

# Configurations of Board of Director Composition and Structure, Strategic Attributes, and Business Performance

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## Abstract

*Research on the role of the board of directors and configurations of strategic attributes, important areas in strategic management, have proceeded somewhat independently. This study integrated these two streams of research to highlight the configurations among board of director composition and structure, and strategy. Hypotheses that firms with above-average performance would have significantly different configurations of board and strategic attributes compared to firms that have below-average performance were supported.*

## Introduction

The study of configurations, or patterns of relationships, among organizational characteristics and contextual features has a rich tradition (Govindarajan, 1988; Miller, 1987, 1990). Among the contextual factors examined have been environment (Burns and Stalker, 1961; Lawrence and Lorsch, 1969; Thompson, 1967) and strategy (Chandler, 1962; Miles and Snow, 1978; Govindarajan, 1986, 1988; Miller, 1986, 1987, 1988).

The general conclusions of these studies are: 1) strategy is a major determinant of an organization's uncertainty (Chandler, 1962; Miles and Snow, 1978; Govindarajan, 1988), 2) coping with uncertainty is a fundamental problem in strategy implementation (Govindarajan, 1988; March and Simon, 1958; Thompson, 1967), and 3) organizational characteristics should be consistent with strategy (Chandler, 1962; Gupta and Govindarajan, 1984; Govindarajan, 1986, 1988; Miles and Snow, 1978; Miller, 1986, 1988; Miller and Friesen, 1984). Recently it has been shown that the fit among these characteristics is likely to be systematic rather than bivariate, and thus, the systems approach to fit has greater explanatory power (Govindarajan, 1988; Miller, 1988).

Only recently (Zahra and Pearce, 1989) has the

literature on boards of directors begun to consider that board characteristics may be contingent upon contextual characteristics. This contrasts with generally universalistic prescriptions of the ideal board having a majority of outside directors and committees (i.e., American Law Institute, 1982; Firstenberg and Malkiel, 1980), which Kesner, Victor and Lamont (1986) describe as the outside dominance perspective. While Zahra and Pearce (1989) do not offer clear propositions and testable hypotheses about the nature of board contingencies, they suggest that some of the general results of the configuration studies may be generalized to the board level.

Thus, this study has two related purposes. The first is to begin to attempt to integrate the extant knowledge about configurations and board characteristics. The second, and more important, purpose is to investigate the nature of any configurations which may exist among strategy, organizational characteristics, board characteristics and performance.

## The Search for Strategic Configurations

The study of organizational configurations has developed a rich tradition in the three decades since the work

of Burns and Stalker (1961). Their study reported different relationships between environmental conditions and organizational characteristics. Dynamic environments call for organizations with a flexible organization structure, loosely defined tasks, and consultative communication. On the other hand, mechanistic organizations, which rely heavily on functional specialists, hierarchical communication, and clearly defined tasks and responsibilities, were best in stable environments.

Lawrence and Lorsch (1969) built on the work of Burns and Stalker (1961) and reported that organizations in more dynamic environments were more differentiated and had more special subunits linked to their environments than those organizations in stable environments. The more effective organizations employed higher levels of integration, or processes which achieved unity, among their subunits. Specifically, they reported that integration processes are more elaborate as the organization is more differentiated. Thus, environmental uncertainty and complexity require certain types of organizational characteristics.

Concurrently, Chandler (1962) deduced the strategy-structure paradigm (Channon, 1973; Rumelt, 1974), that each strategy has an appropriate structure which promotes higher levels of performance. This thesis has been supported by numerous studies (Galbraith and Kazanjian, 1986) at the corporate level.

More recently, the focus of strategic configurations has been at the strategic business unit (SBU) level. Results of these studies (Collins, Hage, and Hull, 1988; Govindarajan, 1986, 1988; Miller, 1986, 1988) indicate that the configuration between business level strategy and organizational structure and processes is related to performance.

Strategies based on differentiation and innovation are associated with higher levels of uncertainty, which must be handled with specific administrative mechanisms (Govindarajan, 1986, 1988; Segev, 1988). For example, Miller (1988) suggested that liaison devices and technocrats should be employed where uncertainty is found, while sophisticated cost controls should be used if cost leadership and certainty are the goals. Similarly, Lenz (1980a) reported that high profit savings and loans had an emphasis on cost control, while high growth savings and loans did not.

#### *How Broadly Do Configurations Exist?*

The research on configurations yields a set of five conclusions. These conclusions are: 1) the choice of strategy influences the uncertainty with which an organi-

zation must cope, 2) coping with uncertainty is a fundamental problem in strategy implementation, 3) certain administrative mechanisms are better able to cope with uncertainty, and ultimately, 4) that the configuration between strategy and administrative mechanisms is related to performance. In addition, the relationships among these variables often is systematic, not bivariate, as often reported in early studies.

#### *Configurations of the U.S. Airlines Industry*

The U.S. airline industry exemplifies many of the points articulated above. Since deregulation of the airline industry in 1978, rapid change has been caused by new threats and opportunities, representing a full range of competitive options (Meyer, Oster, Morgan, Berwan, and Strassman, 1981), which highlight the industry's history of competitiveness and wide performance differences. The first few years following deregulation saw a number of strategic moves designed to protect firm positions (Robinson and Ward, 1983; Phillips, 1985). For example, Phillips (1985) noted that the development and use of the hub-and-spoke strategy occurred during this time period.

