; Wasson 1974; Zeithaml and Fry 1984). In response to anticipated market growth, firms tend to make sizeable investment in assets, despite a possible short-term effect on profitability (Anderson and Zeithaml 1984; Hambrick, MacMillan, and Day 1982; MacMillan, Hambrick, and Day 1982). Thus, the growth market situation may result in an understatement of economic return *in comparison with* other market situations. In contrast, in declining markets, firm expenses and investments tend to decrease. Marketing expenses decrease as firms phase out unprofitable outlets and reduce advertising and selling costs to a level designed to retain loyal customers (Anderson and Zeithaml 1984; Hay and Ginter 1979; Kotler 1988; Wind 1981). Firms respond to declining demand by diminishing the rate of investment or actually divesting (harvesting) the asset base. Thus, the declining market situation may result in an overstatement of the economic return *in comparison with* other market situations.

Discussion and Implications

Our results indicate that (1) the Miles and Snow strategy types, when rank-ordered by adaptive capability, correlate positively with marketing effort, (2) this relationship between strategy type and marketing tactics holds in different market environments, and (3) the volatility of the market (objectively measured) moderated the strategy-performance relationship.

The results suggest that though the analyzer strategy may lead to superior performance in a relatively predictable (i.e., mild volatility) market setting, it may not be the optimal strategy in highly volatile markets. The basis for this performance difference can be traced to the tradeoff between external and internal focus inherent in the analyzer organization.

Consistent with *a priori* expectations, firms with a greater internal focus (i.e., defenders) performed relatively well in markets that were declining in an erratic pattern; however, the observed differences are not statistically significant. Contrary to *a priori* expectations, erratic *growth* markets (i.e., high positive volatility) also appear to reward internally focused strategies. The latter finding could be due to several factors, including (1) the quantitative (rather than qualitative) measure of market volatility used and (2) the distinction between volatility and other measures of change.

The *quantitative* measure of market volatility used in our study measures shifts in the dollar volume of the market (demand deposits). It does not measure the *qualitative* aspects of market volatility, such as changes in consumer tastes. Possibly erratic change in the volume of the market, whether positive or negative, exerts pressure on routinely demanded operational sys-

tems. The internally focused firm (defender or reactor) may be better prepared to absorb these shifts in demand.

It is important to note that the moderating variable employed is market *volatility* and not simply growth or decline. Hence, even in a positive volatility market, growth is sporadic. Firms that extend capacity and introduce new products/services in response to each market increase therefore are likely to undergo episodic downturns.

The finding that organizations that *constrict* their strategic attention (defenders and reactors) perform better in erratically growing markets is consistent with some evidence about the behavior of managers in turbulent environments. Smart and Vertinsky (1984) found that, when environments are seen as highly complex and turbulent, managers perceive their ability to control events to be limited and respond by retrenching operations. Though Smart and Vertinsky measured perceived turbulence and did not assign positive or negative directions to such change, the findings could be construed to support the proposition that managers constrict strategic attention in erratically changing environments. Hambrick (1983b) also found evidence that defender organizations achieved financial results superior to those of prospectors in both growth and mature markets.

Implications for Future Research

Further research is needed, in part because of the limitations of our study. First, the scope of variables in this or any study is necessarily limited. This limitation operates to the disadvantage of field studies involving marketing variables, in which multiple and complex factors determine any organization's outcomes. In the context of our study, additional research would be useful to (1) test the framework by using different measures of market volatility and (2) elaborate the relationship among strategy, marketing tactics, environment, and performance by including factors relating to how the marketing effort is structured within the organization.

We examined strategy-performance relationships in markets with different levels of market demand volatility (i.e., fluctuations in dollar volume of demand). The relationship between strategic type and performance may differ in situations of *qualitative* market volatility (e.g., where consumer tastes fluctuate). Hence, though defender strategies lead to superior results under conditions of quantitative market volatility (i.e., fluctuation of dollar volume of demand), prospector strategies may lead to superior results under conditions of qualitative market volatility (i.e., fluctuation of the product-feature demand). It would be useful to articulate differences between quantitative and qualitative market volatility, to examine effects

of the latter on the strategy-performance relationship, and to examine the interactions of the two types of market volatility.

In addition, the finding that selected marketing activity variables (such as those we used) correspond systematically to a strategic typology should be expanded by examining other aspects of marketing. In particular, future research could examine the relationship between strategy and structural factors such as centralization of the marketing function, formalization of marketing planning, and specialization of marketing functions.

