Business Firm Performance Types And The Strategic Implications

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Abstract

This study reports the findings of five different performance types that exist among business firms. These types were: "growing" firms, "turnabout" firms, "stagnant" firms, "turnaround" firms, and "declining" firms. Using multiple discriminant analysis, the strategic differences among the five types were revealed. These strategic differences were captured in three dimensions, namely, asset-acquisition, finance, and differentiation. The key results indicate that growing firms tended to emphasize differentiation; turnabout firms ranked low on almost all dimensions; stagnant firms were high on both asset-acquisition and differentiation; turnaround firms tended to focus on financial strategies, and declining firms placed little emphasis on differentiation. The promising use of multiple discriminant analysis as a tool for taxonomic research in strategic management was highlighted.

Introduction

Over the last 15 years many researchers have investigated the relationship between business strategy and firm performance (e.g. Buzzell, Gale & Sultan, 1975; Dess & Davis, 1984; Galbraith & Schendel, 1983; Hambrick, 1983b; Hofer, 1975; Miles & Snow, 1978; Snow & Hrebiniak, 1980). One stream of research has focused on exploring "typologies" of strategy and then relating them to business performance. Typical of studies in this area are those that have used Porter's (1980) generic strategies (e.g. Dess & Davis, 1984; White, 1986) and Miles & Snow's (1978) "typology" (e.g. Hambrick, 1983a; Snow & Hrebiniak, 1980). A second and emerging stream of research has concerned itself with identifying particular strategies for firms in different performance situations. Some of the situations identified are "declining" (Harrigan, 1980) and "turn-around" (Hofer, 1980).

The present study falls into the second stream of research. In general, studies in this area have identified limited types of performance situations, and, furthermore, no attempt has been made to relate one performance situation to another. Even in those cases where comparisons have been made, they usually have dealt with no more than two performance types.

Our purpose for this study was twofold. First, we sought to explore possible performance situations that may exist in addition to those that have been studied by researchers. Second, we sought to determine whether strategic differences exist between the different performance situations, and, if so, the nature of such differences.

Strategy-Performance Linkages

The concept of strategy is central to strategic management. As Snow & Miles (1983) describe it, "Strategy is a key concept because it encompasses a variety of organizational decisions, focuses on the internal and external environment, and highlights the notion of a fit or equilibrium both within the organization and between the organization and its broader societal context" (p. 231). Strategy is commonly conceived as a pattern of major resource allocation decisions that relate the organization to its environment (Lenz, 1980; Bracker, 1980).

The role of strategy in affecting performance outcomes is well-accepted in the strategic management literature. Early studies examining the impact of strategy on performance have come mainly from the PIMS (Profit Impact of Market Strategies) researchers (Schoeffler et al, 1974; Buzzell et al, 1975). These and other studies have provided guidelines on how a firm should strive for high performance. The research

findings outline a set of general contingent business strategies to improve firm performance. For instance, Buzzell et. al. conducted a cross-sectional study that reported a positive correlation between market share and return on assets. Hofer (1975) developed a contingency theory of business strategy based upon the stages of product life cycle. In addition, Hambrick (1983a) reported that Miles and Snow's typologies of strategies are more appropriate for certain environments and for different performance criteria and in another study (1983b) found general support for Porter's (1980) generic strategies and performance. Galbraith and Schendel (1983) reported that relationships do exist between business strategy types and different measures of firm performance. Their study revealed that given the same strategy types, firms holding dominant competitive positions generally enjoy more favorable performance results than those holding less dominant market positions.

Performance Types

While the research on strategy types is growing rapidly, the notion of "performance types" is still relatively unexplored. The term "performance types" is used in this study to describe firms with a particular pattern or trend of performance over time. The literature is rather scanty on this because few studies have dealt with performance in a longitudinal fashion.