Several studies have examined the relationship between strategic variables and performance in the airline industry. Ellison (1982) and Lazarus and Ashley (1985) claimed that airlines must lower costs in order to achieve financial success. More importantly, Chan (1989) reported that higher profit airlines had lower promotion expenses, were larger, and were more computerized than lower profit airlines. Similarly, Snow and Hrebiniak (1980) found that high profit airlines had an expertise in financial management. In terms of growth, both Bailey, Graham, and Kaplan (1985), and Chan (1989) reported that high growth airlines were smaller and had lower labor costs. Bailey et al. (1985) also reported high growth airlines were not unionized, and fought for market share. Three points summarize the studies of airlines. First, those airlines achieving high levels of profitability were the larger airlines, which placed an emphasis on cost control in order to take advantage of their operating leverage and large size and minimize the financial volatility which the industry was experiencing. Second, high growth airlines were the smaller airlines which controlled their labor costs. The final conclusion is that controlling labor costs is important for strategic success.

A critical set of questions exists regarding strategic configurations: 1) given that configurations exist between strategic and administrative mechanisms, do configurations exist at the highest level (board of directors) of the firm, and 2) are they consistent with the configurations

previously reported? Before these questions can be investigated, the literature on the role of corporate boards of directors will be reviewed to develop hypotheses on configurations among strategy, boards and performance.

### Characteristics of the Board of Directors

#### *Strategic Responsibilities of the Board*

The board of directors is recognized as the agent which ensures that a firm establishes a strategy and that performance is monitored and evaluated (Andrews, 1980; Boulton, 1978; Henke, 1985; Mace, 1971). These tasks require the board to monitor and evaluate actions of the firm's management. When the evaluation indicates that corrective actions, including replacing management, are necessary, it is also the board's responsibility to do so.

The literature on board functioning commonly recommends that the board be composed of a majority of outside (not otherwise employed by the firm) directors (American Law Institute, 1982; Bacon and Brown, 1973; Berg and Smith, 1978; Firstenberg and Malkeil, 1980). The expected benefits of this outside dominance perspective (Kesner et al., 1986) includes the broader view of outside directors, and their independence from the chief executive officer (CEO) outside the board room.

The American Law Institute (1982) proposed a set of board committees for all major firms to handle the tasks of the board. *The Business Roundtable* (1978) called for the board to use a committee structure that reflects the issues and problems faced by the firm. Board composition and committee structure were listed by Zahra and Pearce (1989) as the means by which a board addresses a firm's contingencies. Thus, committee structure can be considered to be differentiation at the board level. Committees promote effective board differentiation by allowing specialized knowledge and experience of the directors to be developed and used by the board.

#### *Board Composition and Firm Performance*

While some studies have found support for the claim that firms with a majority of outside directors will have higher levels of performance (Baysinger and Butler, 1985; Pfefer, 1972; Rechner and Dalton, 1991), there are also studies which fail to support his claim (Kesner et al., 1986; Kesner, 1987; Zahra and Stauton, 1988). More damaging to the claim of the outside dominance perspective (Kesner et al., 1986) are the results which report a positive relationship between a majority of

inside directors and firm performance (Cochran, Wood, and Jones, 1985; Davis and Donaldson, 1989; Vance, 1964, 1978).

These contradictory results caused Zahra and Pearce (1989) to note that research should focus on other board attributes and roles, including board structure and firm strategy, in order to more fully determine the relationship between board composition and firm performance (p. 317). Thus, they proposed a contingency framework in which composition is a function of many variables, including strategy.

#### *Board Committees as Decision-Making Mechanisms*

Most decision making at the board level takes place in board committees (Bacon and Davis, 1973). Board committee structure is a form of differentiation (Lawrence and Lorsch, 1969) where each committee has specific tasks and should have members with appropriate attributes. Committee structure represents the board's division of activities, flow of information, and decision making. The use of committees influences the board's performance of its responsibilities. *The Business Roundtable* (1978) noted that the use of board committees enables the board to utilize the specialized knowledge and experience of directors to address the particular problems of the firm. Thus, board differentiation and efficient use of director time is promoted by the use of committees.

The strategic uses of board committees was discussed by Harrison (1987), who identified two types of committees with different strategic purposes. Executive and finance committees advise management on major strategic decisions and are operating committees. Nominating committees provide a monitoring function to protect shareholder interests. By separating the board's activities into advising and monitoring, and establishing committees to perform these activities, board performance is promoted.

The use of board committees to promote differentiation and integration is consistent with Lenz's (1980b) claim that the existence of appropriate administrative frameworks helps determine a firm's strategic capability. Board committees make it easier to make decisions which establish and evaluate a firm's strategy enabling these tasks to be brought together in a decision-making unit. When a board's committee structure (the administrative framework of the board) is built to address the firm's issues and problems, it establishes a strategic capability.

Board structure has been more actively examined by consultants and practitioners than by academics (Zahra and Pearce, 1989). For example, consultants (Braiotta and Sommer, 1978; Heidrick and Struggles, 1981; Korn/Ferry, 1982a) have examined the growing use of four types of committees; audit (Bacon, 1979), public policy (McGrath, 1980), planning (Brown, 1981), and compensation (Meuter, 1989).

Academic research has examined some features of board committees. For example, Jemison and Oakley (1981) found that a minority of insurance company boards had either an audit (45%) or nominating (42%) committee. Kesner (1988) reported that important board committees had a majority of outsiders with business careers and a long record of membership on the board.