A second limitation of our study is the limited use (in part) of cross-sectional data. In particular, contemporaneous measures of strategy, tactics, and performance may ignore time-related effects. Fiegenbaum and Thomas (1988) suggest, for example, that firms may be risk seeking when having losses and risk averse when achieving target performance. Hence one could argue that a firm that is performing poorly may seek new opportunities (i.e., assume a prospector strategy). A cross-sectional measure would associate poor performance and prospector strategy and would show the best performing firms to be the least likely to seek new opportunities (i.e., assume defender or reactor strategies). This limitation was mitigated in our study by the facts that conceptually the Miles and Snow strategy types are considered relatively enduring orientations (Miles and Snow 1978) and, in the aggregate, the defender and reactor types were not the most profitable strategies in this study or in the cross-sectional study by Snow and Hrebiniak (1980).

Nonetheless, a longitudinal study of the relationship among strategy, marketing tactics, market environment, and firm performance could be designed to examine (1) the stability or movement of the firm *along* the Miles and Snow strategic continuum in response to market environment shifts, (2) the stability or movement of the firm along the strategic continuum in response to organizational shifts, and (3) time-lagged responses between strategic action and organization performance.

Managerial Implications

Our research has provided evidence that, in relatively predictable (nonvolatile) environments, there is a systematic relationship between strategic adaptability and firm performance. Within this range, substandard performance is associated with firms that fail to balance slack resources carefully (by either under- or overinvesting in adaptive marketing capability).

In relatively unpredictable (volatile) markets, managers have considerably more freedom to choose strategic orientations without sacrificing performance. However, there is some indication that in erratically declining markets (negative market volatility), inter-

nally focused strategies (defenders) may have a performance advantage. Managers therefore may consider responding to erratic market decline by narrowing the product base and instituting selected efficiencies (i.e., by attempting to move toward a defender type of strategy).

Our findings have implications at two levels, corporate (domain selection) and business (domain navigation). At the corporate level, the implications are that firms with a cultural orientation aligned with a particular strategy may seek out markets consistent (or not inconsistent) with that strategic orientation. Thus, an analyzer might seek out relatively predictable environments, which would appear to reward its balance of internal-external perspectives.

At the business level, the findings (and the contingency perspective) seem to imply that organizations should change strategic orientation in response to market volatility. However, there appear to be distinct limitations on the ability of organizations to make substantial shifts in their fundamental strategy. Miles and Snow (1978) conceived of strategy types as relatively enduring and the literature on corporate cultures (see, e.g., Deal and Kennedy 1982) seems to support the relative stability of organizational approaches to the environment.

If the Miles and Snow strategy typology is viewed as a continuum, as is suggested here, a firm may be able to move toward an adjacent strategy type (i.e., a defender may selectively explore new products). Some support for this strategic flexibility was found in a recent survey of 30 companies that had been in business for more than 75 years. The study revealed that most of the companies switched to a survival mode when times were turbulent and to a self-development mode when the pace of change was slow (De Geus 1988). The importance of a contingency perspective for management lies in identifying areas where organizational-environmental compatibility affects results, as well as areas where management is relatively unconstrained by the environment.

Appendix

Measurement Scales

- *Market scanning* was measured by the frequency with which an organization conducts certain customer and competitor scanning activities. Firms' responses to this and other frequency questions were measured on a 4-point scale: very often (two or more times a year), often (once every year or two), seldom (less than once every two years), and never.
- *Product development* was measured by the respondent's evaluation of the frequency with which new services are introduced.
- *Pricing analysis* was measured by the respondent's evaluation of the frequency with which the bank reevaluates its pricing of services.

- *Distribution intensity* was measured as a log transformation of the ratio of the sum of the number of staffed and nonstaffed banking locations (ATMs) available to customers of the bank divided by the bank's total assets.
- *Advertising effort* was measured by the respondents' perception of how much money their bank spends on selected media in comparison with their primary competitor. Responses were measured on a 4-point scale: much more (more than twice as much), more (more, but less than twice as much), about the same, and less.
- *Screening of customer-contact personnel* was measured by the respondent's estimate of the percentage of tellers and officers who took personality and aptitude tests prior to being hired. These questions were asked separately, resulting in four questions. Response categories were most (75–100%), many (50–74%), some (25–49%), and few or none (less than 25%).
- *Support of customer-contact personnel* was measured by the respondent's estimate of factors such as the percentage of experienced tellers who received sales training each year, use of specific materials in contact personnel training (e.g., information on services offered, persuasive communications techniques), and availability of selected information (e.g., client use of bank services).