It is common practice for strategy researchers today to classify firms into "high" and "low" performing types and then determine strategic differences among them (e.g. Lenz, 1980; Hambrick, 1983b). This classification procedure is based on cross-sectional data, and usually involves averaging performance over the time period studied. Average performance then may be the result of both steady increase or decrease in performance, or from a stable pattern of performance, or from a mix of increases and decreases in performance. The essence of capturing performance over time is to determine a firm's consistency in performance.

Besides the "high" and "low" type of classification, performance has been characterized as "declining" (Harrigan, 1980) and "turnaround" (Hofer, 1980). In general, studies in this area are quite limited in the number of performance situations explored. Furthermore, usually only one performance type is examined. The only major effort to date that attempted to study more than one performance type was that undertaken by O'Neill (1986) who compared the strategies of declining and turnaround firms in the banking industry. We felt that there are other possible performance types which

have not been adequately dealt with in the literature. Specifically, we argue that there are five performance types that are intuitively appealing and can be found in any industry. The five types are "growing," "turnabout," "stagnant," "turnaround," and "declining" firms. These types are graphically depicted in Figure 1.

The "growing" type refers to firms that show a consistently upward trend in their performance. The opposite of the growing type is the "declining" type. The "turnabout" type refers to firms that enjoy an increase in performance for a period of time and then suffer a steady decline in performance. The opposite of the turnabout type is the "turnaround" type. Finally, the "stagnant" type refers to firms that exhibit little variation in performance over time. The growing and turnaround types are representative of "successful" firms while the turnabout and declining types are representative of "unsuccessful" firms. Stagnant firms, on the other hand, are neither indicative of success nor failure.

Proposition

The underlying thesis supporting this study is that different strategies used by firms lead to different performance patterns (Galbraith & Schendel, 1983; Schendel & Patton, 1978). To put it another way, differences in performance among firms are a consequence of their differences in strategies. The basic question that this research seeks to answer is this: Are there important strategic differences between firms with different performance trends? The global proposition of this study is thus stated as follows:

The strategic profiles of growing, turnabout, stagnant, turnaround, and declining types of firms are significantly different from each other.
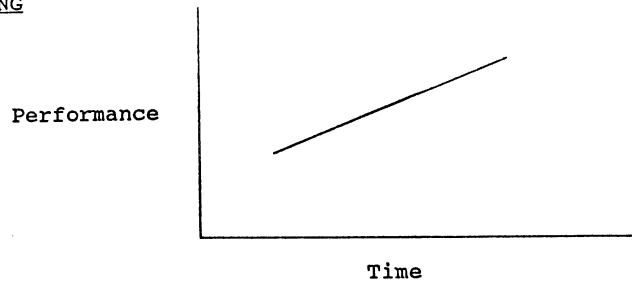
Method