Of particular importance to this study, Wilson (1979) reviewed the way in which the General Electric board adopted a comprehensive board committee structure to increase public accountability and handle the diverse environmental pressures which GE faced. While his findings cannot be generalized, they suggest a general contingency model of committee structure (*The Business Roundtable*, 1978). More recently, Zahra and Pearce (1989, p. 321) asked whether the boards of successful firms, in different contexts, have different committee structures than those of less successful firms.

### Hypotheses

Two specific conclusions can be made based on the research reviewed above. The first is that profit strategies are positively related to environmental predictability (Segev, 1989) and require tight cost controls (Bailey et al., 1985; Chan, 1989). Thus, strategic behavior should reflect cost control, while board committee structure, differentiation, should reflect the concern with success and continuity of this strategy. In addition, there is debate over whether or not a higher proportion of outside directors is related to firm performance. Therefore, it can be hypothesized:

**H1:** *Those firms with above average profits will have configurations which reveal lower costs and debt, larger size, higher capacity utilization, greater existence of board finance and nominating committees of the board of directors than those firms with below average profits.*

The second conclusion is that a growth strategy is based upon strategies of innovation and differentiation (Porter, 1980) and controlling labor costs (Bailey et al., 1985; Chan, 1989). In addition, these strategies were related to greater use of organizational differentiation

and integration (Lawrence and Lorsch, 1969). Thus, it can be hypothesized:

**H2:** *Firms with above average growth will have configurations which reveal they are smaller firms with lower labor costs and greater existence of board executive, finance, and nominating committees than those firms with below average growth.*

### Method

#### *Sample and Data*

The sixteen airlines classified by the Civil Aeronautics Board as "major" or "national" airlines during the time period 1980 to 1984 comprised the study's sample. Previous research on the airline industry has produced several results of significance to this study. Financial characteristics of U.S. airlines makes them a unique sample to study. The capital investment needs of the industry have increasingly exceeded internally generated funds since 1970 (Howard, Hart, and Glombeck, 1982). In addition, financial volatility has not only increased in the airline industry, but has also increased more than the volatility in other industries since 1970 (Lang and Lockhart, 1990).

Two sets of archival data were collected. Board of director composition and committee structure data were collected from the airlines' annual reports and 10-K reports. In addition, performance and strategy data were collected from *Form 41 Reports*, collected and published by the Civil Aeronautics Board.

#### *Variable Operationalization*

This study's two dependent variables were firm performance measures, while the ten independent variables were strategic attribute and board characteristic measures. The operationalization of each variable, as well as its hypothesized relationship with each of the dependent variables is presented below in Table 1. A brief discussion of the importance of each variable is presented below.

#### *Dependent Variables*

Consistent with other studies (Child, 1974; Schendel and Patton, 1978; Bourgeois, 1980; Miller and Freisen, 1983), this study used both growth and profitability as measures of performance. Firms usually experience a tradeoff between profit and growth (Lenz, 1980a; Schendel and Patton, 1978). Therefore, success in one measure is no indication that a firm will be successful according to the other measure. To accommodate this

<b>Table 1</b>				
<b>VARIABLE OPERATIONALIZATION</b>				
	Operationalization	Source	Hypothesized Relationship with:	
			Profit	Growth
<b>PERFORMANCE VARIABLES</b>				
Growth	Annual Percent Change in Revenue Passenger Miles	CAB Report 41		
Profit	<u>Net Profit (loss)</u> Total Assets	CAB Report 41		
<b>STRATEGY VARIABLES</b>				
Capacity Utilization	<u>Available Seat Miles</u> Number of Aircraft Days	CAB Report 41	+	+
Promotion & Sales Expenditures	<u>Promotion and Sales Expenditures</u> Total Operating Revenues	CAB Report 41	-	+
Labor Cost	<u>Total Labor Costs</u> Total Operating Revenues	CAB Report 41	-	+
Debt	<u>Total Debt</u> Total Assets	CAB Report 41	-	-
Size	Total Assets	CAB Report 41	+	
<b>BOARD VARIABLES</b>				
Board Composition	<u>Directors without an Employment History with the Airline</u> Total Number of Directors	Firm Annual Reports	+	+
Executive Committee	Presence or Absence	Firm Annual Reports and 10-K Reports	+	+
Finance Committee	Presence or Absence	Firm Annual Reports and 10-K Reports	+	+
Nominating Committee	Presence or Absence	Firm Annual Reports and 10-K Reports	+	+

tradeoff, the two performance measures were examined separately.

Profitability is commonly measured by the return on investment (Buzzell, Gale, and Sultan, 1975; Dess and Davis, 1984; Lenz, 1980a; Jauch, Osborn, and Glueck, 1980). In this study, profitability was measured by the return on assets, which is one measure of return on investment. Consistent with earlier studies of the airline industry (Fruhan, 1972; Graham and Kaplan, 1982; Chan, 1989), this study measured growth as the annual percentage change in revenue passenger miles.

### *Independent Variables*

Capacity utilization is a measure of how efficiently the equipment of an airline is used. High capacity utilization enables an airline to spread its fixed costs over a larger passenger base (Ellison, 1982). Promotion and sales expenditures represent the extent that a firm's promotion efforts are aimed at product differentiation. They are used to increase ridership, but reduce a firm's cost control. Labor cost is the most controllable expense an airline has because an airline does not have to be unionized, and if it is, it negotiates its own labor contract. In addition, there often is little difference between airlines in other expenses, such as fuel and equipment.