Validity Tests

Multiple items were used to construct six of the marketing variables analyzed in the study. Selection of items was based on a review of relevant academic and professional literature (e.g., Cosse and Swan 1983; Parasuraman, Berry, and Zeithaml 1983; Reed et al. 1976; Stasch and Lanktree 1980; Zeithaml and Zeithaml 1984) and comments by industry executives. Interitem and item-total correlations were examined as a preliminary test of the internal consistency of each measure. Further, Cronbach's alpha was calculated for each measure (with the exception of distribution, which was constructed as a ratio and not an aggregate of scale items, and product development, which was a single-item measure). The resulting values of alpha (see Table A1) generally support their use in an exploratory context (Nunnally 1978); all values are above .7 except personnel support (.62).

TABLE A1
Characteristics of Variables

Variable	Mean	Variance	Coefficient Alpha	Number of Items
Marketing Tactics				
Market scanning	.27	.05	.79	6
Product development	.48	.03	—	1
Pricing analysis	.75	.02	.72	3
Distribution intensity	.24	9.50	—	—
Advertising	.17	.05	.88	4
Customer contact personnel				
Screening	.15	.07	.87	4
Support	.63	.06	.62	7
Political activity	.37	.04	.72	3
Performance*				
ROA	.45	2.24	—	—
ROE	7.21	27.83	—	—
PCMS	1.65	9.04	—	—

*ROA is return on assets; ROE is return on equity; PCMS is percentage change in market share.

TABLE A2
Principal Components Factor Analysis with Varimax Rotation

Marketing Activities	Factor ^a					
	1	2	3	4	5	6
TV advertising expenditures	.06	-.02	.81	.01	.08	.16
Radio advertising expenditures	-.04	.01	.80	-.11	.14	-.09
Newspaper advertising expenditures	.09	.19	.75	.07	.06	.04
Expenditures on all ad media	.09	.09	.93	.06	.04	-.02
Contact with legislators	.14	.17	.10	.01	.81	.15
Contact with regulatory officials	.13	.03	.14	.07	.68	.17
Contact with city council members	.13	-.11	.09	.03	.52	.23
Survey current customers	.58	.01	.04	.15	.16	.25
Focus groups with current customers	.68	.10	-.01	.09	-.13	-.02
Shop competing firms for information	.76	.11	.08	.06	-.13	-.02
Survey competitors' customers	.60	.14	.17	.03	.25	.18
Collect traffic counts at competitor/or locations	.78	.03	.03	.01	-.09	-.01
Focus groups with competitors' customers	.73	.09	-.04	.02	.29	.03
Reevaluate service charges	.02	.15	.04	-.03	.01	.81
Reevaluate charges for extra services	.03	.05	-.03	.01	.17	.80
Gather information on competitors' prices	.19	.21	.06	.04	.18	.50
Personality tests conducted on tellers	.10	.83	.01	.15	.01	.09
Aptitude tests conducted on tellers	-.04	.80	.09	.06	.01	.05
Personality tests conducted on officers	.11	.85	.06	.05	-.06	.14
Aptitude tests conducted on officers	.21	.82	.09	.06	.01	.05
Training includes product information	.09	.10	-.05	.56	-.15	.05
Training in communication techniques	.37	.09	-.04	.51	-.20	.21
Training in company mission	.18	.04	-.01	.50	-.25	.23
Training to handle complaints	.21	-.05	.07	.45	-.04	.31
Provide officers customer deposit history	-.19	.09	.09	.59	.23	-.21
Provide officers customer business profile	-.04	.10	-.04	.61	.10	-.04
Provide officers customer services profile	.03	.08	.05	.58	.23	-.15
Percentage variance explained	19.4	10.2	9.2	7.4	6.3	5.1

^aUnderlying dimensions:

- F1 = market scanning
- F2 = screening of customer contact personnel
- F3 = advertising
- F4 = support of customer contact personnel
- F5 = political activity
- F6 = pricing analysis

A factor analysis on the 27 scale-related items was conducted to examine whether the resulting factor loadings supported six of the hypothesized marketing constructs: market scanning, pricing analysis, advertising, screening of customer contact personnel, support of customer contact personnel, and

political activity. A 6-factor principal component factor analysis with varimax rotation tended to support the six hypothesized multiple-item variables (see Table A2); 5-factor and 7-factor analyses disclosed no clearly interpretable findings.