Population and Sampling Frame

The COMPUSTAT database, produced by Standard & Poor's, was the source for all data used in this study. Included in the database are the annual financial statements of firms listed on the New York, American and regional exchanges, and some Over-The-Counter firms.
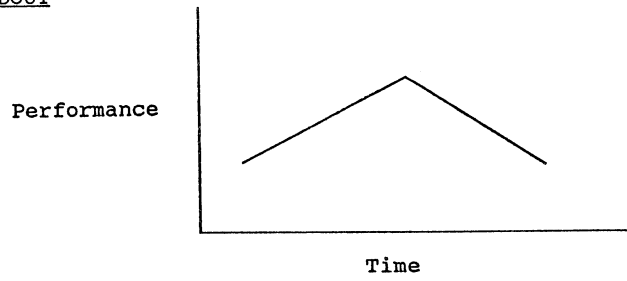
The firms comprising the sample were selected from the manufacturing sector of the U.S. economy, using two-digit SIC codes (between 20 to 39) as identifiers. The profitability pattern of each firm between the period 1979-1984 was analyzed and then classified into one of five performance patterns or dropped if it did not fall
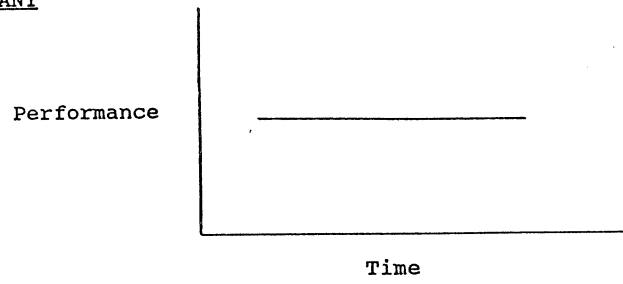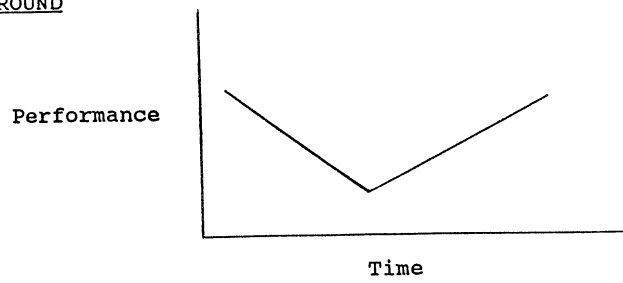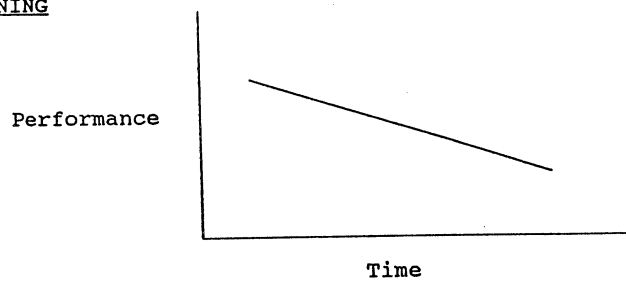
FIGURE 1

PERFORMANCE TYPES

A.   GROWING

Performance

Time

B.   TURNABOUT

Performance

Time

C.   STAGNANT

Performance

Time

D.   TURNAROUND

Performance

Time

E.   DECLINING

Performance

Time

into one of those patterns. The final sample of 171 manufacturing firms consisted of 22 growing firms, 37 turnabout firms, 17 stagnant firms, 63 turnaround firms, and 32 decline firms. The methodology involved in classifying these firms is discussed in the next section.

Operationalizing the Variables

Strategic Attributes

Research on business strategy has tended to operationalize this phenomenon through a vector of multivariate factors that are controllable by managers (Hambrick, 1980; Woo, 1987). Given the constraints of data availability in the COMPUSTAT database, the strategy variables in this study were selected based on similar prior studies (e.g. Hatten et al, 1978; Woo 1987; Hambrick et al, 1982; Schendel & Patten, 1978). The variables examined were: size, debt/equity ratio, dividend payout ratio, research and development expenditures, advertising expenditures, capital expenditures, capital expenditures in excess of depreciation, and working capital.

"Size" is the value of the firm's total assets. Total assets represent one of the firm's most important financial resources because their possession makes the acquisition of other resources possible (Mock, 1979). Studies in industrial organization and business policy have shown that firm size is one of the most validated correlates of profit performance (Beard & Dess, 1981; Gale, 1972; Shepherd, 1972). Research has generally shown a positive association between firm size and firm profitability. This relationship is consistent with a substantial body of literature that indicates that larger organizations achieve better performance because of economies of scale (Boston Consulting Group, 1972; Scherer, 1980).

"Debt/equity ratio" is the ratio of the firm's long-term debt to the stockholders' equity. This is the basic measure of the capital structure of the firm, and may influence some components of the firm's cost structure. Empirically, this variable has had a fairly consistent negative association with firm profitability. This is because debt represents a financial risk to the firm (Gale, 1972).

"Dividend payout ratio" is the ratio of dividends paid to net income. This reflects the firm's evaluation of future investment opportunities and its financial investment strategy with respect to long-term assets.