While debt is a major source of funds for airlines, it also represents an increased financial risk to the firm (Lazarus and Ashley, 1985). Total assets was used as the operationalization of firm size, because financial resources are considered to be the most important resources of an organization, since their possession makes the acquisition of all other resources possible (Mock, 1979).

Consistent with the literature reviewed above, board composition reflects the backgrounds of the members of the board of directors. These backgrounds reveal whether a director is, or was, a full-time employee of the firm (insider), or not (outsider).

Boards of directors often have committees which have responsibilities to perform specific tasks. The executive committee, which functions in lieu of the whole board between formal meetings of the board, was identified as an important (Kesner, 1988) operating committee (Harrison, 1987) and should have strategic significance.

The primary task of the finance committee, an operating committee (Harrison, 1987), is to review and guide financial policy, such as capital structure, dividend policy, cost control, and acquisitions and divestitures.

Thus, it differentiates the board to handle its financial concerns, which are critical in airlines (Howard et al., 1982; Lang and Lockhart, 1990).

Among others, *The Business Roundtable* (1978) stated that the issue of director and top management succession can be handled through a special committee, such as a nominating committee (committee on succession), which addresses the need for a supply of competent successors. While Harrison (1987) claimed that it is a monitoring committee which provides an independent review of the firm's affairs, thereby protecting shareholder interests by ensuring a management team capable of pursuing the chosen strategy, Kesner (1988) called it an important committee. The importance of a supply of successors is seen in the positive relationship among top management skills, firm strategy, and performance (Bourgeois, 1980; Hambrick, 1981, 1987; Leontides, 1982).

### *Analytical Procedure*

Discriminant analysis has proven to be an appropriate method for studying configurations or profiles of variables (Hambrick, 1983; Lenz, 1980a; Ramanujam, Venkatraman, and Camillus, 1986). Also, the descriptive nature of the study's dependent variables makes discriminant analysis an appropriate technique (Eisenbeis, 1977; Hair, Anderson, and Tatham, 1987). In addition, and perhaps more importantly, the use of a pooling procedure (described below) resulted in interdependence (collinearity) among the observations. Interdependence is an important feature of configurations. Interdependence would seriously affect the interpretation of the results of multiple regression, whereas the impact of multicollinearity on the interpretation of discriminant analysis results is much less (Eisenbeis, 1977; Ramanujam, Venkatraman, and Camillus, 1986).

### *Statistical Analysis*

Due to the relatively small sample used in this study, all five years of data were pooled for analysis. This method has been used in previous research when the sample came from one industry and the number of firms sampled was small (Brown-Johnson, Sambharya and Bobko, 1989; Hatten, Schendel, and Cooper, 1978; Hatten and Schendel, 1977; Lenz, 1980a).

The median-split method, often used in these types of studies (Hambrick, 1983; Khandwalla, 1973; Lenz, 1980a; Ramanujam, Venkatraman, and Camillus, 1986), was used to divide the sample into high and low performing airlines. Next, the groups were analyzed, using discriminant analysis, to profile the configurations of

high and low performing airlines and to reveal the differences between these profiles (as indicated by scores on the strategic and board of director variables). The statistical significance of the discriminant functions was determined by the multivariate F-Test, which revealed whether or not significant differences existed between the configurations of high and low performing firms. (For a more in-depth explanation of the multivariate F-Test, see Hair et al., 1987).

## Results

The results of this study were generally consistent with the hypotheses. Different levels of performance were associated with different configurations of strategic attributes and board of director committee structure, but not composition.

### *Profit*

The results of the discriminant analysis of the profit (ROA) groups are presented in Tables 2a, b, and c. The firms in the high-profit (top half) and low-profit (lower half) airlines were significantly different from each other in terms of their configuration of various strategic and board factors (multivariate  $F = 2.67$ ;  $p < .01$ ) as noted in Table 2a. Table 2a also reveals that high-profit firms tended to be associated with lower promotion and sales expenditures and were more likely to have nominating and finance committees, compared to low-profit firms. None of the other independent variables included in the analysis were found to be significant. The significance of promotion and sales expenditures and nominating and finance committees were consistent with the hypothesis. Also, board composition was not found to be related to firm performance.

The discriminant weights of the independent variables for profits are found in Table 2b. The weights (absolute values of those reported), when arranged in descending order, reveal the discriminating power of these significant independent variables. They are promotion expense (.7200), finance committee (.3651), and nominating committee (.1717). These results must be interpreted with some caution, because of the multicollinearity among the various independent variables. This may have caused the failure of some variables with larger discriminant weights than the nominating and finance committees to achieve statistical significance.

The discriminant function obtained for the profit groups classified 89.2% of the firms correctly (Table 2c), which is substantially higher than the chance criterion of 62.5% (50%, plus 1/4 of 50%) recommended by Hair,

Anderson, and Tatham (1987). This appears to lend strong support to the validity of the discriminant function. However, this claim is made cautiously because the study did not use holdout samples (Hair et al., 1987).

### *Growth*

Similar to the profit groups, the high-growth (top half) and low-growth (bottom half) firms were found to be significantly different from each other (Table 3a). The results reveal that high-growth firms were more likely to be smaller, with lower capacity usage, lower labor costs, nominating committees and executive committees, but be less likely to have a finance committee. These results were consistent with the hypothesis. In addition, the results did not support the assertion that the more outside directors a firm has, the higher its performance.