REFERENCES

- Abernathy, William J. and Kenneth Wayne (1974), "Limits of the Learning Curve," *Harvard Business Review*, 52 (September-October), 109-19.
- American Bank Directory* (1983). Norcross, GA: McFadden Business Publication.
- (1986). Norcross, GA: McFadden Business Publication.
- Anderson, Carl R. and Carl P. Zeithaml (1984), "Stage of the Product Life Cycle, Business Strategy, and Business Performance," *Academy of Management Journal*, 27 (1), 5-24.
- Bagozzi, Richard P. (1974), "Marketing as an Organized Behavioral System of Exchange," *Journal of Marketing*, 38 (October), 77-81.
- Benston, George J. (1985), "The Validity of Profits-Structure Studies with Particular Reference to the FTC's Line of Business Data," *American Economic Review*, 75 (March), 37-67.
- Boal, Kimberly B. and John M. Bryson (1987), "Presentation, Testing and Policy Implications of Planning Processes," *Strategic Management Journal*, 8 (May-June), 211-31.
- Bourgeois, Lionel J., III (1980), "Strategy and Environment:

- A Conceptual Integration," *Academy of Management Review*, 5 (January), 25–39.
- (1984), "Strategic Management and Determinism," *Academy of Management Review*, 9 (October), 586–96.
- (1985), "Strategic Goals, Perceived Uncertainty, and Economic Performance in Volatile Environments," *Academy of Management Journal*, 10 (October), 586–96.
- Burrell, Gibson and Gareth Morgan (1979), *Sociological Paradigms and Organizational Analysis*. London: Heinemann.
- Buzzell, Robert D. and Bradley T. Gale (1987), *The PIMS Principles: Linking Strategy to Performance*. New York: The Free Press.
- and Frederik D. Wiersema (1981), "Modeling Changes in Market Share: A Cross-Sectional Analysis," *Strategic Management Journal*, 2 (January–March), 27–42.
- Cameron, Kim S. and David A. Whetten (1983), *Organizational Performance: A Comparison of Multiple Models*. New York: Academic Press, Inc.
- Chakravarthy, Balaji S. (1986), "Measuring Strategic Performance," *Strategic Management Journal*, 7 (September–October), 437–58.
- Child, John (1972), "Organizational Structure, Environment and Performance: The Role of Strategic Choice," *Sociology*, 6, 1–22.
- Cosse, Thomas J. and John E. Swan (1983), "Strategic Marketing Planning by Product Managers—Room for Improvement?" *Journal of Marketing*, 47 (Summer), 92–102.
- Day, George (1981), "The Product Life Cycle: Analysis and Applications Issues," *Journal of Marketing*, 45 (Fall), 60–7.
- and Robin Wensley (1983), "Marketing Theory with a Strategic Orientation," *Journal of Marketing*, 47 (Fall), 79–89.
- Deal, Terrence E. and Allen A. Kennedy (1982), *Corporate Cultures: The Rites and Rituals of Corporate Life*. Reading, MA: Addison-Wesley Publishing Company.
- De Geus, Arie P. (1988), "Planning as Learning," *Harvard Business Review*, 66 (March–April), 70–4.
- Dess, Gregory G. and Donald W. Beard (1984), "Dimensions of Organizational Environments," *Administrative Science Quarterly*, 29 (March), 52–73.
- Fiegenbaum, Avi and Howard Thomas (1988), "Attitudes Toward Risk and the Risk-Return Paradox: Prospect Theory Explanations," *Academy of Management Journal*, 31 (March), 85–106.
- Fisher, Franklin M. and John J. McGowan (1983), "On the Misuse of Accounting Rates of Return to Infer Monopoly Profits," *American Economic Review*, 73 (March), 82–97.
- Ford, William F. and Dennis A. Olsen (1978), "How 1,000 High-Performance Banks Weathered the Recent Recession," *Banking* (April), 36.
- Fry, Louis W. and Deborah A. Smith (1987), "Congruence, Contingency, and Theory Building," *Academy of Management Review*, 12 (January), 117–32.
- Galbraith, Jay R. (1977), *Organization Design*. Reading, MA: Addison-Wesley Publishing Company.