"R&D expenditures" is expressed as the ratio of R&D

expenditures to sales. It includes expenditures designed to develop improvements in both process (production) and product which could improve the firm's performance. This may represent the firm's product differentiation and cost control strategies.

"Advertising expenditures" is the ratio of advertising expenditures to sales. This is one important element of a firm's marketing or product differentiation strategy.

"Capital expenditures" is the amount of money spent on the additions to the company's fixed assets, excluding the amounts arising from acquisitions, taken as a ratio to total assets. Capital intensiveness is also well validated as a correlate of firm profitability (Beard & Dess, 1981). Its relationship with profitability is generally negative. The amount a firm spends on capital equipment reflects its long-term asset acquisition or capital-building strategy.

"Capital expenditures in excess of depreciation" is the same as capital expenditures less depreciation. This is the net additional capital infused into the firm's assets and reflects the firm's asset acquisition strategy.

"Working capital", for our purposes, is the ratio of current assets minus current liabilities to sales. It reflects the financial strategy with which a firm manages its assets. Working capital reflects inventory policy, cost control, and credit policy.

Each of these strategic variables is measured as the firm's average value of that variable for the five consecutive years used to classify the performance groupings.

Performance Types

We use ROI (Return on total assets) as our measure of performance as it is probably the most commonly used measure of performance among strategy researchers (e.g. Buzzell et al, 1975; Dess & Davis, 1984; Hambrick, 1983b; Schoeffler et al, 1974). As argued by Snow & Hrebiniak (1980), "performance may vary according to whose viewpoint is taken (e.g. customers or stockholders), the time period observed, criteria used, and so on. Yet it is clear that much of an organization's behavior is directed at achieving satisfactory performance, however it is defined" (p. 319). Furthermore, "while profitability might not fully account for all aspects of organizational performance, it is reasonable to expect well-managed firms to show higher financial returns than their more poorly managed competitors" (p. 322). The alternative measure, return on equity (ROE), is not used because "as a measure of the firm's overall

profitability it is clearly inferior to return on assets, which reveals the success of the firm in employing all of the capital at its command" (Pearce II (1983) at p.302). ROI was measured by net income divided by total assets.

The operationalization of the five types of firms identified in this study is as follows:

"Growing" firms were those reporting an annual increase in ROI for five consecutive years from 1980 to 1984.

"Turnabout" firms were those that reported an annual increase in ROI for two or more consecutive years and then immediately followed by a decrease in two or more consecutive years in the five year period studied.

"Stagnant" firms were those that reported constant returns on ROI over the five year period within a range of plus or minus 5% change in ROI.

"Turnaround" firms were those that reported an annual decrease in ROI for two or more consecutive years and then immediately followed by an increase in two or more consecutive years in the five year period studied.

"Declining" firms were those that reported an annual decrease in ROI for five consecutive years from 1980 to 1984.

Data Analysis

Multiple discriminant analysis (MDA) was used in this study to profile differences between the five performance types. This method was deemed appropriate for several reasons. First, the purpose of this study is descriptive, rather than prescriptive. MDA serves this purpose well because it is a well-accepted profiling technique (Eisenbeis, 1977; Hair et al, 1987). Second, the criterion variable is categorical in nature and not continuous. This makes it a more suitable method than multiple regression which is appropriate when both criterion and predictor variables are metric (Hair et al, 1987). Finally, an examination of the correlation matrix for the set of strategic variables revealed some multicollinearity in the data set. Multicollinearity would affect interpretation of regression results. However, multicollinearity does not affect interpretation of discriminant results, contrary to what many researchers believe (Eisenbeis, 1977; Ramanujam, et al, 1986). A stepwise discriminant procedure using the SPSS-X Package was used in this study.

Analysis And Results

A total of 171 firms were analyzed and classified into performance types labeled "growing," "turnabout," "stagnant," "turnaround," and "decline." However, the stepwise procedure, which generated the discriminant functions, included only 72 firms due to missing data. The procedure generated four discriminant functions, only three of which were significant. The first function represented the best discriminator among the groups, followed by the second and third functions. The results of the discriminant analysis supported the global proposition, i.e., significant differences were found between the five performance types (see F-ratios in Table 1).