Table 3b reveals the discriminant weights of the discriminant function between the high and low growth firms studied. In descending order of discriminating power, the significant variables were capacity utilization (.7762), nominating committee (.6468), finance committee (.5638), executive committee (.4788), size (.3859), and labor costs (.3327). As discussed above, the fact that variables with higher discriminant weights than some of the significant variables were not significant, indicates that caution should be used in interpreting the importance of the discriminant weights.

The classification accuracy of 85.5% (Table 4c) obtained for the growth groups lends strong support to the validity of the discrimination function, because it exceeded the chance criterion of 62.5%. Again, these results must be tempered because the study did not include a holdout sample.

## Discussion

The results of this study were generally consistent with the hypotheses and previous research on configurations between high and low performance and strategic attributes. This study expanded upon previous findings by revealing that the different configurations also included different board of director committees. Additionally, the study did not support the outside dominance perspective of the board.

### *Low Profit vs. High Profit Airlines*

In an airline with high profits (top half), the configuration of strategy variables was as expected. Hrebiniak and Snow (1980) found high profit airlines had expertise

<b>Table 2</b>			
<b>PROFIT GROUPS</b>			
<b>A: GROUP MEANS AND SIGNIFICANCE TESTS</b> <i>MULTIVARIATE F-TEST = 2.67**</i>			
	Group Means		
	High-Profit	Low-Profit	Univariate F-Test Significance
Promotion	0.13	0.14	0.001**
Nominating Committee	0.26	0.23	0.045*
Finance Committee	0.38	0.33	0.043*
* p < .05			
** p < .01			
<b>B: DISCRIMINANT WEIGHTS</b>			
	Utilization	-.0761	
	Promotion	.7200	
	Labor Costs	.5875	
	Debt	-.0366	
	Size	.0262	
	Board Composition	.2107	
	Nominating Committee	-.1717	
	Executive Committee	.1793	
	Finance Committee	-.3651	
<b>C. CLASSIFICATION MATRIX</b>			
	Predicted Group		
Actual Group	Low-Profit	High-Profit	Total
Low-Profit	39	2	41
High-Profit	17	25	<u>42</u>
Predicted Total	56	27	<u>83</u>
Percent correctly classified = 89.2%			



<b>Table 3</b>			
<b>GROWTH GROUPS</b>			
<b>A: GROUP MEANS AND SIGNIFICANCE TESTS</b> <i>MULTIVARIATE F-TEST = 2.94<sup>***</sup></i>			
	Group Means		Univariate F-Test Significance
	High-Growth	Low-Growth	
Utilization	385.76	470.07	0.002**
Labor Costs	0.35	0.36	0.05*
Assets	1402659966	2110580439	0.01**
Nominating Committee	0.27	0.22	0.008**
Executive Committee	0.79	0.77	0.007**
Finance Committee	0.33	0.37	0.005**
* p < .05 ** p < .01			
<b>B: DISCRIMINANT WEIGHTS</b>			
	Utilization	-.7762	
	Promotion	.3213	
	Labor Costs	-.3327	
	Debt	.2922	
	Size	-.3859	
	Board Composition	.3389	
	Nominating Committee	.6468	
	Executive Committee	.4788	
	Finance Committee	-.5638	
<b>C. CLASSIFICATION MATRIX</b>			
Actual Group	Predicted Group		Total
	Low-Growth	High-Growth	
Low-Growth	(0) 43	(1) 7	50
High-Growth	5	28	<u>33</u>
Predicted Total	48	35	<u>83</u>
Percent correctly classified = 85.5%			

in financial management. Cost control and efficiency are critical issues in financial management of airlines because of their operating leverage (Ellison, 1982). A small change in variable costs, including promotion and sales expenses, and labor expenses, can have a large impact on a firm's profit margin. Consistent with the configurations of high and low profit airlines reported by Bailey et al. (1985) and Chan (1989), higher profit firms are associated with lower promotion and sales expenses than low profit firms. It appears these airlines attempted to control variable costs.

Conversely, low profit airlines appear to follow a strategy, including heavier promotion, which does not support the need for the cost control essential for profitability. Low profit airlines appeared to sacrifice cost control, and thus, profit margins. Lenz (1980a) reported similar results in savings and loan associations, where profitable savings and loan associations had a high yield margin because they did not engage in competitive practices which did not support continued profitability. In addition, the failure of low profit firms to be associated with higher capacity utilization, while having higher promotion expenditures, implies that the total marketing program of these firms is not effective. Among the possible problems which may contribute to their situation are higher than average fares, a bad route structure (Ellison, 1982), and poor service (e.g., poor flight scheduling, poor treatment of passengers). These are problems which promotion can only cover up, not overcome.

The use of finance and nominating committees in high profit firms is consistent with the prescriptions of *The Business Roundtable* (1978), Wilson, (1979), and Zahra and Pearce (1989) that board committees reflect the issues a firm faces. A finance committee is a means of differentiating the board to more closely address the issues of financial management and profitability. Financial management requires resolving issues which include issuing new debt, certainly an issue for airlines (Howard et al., 1982), the purchase of new equipment, as well as any other action that may affect operating revenues and expenses, such as promotion and sales expenses and labor costs. Thus, these findings appear to extend Lawrence and Lorsch's (1969) discussion of differentiation to the board of directors.

Nominating committees of the board of directors are responsible for ensuring an orderly succession of competent top level management and directors. This is an administrative mechanism for establishing management personnel consistent with the firm's strategy (Bourgeois, 1980; Hambrick, 1981; Leontiades, 1982). Thus, they can be a differentiation mechanism which enables

successful firms to have a pool of managers and directors who are capable of formulating goals and strategies, as well as evaluating performance in comparison with the goals.