- Garcia, F. L. (1985), *How to Analyze a Bank Statement*, 7th ed. Boston: Bankers Publishing Co.
- Gronroos, Christian (1983), "Strategic Management and Marketing in the Service Sector," Report No. 83–104, Marketing Science Institute.
- Hambrick, Donald C. (1982), "Environmental Scanning and Organizational Strategy," *Strategic Management Journal*, 3 (April–June), 159–75.
- (1983a), "High Profit Strategies in Mature Capital Goods Industries: A Contingency Approach," *Academy of Management Journal*, 26 (December), 687–707.
- (1983b), "Some Tests of the Effectiveness and Functional Attributes of Miles and Snows' Strategic Types," *Academy of Management Journal*, 26 (March), 5–26.
- , I. C. MacMillan, and D. L. Day (1982), "Strategic Attributes and Performance in the BOG Matrix—A PIMS-Based Analysis of Industrial Products Businesses," *Academy of Management Journal*, 25 (September), 510–31.
- Harrigan, Kathryn R. (1983), "Research Methodologies for Contingency Approaches to Business Strategy," *Academy of Management Review*, 8 (July), 398–405.
- Hay, R. D. and P. M. Ginter (1979), "Strategies for Maintaining a Share of the Market," paper presented at Annual Meeting of Southern Academy of Management.
- Henderson, Bruce D. (1984), "The Application and Misapplication of the Experience Curve," *Journal of Business Strategy*, 4 (Winter), 3–9.
- Hrebiniak, Lawrence G. and William F. Joyce (1985), "Organizational Adaptation: Strategic Choice and Environmental Determinism," *Administrative Science Quarterly*, 30 (September), 336–49.
- Jacobsen, Robert (1987), "The Validity of ROI as a Measure of Business Performance," *American Economic Review*, 77 (June), 470–8.
- (1988), "The Persistence of Abnormal Returns," *Strategic Management Journal*, 9 (September–October), 415–30.
- Kotler, Philip (1986), "Megamarketing," *Harvard Business Review*, 64 (March–April), 117–24.
- (1988), *Marketing Management: Analysis, Planning, Implementation and Control*, 6th ed. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Lambin, Jean-Jacques (1972), "A Computer On-Line Marketing Mix Model," *Journal of Marketing Research*, 9 (May), 119–26.
- Levitt, Theodore (1965), "Exploit the Product Life Cycle," *Harvard Business Review*, 43 (November–December), 81–94.
- Lilien, Gary L. and Philip Kotler (1983), *Marketing Decision Making: A Model-Building Approach*. New York: Harper & Row.
- Long, William F. and David J. Ravenscraft (1984), "The Misuse of Accounting Rates of Return: Comment," *American Economic Review*, 74 (June), 494–500.
- MacMillan, I., D. Hambrick, and D. Day (1982), "The Product Portfolio and Profitability—A PIMS-Based Analysis of Industrial-Product Businesses," *Academy of Management Journal*, 25 (December), 733–55.
- McDaniel, Stephen W. and James W. Kolari (1987), "Marketing Strategy Implications of the Miles and Snow Typology," *Journal of Marketing*, 51 (October), 19–30.
- Meyer, Alan D. (1982), "Adapting to Environmental Jolts," *Administrative Science Quarterly*, 28 (December), 515–37.
- Miles, Raymond E. and Charles C. Snow (1978), *Organizational Strategy, Structure, and Process*. New York: McGraw-Hill Book Company.
- Miles, Robert H. (1982), *Coffin Nails and Corporate Strategy*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Moriarty, Mark (1975), "Cross-Sectional, Time-Series Issues in the Analysis of Marketing Decision Variables," *Journal of Marketing Research*, 12 (May), 142–50.
- Nunnally, Jum C. (1978), *Psychometric Theory*, 2nd ed. New York: McGraw-Hill Book Company.
- Parasuraman, A., Leonard L. Berry, and Valarie A. Zeithaml (1983), "Service Firms Need Marketing Skills," *Business Horizons*, 26 (November–December), 28–31.
- Pfeffer, Jeff and Gerald Salancik (1978), *The External Control of Organizations*. New York: Harper and Row.