The significant discriminators among the five performance types were dividend payout ratio (DIVI), advertising expenditures (ADEXP), capital expenditures (CAPEXP), capital expenditures in excess of depreciation (EXINV), firm size (SIZE), and working capital (WC). These variables were significant at the $p<.01$ level. The variables that were not significant discriminators were debt/equity ratio and R&D expenditures.

Validity of the Discriminant Functions

How valid are the discriminant functions in discriminating between the five groups? To answer this question we turn to the classification matrix provided in Table 2. (Note that the classification procedure used all the 171 firms to predict group membership since it is unaffected by missing data). Table 2 shows that the discriminant model achieved a hit ratio of 40.3%. The hit ratio is the percentage of firms correctly classified by the discriminant model.

To evaluate the effectiveness of the model completely, we tested this hit ratio against two criteria, that is, the maximum chance criterion and the proportional chance criterion (Hair et al, 1987). The former is the hit ratio obtained if we assign all of the observations to the group with the highest probability of occurrence. The maximum chance criterion was calculated to be 36.8% in this study. The proportional chance criterion was obtained by squaring the proportions of each group, which came out to be 24.4%. We can see that the hit ratio of 40.3% exceeded both the criteria used. Hence, we concluded that the discriminant model was valid. However, we must be cautious about the upward bias that is likely without a holdout sample.

Strategic Dimensions

Table 3 presents the rotated discriminant loadings of

TABLE 1

MULTIVARIATE F-TESTS FOR GROUP DIFFERENCES

	1	2	3	4
2	2.21*			
3	2.34*	2.99**		
4	2.41*	4.49**	4.39**	
5	3.03**	2.55**	3.45**	3.79**

*   significant at .05 level
** significant at .01 level

1= Growing; 2= Turnabout; 3= Stagnant; 4= Turnaround; 5= Decline

TABLE 2

CLASSIFICATION RESULTS

		Predicted Group Membership				
Actual Group	#Cases	1	2	3	4	5
Growing	22	4	10	1	7	0
		18.2%	45.5%	4.5%	31.8%	0%
Turnabout	37	3	21	0	13	0
		8.1%	56.6%	0%	35.1%	0%
Stagnant	17	3	5	2	7	0
		17.6%	29.4%	11.8%	41.2%	0%
Turnaround	63	7	12	1	41	2
		11.1%	19.0%	1.6%	65.1%	3.2%
Declining	32	3	9	2	17	1
		9.4%	28.1%	6.3%	53.1%	3.1%

Percent of grouped cases correctly classified: 40.3%

TABLE 3

ROTATED DISCRIMINANT LOADINGS

	Function 1	Function 2	Function 3
CAPEX	-3.102*	0.487	-0.256
EXINV	2.857*	0.203	-0.162
SIZE	0.693*	0.140	0.357
DIVI	-0.264	0.911*	0.169
WC	0.284	0.515*	-0.438
ADEXP	0.028	0.034	0.749*

* significant loadings

each strategic variable on each of the three discriminant functions.

Upon examining the patterns of loadings, we find that three "strategic dimensions" emerge. The significant variables in the first function were capital expenditures, capital expenditures in excess of investment, and firm size. They seem to represent a firm's "asset-acquisition" or capital-building strategy. Examining the second function, the significant variables, dividend payout ratio and working capital, seem to represent a firm's "financial" strategy. Finally, advertising expenditures, which was the only significant variable in the third function, seems to represent a firm's marketing or "differentiation" strategy. In order to understand the relative positioning of each performance type on each of the strategic dimensions, a visual three-dimensional plot based on group centroids is provided in Figure 2.

The standardized means of each strategic variable are graphically depicted in Figure 3.

Reading Figures 2 and 3 together, the results of this study can be meaningfully discussed.