It was expected that high profit firms would be more likely to have special administrative mechanisms (Lenz, 1980b), which create a general management skill which is responsive to their strategic attributes. Issues of cost control and management succession are basic to pursuing a profit strategy.

#### *Low Growth Airlines vs. High Growth Airlines*

The study revealed that there are distinct strategic characteristics; smaller size, lower labor costs, and excess capacity, which are associated with successfully pursuing a growth strategy. Specifically, the faster growth of small, low labor cost airlines is consistent with the results of both Bailey et al. (1985) and Chan (1989). Rather than using promotion as a means of product differentiation (as indicated by the lack of significance of promotion expenses), these airlines may use low cost as a means to attract passengers. This can be accomplished by passing labor cost savings and lower overhead costs to the passengers in the form of lower fares. This strategy would be a means of taking advantage of operating leverage.

In comparison, slower growing airlines are large airlines, which may not have as much excess capacity to absorb increased ridership, possibly without large capital expenditures to increase fleet size. In addition, the slow growth airlines do not have a comparative labor cost advantage, which appears to contribute to a comparative disadvantage.

The differences between high and low growth firms are consistent with the results of Miller (1988) and Govindarajan (1988), both of whom reported that, within different environments, different configurations are associated with different levels of performance. In this case, cost structure, size and capacity utilization are associated with different rates of growth for high and low growth airlines.

The association of board nominating, executive, and finance committees with growth indicates that high growth firms use a highly differentiated (Lawrence and Lorsch, 1969) board to address issues related to a high growth strategy. This is consistent with the recommendations regarding board committees made by *The Business Roundtable* (1978), Harrison (1987), Pearce and Zahra (1989), and Wilson (1979).

One of the features of an executive committee of the board of directors is that it can meet, on short notice, between regularly scheduled board meetings, to handle issues which do not permit waiting until the next scheduled board meeting. Therefore, an executive committee helps ensure that the pressing issues of a growth strategy, which creates a more turbulent environment (Govindarajan, 1988; Miles and Snow, 1978; Miller, 1988) can be responded to quickly.

As noted earlier, the nominating committee of the board of directors is responsible for ensuring the presence of an adequate pool of potential successors to top management positions and seats on the board of directors. The association between the presence of a nominating committee and high growth reveals the importance of a mechanism which differentiates the board so that it may address this issue.

The lower association between the higher growth airlines and board finance committees is somewhat surprising given growing firms have lower labor costs. This may be a result of not being unionized, which minimizes the need for financial management expertise.

The overall configuration of strategy, board committees and firm growth is consistent with Lenz's (1980b) claim that administrative frameworks create a strategic capability for the firm. Firms with high rates of growth appear to achieve high growth because they focus on building the strategic capability to achieve it.

### Conclusions

This study made two significant findings to the literature on organization processes and performance. First, it supports the growing evidence of strategic configurations by including board characteristics of composition and committees, differentiation (Lawrence and Lorsch, 1969), as elements of the configurations. The configurations of strategic characteristics and the board committees, appears to create a strategic capability (Lenz, 1980b) for resolving resulting strategic issues.

The second result is the limited support the study yielded for the Zahra and Pearce (1989) contingency model of board characteristics. The committee structure, in terms of earlier board studies, appears to be the way the board develops its technical expertise, which Vance (1978) claimed was essential for the board to promote firm performance. When considered in conjunction with the number of outside directors not being related to performance, the ability of the board to address issues and decisions in the appropriate manner appears to be more important than the expertise and

judgment of outside directors.

### Suggestions for Future Research

This study can serve as the basis for future research on boards of directors in three major ways. First, other industries should be examined to determine the generalizability of the specific results of this study. Such studies may provide initial answers as to whether boards have universal characteristics or whether they are relatively idiosyncratic to each industry and firm. Second, the creation of the board's strategic capability should be a future research topic. These studies should include not only the processes the firm uses to develop this expertise, but how they recruit the necessary talent and how relevant board tasks are structured. The third suggestion is to attempt to integrate the Zahra and Pearce (1989) model, which may be the most comprehensive model of board characteristics, in future studies. Examining this model may not only provide a deeper understanding of the relationships among board and firm characteristics, it may also help to address the first two suggestions presented above.

### \*\*\*References\*\*\*

1. American Law Institute (1982). *Principals of Corporate Governance and Structure: Restatement and Recommendations*. Tentative draft, Philadelphia, PA.
2. Andrews, K., "The Roundtable Statement on Boards of Directors," *Harvard Business Review*, Vol. 56, No. 5, pp. 24-38, 1978.
3. Andrews, K., "Directors' Responsibilities for Corporate Strategy," *Harvard Business Review*, Vol. 58, No. 6, pp. 30-ff, 1980.
4. Bacon, J., and J. Brown, *Corporate Directorship Practices: Role, Selection, and Legal Status of the Board*. New York: The Conference Board, Inc., 1973.
5. Bacon, J., *Corporate Directorship Practices: The Audit Committee*. New York: The Conference Board, Inc., 1979.
6. Bailey, E., D. Graham, and D. Kaplan, *Deregulating the Airlines*, Cambridge, MA: MIT Press, 1985.
7. Baysinger, B., and H. Butler, "Corporate Governance and the Board of Directors: Performance Effects of Changes in Board Composi-