- Price, James L. and Charles W. Mueller (1986), *Handbook of Organizational Measurement*. Marshfield, MA: Pitman Publishing Inc.
- Reed, Edward W., Richard V. Cotter, Edward K. Gill, and Richard K. Smith (1976), *Commercial Banking*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Rosenberg, Morris (1968), *The Logic of Survey Analysis*. New York: Basic Books.
- Roussakis, Emmanuel N. (1984), *Commercial Banking in an Era of Deregulation*. New York: Praeger Publishers.
- Ruekert, Robert W. and Orville C. Walker, Jr. (1987), "Interactions Between Marketing and R&D Departments in Implementing Different Business Strategies," *Strategic Management Journal*, 8 (May-June), 233-48.
- _____, _____, and Kenneth J. Roering (1985), "The Organization of Marketing Activities: A Contingency Theory of Structure and Performance," *Journal of Marketing*, 49 (Winter), 13-25.
- Salamon, Gerald L. (1985), "Accounting Rates of Return," *American Economic Review*, 75 (June), 495-504.
- Sharma, Subhash, Richard M. Durand, and Oded Gur-Arie (1981), "Identification and Analysis of Moderator Variables," *Journal of Marketing Research*, 18 (August), 291-300.
- Sheshunoff Rating Services Inc. (1986), *Sheshunoff Bank Quarterly: March 1986 Results*. Austin, TX.
- Shrader, Charles B., Lew Taylor, and Dan R. Dalton (1984), "Strategic Planning and Organizational Performance: A Critical Appraisal," *Journal of Management*, 10 (Summer), 149-71.
- Smart, Carolyne and Ilan Vertinsky (1984), "Strategy and the Environment: A Study of Corporate Responses to Crisis," *Strategic Management Journal*, 5 (July-September), 199-213.
- Snow, Charles C. and Donald C. Hambrick (1980), "Measuring Organizational Strategies: Some Theoretical and Methodological Problems," *Academy of Management Review*, 5 (October), 527-38.
- _____, and Lawrence G. Hrebiniak (1980), "Strategy, Distinctive Competence, and Organizational Performance," *Administrative Science Quarterly*, 25 (June), 317-36.
- Snyder, Neil H. and William F. Glueck (1982), "Can Environmental Volatility Be Measured Objectively?" *Academy of Management Journal*, 25 (March), 185-92.
- Stasch, Stanley F. and Patricia Lanktree (1980), "Can Your Marketing Planning Procedures Be Improved?" *Journal of Marketing*, 44 (Summer), 79-90.
- Tosi, H., R. Aldag, and R. Storey (1973), "On the Measurement of the Environment: An Assessment of the Lawrence and Lorsch Environmental Uncertainty Subscale," *Administrative Science Quarterly*, 18 (March), 27-36.
- Venkatraman, N. and Vasudevan Ramanujan (1986), "Measurements of Business Performance in Strategy Research: A Comparison of Approaches," *Academy of Management Review*, 11 (October), 801-14.
- Walker, Orville C., Jr. and Robert W. Ruekert (1987), "Marketing's Role in the Implementation of Business Strategies: A Critical Review and Conceptual Framework," *Journal of Marketing*, 51 (July), 15-33.
- Wasson, Chester R. (1974), *Dynamic Competitive Strategy and Product Life Cycles*. St. Charles, IL: Challenge Books.
- Weick, Karl E. (1977), "Re-Puncturing the Problem," in *New Perspectives on Organizational Effectiveness*, Paul S. Goodman, Johannes M. Pennings, and Associates, eds. San Francisco: Jossey-Bass Inc., Publishers.
- _____, (1979), *The Social Psychology of Organizing*, 2nd ed. Reading, MA: Addison-Wesley Publishing Company.
- Weiss, Doyle L. (1968), "Determinants of Market Share," *Journal of Marketing Research*, 5 (August), 290-5.
- Wind, J. (1981), "Product Life Cycle," unpublished manuscript, The Wharton School, University of Pennsylvania.
- Zammuto, Raymond F. (1982), *Assessing Organizational Effectiveness: Systems Change, Adaptation, and Strategy*. Albany: State University of New York Press.
- Zeithaml, Carl P. and Louis W. Fry (1984), "Contextual and Strategic Differences Among Mature Businesses in Four Dynamic Performance Situations," *Academy of Management Journal*, 27 (4), 841-60.
- _____, and Valarie A. Zeithaml (1984), "Environmental Management: Revising the Marketing Perspective," *Journal of Marketing*, 48 (Spring), 46-53.
- Zeithaml, Valarie A., P. Varadarajan, and Carl P. Zeithaml (1988), "The Contingency Approach: Its Foundations and Relevance to Theory Building and Research in Marketing," *European Journal of Marketing*, 22 (7), 37-63.

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