DISCUSSION

First, the results indicate that growing firms tended to place heavy emphasis on differentiation and low emphasis on the financial dimension, relative to the other types of firms. These firms spent the most on advertising expenditures. The high emphasis on differentiation may indicate that these firms had successfully created a name for themselves in their markets vis-a-vis their competitors. These firms had low amounts of working capital and a low dividend payout ratio and they tended to be generally small in size.

In contrast to growing firms, declining firms tended to place high emphasis on the financial dimension and low emphasis on differentiation. The inadequate attention paid to product differentiation may explain why these firms were heading downward in terms of profits. The high amount of working capital carried by these firms might make them potential takeover targets. Like growing firms, the declining firms also tended to be small in size.

Turnabout firms rank the lowest on both financial and differentiation dimensions relative to the other types of firms. The failure to put sufficient emphasis on these two strategic dimensions may explain why these firms could not keep up with their profit performance in the long run. They spent the least on advertising and have the lowest dividend payout ratio. Not only had they failed to create a niche for themselves, they also failed to utilize their financial resources wisely. They probably fall into the category of "reactors" (Miles & Snow, 1978) or are "stuck in the middle" (Porter, 1980). Turnabout firms tended to be the smallest in size compared to the other four types.

Stagnant firms rank the highest on both the differentiation and asset-acquisition dimensions. They had the highest level of advertising expenditures among all the five types of firms. Not surprisingly, such expenditures can stifle profit performance and, hence, may explain why these firms could not increase their profit levels significantly. However, unlike their declining and turnabout counterparts, stagnant firms may not suffer a drop in the share of their markets because of their emphasis on differentiation. These firms tended to be the largest in size but spent the least on capital investment. Capital spending in the long run may be necessary if these firms desire to pick up their profit levels.

Turnaround firms rank the highest on the financial dimension but the lowest on the asset-acquisition dimension. These firms had the highest dividend payout ratio but carried the least amount of working capital. The former may reflect the positive outlook of these firms, particularly toward opportunities in the marketplace. The low levels of working capital may indicate the resources that were used to pay the dividends. These firms also tended to spend the most on capital investment. Again, this may have accounted for the low levels of working capital. The high levels of capital spending may explain why these firms were able to make a comeback in the long run.

CONCLUSION

This study has argued for and empirically explored the existence of five performance types of firms. As the results indicate, these types were different from each other, not only statistically, but also in their true character. These findings lend support to prior studies that have found significantly different archetypes or strategic groupings of firms in various settings (e.g. Dess & Davis, 1984; Galbraith & Schendel, 1983; Hatten et al, 1978; Miller & Friesen, 1980).