- tion," *Journal of Law, Economics, and Organizations*, Vol. 1, pp. 101-124, 1985.
8. Berg, S., and S. Smith, "CEO and Board Chairman. A Quantitative Study of Dual vs. Unitary Board Leadership," *Directors & Boards*, pp. 34-39, 1978.
  9. Boulton, W., "The Evolving Board: A Look at the Board's Changing Role and Information Needs," *Academy of Management Review*, Vol. 3, pp. 827-836, 1978.
  10. Bourgeois, J., "Strategy and Environment: A Conceptual Integration," *Academy of Management Review*, Vol. 5, pp. 25-39, 1980.
  11. Braiotta, L., Jr., and A. Sommer, Jr., *The Essential Guide to Effective Corporate Board Committees*, Englewood Cliffs, NJ: Prentice-Hall, 1987.
  12. Brown, J., *Corporate Directorship Practices: The Planning Committee*. New York: The Conference Board, 1981.
  13. Brown-Johnson, N., R. Sambharya, and P. Bobko, "Deregulation, Business Strategy, and Wages in the Airline Industry," *Industrial Relations*, Vol. 28, No. 3, pp. 419-430, 1989.
  14. Chan, P., "Organizational Patterns and Firm Performance: Strategic Lessons from a Perceptuated Industry," *Journal of Management in Practice*, Vol. 1, pp. 24-30, 1989.
  15. Chandler, A., *Strategy and Structure: Chapters in the History of American Enterprise*, Cambridge, Massachusetts: M.I.T. Press, 1962.
  16. Child, J., "Managerial and Organizational Factors Associated with Company Performance-Part I," *Journal of Management Studies*, Vol. 11, pp. 175-189, 1974.
  17. Cochran, P. L., R. A. Wood, and T. B. Jones, "The Composition of Boards of Directors and Incidence of Golden Parachutes," *Academy of Management Journal*, Vol. 28, pp. 664-671, 1985.
  18. Collins, P., J. Hage, and F. Hull, "Organizational and Technological Predictors of Change in Autonomicity," *Academy of Management Journal*, Vol. 31, pp. 512-543, 1988.
  19. Dess, G., and P. Davis, "Porter's (1980) Generic Strategies as Determinants of Strategic Group Membership and Organizational Performance," *Academy of Management Journal*, Vol. 27, pp. 467-488, 1984.
  20. Eisenbeis, R., "Pitfalls in the Application of Discriminant Analysis in Business, Finance, and Economics," *Journal of Finance*, Vol. 32, pp. 875-900, 1977.
  21. Ellison, A., "The Structural Change of the Airline Industry Following Deregulation," *Transportation Journal*, Vol. 21, No. 3, pp. 58-69, 1982.
  22. Firstenberg, P., and B. Malkiel, "Why Corporate Boards Need Independent Directors," *Management Review*, Vol. 69, No. 4, pp. 26-38, 1980.
  23. Fruhan, W., Jr., "Pyrrhic Victories in Fights for Market Share," *Harvard Business Review*, pp. 100-107, 1972.
  24. Govindarajan, V., "Decentralization, Strategy, and Effectiveness of Strategic Business Units in Multi-Business Organizations," *Academy of Management Review*, Vol. 11, pp. 844-856, 1986.
  25. Govindarajan, V., "A Contingency Approach to Strategy Implementation at the Business-Unit Level: Integrating Administrative Mechanisms with Strategy," *Academy of Management Journal*, Vol. 31, No. 4, pp. 828-853, 1988.
  26. Graham, D., and D. Kaplan, *Competition and the Airlines: An Evaluation of Deregulation*. Office of Economic Analysis Staff Report, Dec. Washington, DC: Civil Aeronautics Board, 1982.
  27. Hair, J., R. Anderson, and R. Tatham, *Multivariate Data Analysis* (1st ed., 1979), Tulsa, OK: Petroleum Publishing Company, 1987.
  28. Hambrick, D., "Strategic Awareness within Top Management Teams," *SMJ*, Vol. 2, pp. 263-279, 1981.
  29. Hambrick, D., "High Profit Strategies in Mature Capital Goods Industries: A Contingency Approach," *Academy of Management Journal*, Vol. 26, No. 4, pp. 687-707, 1983.
  30. Hambrick, D., "The Top Management Team: Key to Strategic Success," *California Manage-*