It was shown in this study that each performance type tends to focus on different strategic dimensions. It is interesting to note that even among the "successful" types (i.e., the growing and turnaround firms) firms tend to focus on different strategic dimensions. The same may be said for the "unsuccessful" types (i.e., the
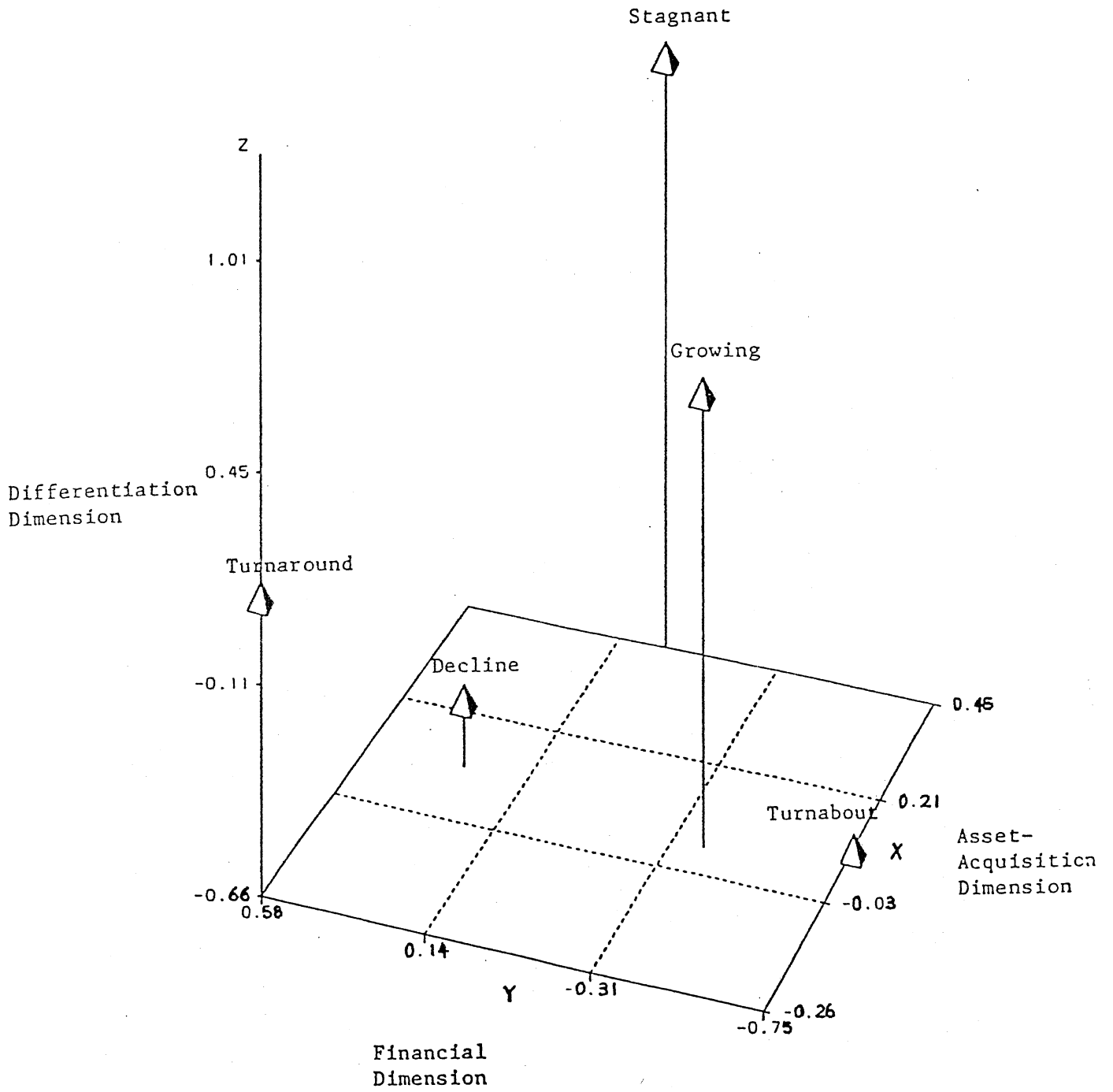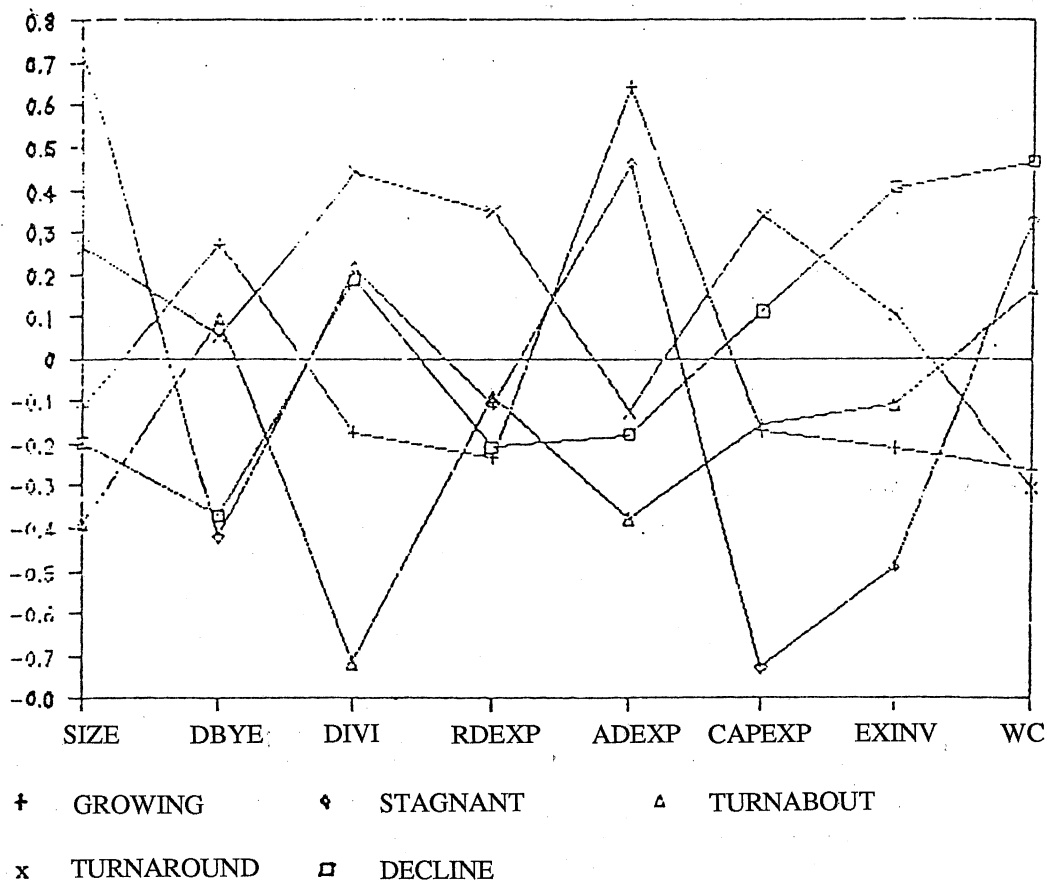
FIGURE 2