- ment Review*, Vol. 30, pp. 88-108, 1987.
31. Harrison, J., "The Strategic Use of Corporate Board Committees," *California Management Review*, Vol. 30, No. 1, pp. 109-125, 1987.
  32. Hatten, K. and D. Schendel, "Heterogeneity within an Industry: Firm Conduct in the U. S. Brewing Industry, 1952-1972," *Journal of Industrial Economics*, Vol. 26, pp. 97-113, 1977.
  33. Hatten, K., D. Schendel, and A. Cooper, "A Strategic Model of the U.S. Brewing Industry: 1952-1972," *Academy of Management Journal*, Vol. 21, pp. 592-610, 1978.
  34. Heidrick and Struggles, *Director Data*. Chicago: Heidrick & Struggles, 1981.
  35. Henke, J., Jr., "Involving the Board of Directors in Strategic Planning," *Journal of Business Strategy*, Vol. 6, pp. 87-95, 1985.
  36. Hofer, C., "Toward a Contingency Theory of Business Strategy," *Academy of Management Journal*, Vol. 18, pp. 792-810, 1975.
  37. Jauch, L., R. Osborn, and W. Glueck, "Short Term Financial Success in Large Business Organizations: The Environment-Strategy Connection," *Strategic Management Journal*, Vol. 1, pp. 49-64, 1980.
  38. Jemison, D., and P. Oakley, "The Need to Reform Corporate Governance in the Mutual Insurance Industry," *Journal of Business Research*, Vol. 12, pp. 52-60, 1981.
  39. Kesner, I., B. Victor, and B. Lamont, "Board Composition and the Commission of Illegal Acts: An Investigation of Fortune 500 Companies," *Academy of Management Journal*, Vol. 29, pp. 789-799, 1986.
  40. Kesner, I., "Directors' Stock Ownership and Organizational Performance: An Investigation of Fortune 500 Companies," *Journal of Management*, Vol. 13, pp. 499-508, 1987.
  41. Kesner, I., "Directors' Characteristics and Committee Membership: An Investigation of Type, Occupation, Tenure, and Gender," *Academy of Management Journal*, Vol. 31, pp. 66-84, 1988.
  42. Khandwalla, P., "Viable and Effective Organizational Designs of Firms," *Academy of Management Journal*, Vol. 16, pp. 481-495, 1973.
  43. Korn/Ferry International, *Board of Directors: 9th Annual Study*. New York: Korn/Ferry International, 1982.
  44. Lazarus, M., and W. Ashley, "Transportation After Deregulation," *Long Range Planning*, Vol. 18, No. 1, pp.42-46, 1985.
  45. Lenz, R., "Environment, Strategy, Organization Structure and Performance: Patterns in One Industry," *Strategic Management Journal*, Vol. 1, pp. 209-220, 1980a.
  46. Lenz, R., "Strategic Capability: A Concept and Framework for Analysis," *Academy of Management Review*, Vol. 5, pp. 225-234, 1980b.
  47. Leontides, M., "Choosing the Right Manager to Fit the Strategy," *Journal of Business*, 1982.
  48. Mace, M., *Directors: Myth and Reality*. Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1971.
  49. March, J., and M. Simon, *Organizations*. New York: John Wiley and Sons, 1958.
  50. Meuter, F., "Questions the New Compensation Committee Member Should Ask," *Directors & Boards*, Vol. 13, No. 2, pp. 31-33, 1989.
  51. Miller, D., "Configurations of Strategy and Structure: Towards a Synthesis," *Strategic Management Journal*, Vol. 7, pp. 233-249, 1986.
  52. Miller, D., "The Genesis of Configuration," *Academy of Management Review*, Vol. 12, pp. 686-701, 1987.
  53. Miller, D., "Organizational Configurations: Cohesion, Change and Prediction," *Human Relations*, Vol. 43, pp. 771-789, 1990.
  54. Miller, D., and P. Freesen, "Strategy-Making and Environment: The Third Link," *Strategic Management Journal*, Vol. 4, pp. 221-235, 1983.
  55. Miller, D., "Relating Porter's Business Strategies to Environment and Structure: Analysis and Performance Implications," *Academy of*

- Management Journal*, Vol. 31, No. 2, pp. 280-308, 1988.
56. Mock, R., "Intergovernmental Power and Dependence," *Public Administration Review*, Vol. 39, pp. 556-561, 1979.
  57. Pfeffer, J., "Size and Composition of the Corporate Board of Directors: The Organization and its Environment," *Administrative Science Quarterly*, Vol. 17, pp. 218-228, 1972.
  58. Ramanujam, V., N. Venkatraman, and J. Camillus, "Multiobjective Assessment of Effectiveness of Strategic Planning: A Discriminant Analysis Approach," *Academy of Management Journal*, Vol. 29, pp. 347-372, 1986.
  59. Rechner, P., and D. Dalton, "CEO Duality and Organizational Performance: A Longitudinal Analysis," *Strategic Management Journal*, Vol. 12, pp. 155-160, 1991.
  60. Robinson, T. and S. Ward, "Management Sessions from Airline Deregulation," *Harvard Business Review*, Vol. 61, No. 1, pp. 40-44, 1983.
  61. Schendel, S., and R. Patton, "A Simultaneous Equation Model of Corporate Strategy," *Management Science*, Vol. 24, pp. 1611-1621, 1978.
  62. Segev, E., "A Systematic Comparative Analysis and Synthesis of Two Business Level Strategic Typologies," *Strategic Management Journal*, pp. 487-50, 1988.
  63. *The Business Roundtable*, "The Role and Composition of the Board of Directors of the Large Publicly Owned Corporation," New York, 1978.
  64. Vance, S., *Board of Directors: Structure and Performance*. Eugene, OR: School of Business Administration, University of Oregon, 1964.
  65. Vance, S., "Corporate Governance: Assessing Corporate Performance by Boardroom Attributes," *Journal of Business Research*, Vol. 6, pp. 203-220, 1978.
  66. Wilson, I., "One Company's Experience with Restructuring the Governing Board," *Journal of Contemporary Business*, Vol. 8, No. 1, pp. 71-81, 1979.
  67. Zahra, S., and J. Pearce II, "A Model of Board of Directors' Behavior and Effectiveness," *Proceedings of the Decision Science Institute Meeting*, Vol. 2, pp. 1147-1149, 1987.
  68. Zahra, S., and W. Stanton, "The Implications of Board of Directors' Composition for Corporate Strategy and Performance," *International Journal of Management*, Vol. 5, No. 2, pp. 229-236, 1988.
  69. Zahra, S., and J. Pearce II, "Boards of Directors and Corporate Financial Performance: A Review and Integrative Model," *Journal of Management*, Vol. 15, pp. 291-334, 1989.