PLOT OF GROUP CENTROIDS

Figure 3
TOTAL-STANDARDIZED CLASS MEANS

| + GROWING | ⬦ STAGNANT | ⌂ TURNABOUT |
| x TURNAROUND | ☐ DECLINE | |

turnabout and declining firms). This observation seems to support the existence of "equifinality" (von Bertalanffy, 1955; Dess & Davis, 1984) in goal-achievement behavior. In other words, there are different ways that can lead a firm to success or to failure.

This study has also highlighted the promising use of MDA in taxonomic research in the area of strategic management. MDA has frequently been used by strategy researchers to classify only two groups of firms/subjects (e.g., Lenz, 1980; O'Neill, 1986; Ramanujam et al, 1986). To the best of our knowledge, there have been no applications of MDA beyond the two-group case in strategy research. The present study illustrates how MDA can be applied to a situation where more than two groups exist. In particular, it demonstrates the ability of MDA to identify taxonomies of variables that simultaneously characterize the dimension of interest (Perreault et al, 1979). This particular feature of MDA cannot be seen in the two-group case because there is only one discriminant function. The taxonomic capability of MDA puts it in the same category with other techniques such as Q-factor analysis and cluster analysis. One advantage that MDA has over these techniques is that while the former can simultaneously classify and profile differences between firms the latter by themselves cannot explain differences between firms.

Several limitations of this study should be noted. First, although performance had been viewed in a longitudinal fashion, cross-sectional data were used to compute the strategic variables. Hence, this study could not capture the dynamic aspect of strategy. Second, only one performance indicator was used in this study. Future research should attempt to include other performance measures that are relevant to the subjects studied. Finally, the generalizability of the study is limited because only manufacturing firms were included in the study. Nonetheless, we argue that the five performance types can be found in any industry, whether it is product- or service-based. As such, future research should attempt to replicate the findings here in other industries.

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