

Contingency Issues of Managerial Activities in Small Firms in Lagos State

Oboreh J. S and Umukoro, F. G
Department of Business Administration,
Delta State University,
Abraka, Nigeria.
Corresponding Email: snapps2008@yahoo.com

ABSTRACT

This paper investigates the contingency issues of managerial activities with small scale firms. The study adopted the survey methods involving the data on chief executive officers and other members of the top executive management level of one hundred and twenty-five firms in Lagos State between 2001 and 2005. The functions of management in addition to entrepreneurship orientation and environmental uncertainty were also collected. These were used in developing a classification. The study found that small firms can be classified based on perceived differences in strategy, structure, and environmental conditions. The study also found that managers of small firms display similar contextual situation. The study suggests four distinct configurations and described managers of firms in terms of profiles. It thereafter explained each profile and the corresponding contingency managerial and research implications elaborated.

Keywords: managerial activities, structural characteristics, firms

INTRODUCTION

In the recent time the urge to carry out studies in small business has been in vogue. Most researchers developed a general tendency to study small business management with particular emphases on the functional areas of business. The majority of studies seems dedicated to planning (e.g. Chrisman and Leslie, 1989; Smeltzer, Mulford, and Blackburn, 1989), organizing and staffing (White, 1990).

While such studies provide detailed knowledge of individual management functions, there seems to be less emphasis on managerial process—such as task environment, organizational configuration, and managerial characteristics, rather they represent artificial focus of attention on one or two functions, sometimes in association with a firm's performance. Although, It is generally believed that studies of small business need not be limited to attributes of its planning, organizing, and controlling functions the need to study a firm's managerial functions under specific situations and the structural adjustments made under varying growth conditions should be considered. Thus, in the quest to find a middle ground between the status quo of small business research and a grand general theory, this study recommend that small business studies should consider a wide variety of environmental, organizational, and managerial attributes that potentially contribute to a firm's success and growth. It is hoped that such studies will eventually result in the development of mid-range theories that would shed light on the diversity of managerial approaches in small business, and contribute to further understanding of small business management practices under a variety of situations. It is on the basis of this recommendation that the present study chose to address the above mentioned circumstances. Specifically, the purposes of the

current study are:

- a) to investigate the proposition that managerial activities (e.g., information gathering, information processing, organizing, controlling) applied by CEOs are distinctly and significantly different across small firms; and
- b) to investigate certain contingency factors such as task environment, entrepreneurial orientation, that predominantly influence the choice of managerial activities in small firms.

Much has been written on the determinants of success in small firms. Undoubtedly a key contributor to the continued success and expansion of small firms is managerial activities pursued by the CEOs (Mintzberg, 1973; Miller and Friesen 1978). These activities typically reveal the CEO's predisposition toward information gathering, information processing, and the use of elaborate planning and control systems.

Some basic reasons have been given why it would be appropriate to investigate the managerial activities of CEOs in small firms. First, it is in agreement with the upper echelons perspective advanced by organizational theorists that a firm's strategic, structural choices and performance levels are influenced by top managers' characteristics (Hambrick, 1987; Norburn and Birley, 1988). Second, consistent with the trend in entrepreneurship research CEO's behaviours and activities have been focused upon instead of their personal characteristics (Stevenson and Jarillo, 1990). Third, there has been some empirical evidence which suggests that the CEO's choice of managerial activities is strongly related to his or her personality (Miller and Toulouse, 1986). Therefore, the use of managerial activities as a predictor meets the requirement of those researchers who identify entrepreneurship with the CEO's dominant organizational personality. The fourth reason is that managerial activities have a greater applicability in understanding of managerial skills relevant to the success of small firms (D'Amboise and Muldowney, 1988). Managerial activities have been conceptualized in terms of structural/control aspects (e.g., centralization, formalization, specialization, cost control) and informational/decision-making aspects (e.g., scanning, analyzing, forecasting, collaborating). The conceptualization has resulted in a number of typologies intended to cover various organizations.

However, most proposed typologies characterize small, developing firms as simply structured, high centralized organizations with little formalization. Yet, existing empirical evidence demonstrates that managerial activities in small firms may possess greater degrees of complexity than commonly believed (Hage and Aiken, 1970; Lawrence and Lorsch, 1967). There existing research which indicates that small firm managers differ from their counterparts in larger organizations in use of information (Fann and Smeltzer, 1989), reliance on outside consultants (Chrisman and Leslie, 1989), planning activities (Cragg and King, 1988), comprehensive decision making (Smith *et al.*, 1988), staffing and organizing (Gatewood and Feild, 1987), and managing and controlling operations (Bracker, and White, 1990).

Also there exist some empirical studies which have looked at managerial activities in configurationally settings where multivariate relations between what managers do and a number of contingencies are evaluated. Miller (1983) found significant multivariate relations between managerial activities and environmental context, strategy content, and the financial aspects of firms' growth. Similarly, Miller, Droge and Toulouse, (1988) revealed significant multivariate relationships between bureaucratic and organic managerial activities, firms' strategic posture, and performance under various environmental conditions. Further, Fombrun and Wally (1989) demonstrated that managerial activities in high-growth firms vary systematically by firms' strategic orientation and the degree of product diversity.

Although multivariate, the above studies predominantly have investigated directional relation-

ships between managerial activities and firms' performance measures moderated by subsets of organizational/environmental influences. The current study, however, will extend the body of research further by identifying and evaluating patterns of relations among managerial activities, organization structure, and environment, using classification procedures. Developing a classification would allow natural configurations to surface among the strategy, structure, and environment of small firms and crystallize important differences among types of firms. In addition, developing a classification would provide more understanding of contingency relations among a firm's task environment, entrepreneurial orientation, and growth variables.

The current study also considered the classification development in small firms by framing the research questions into two basic hypotheses concerning (1) the perceived common characteristics of small firms that survive and adapt to their environments and (2) the configuration of these characteristics that leads to consistency with the environments.

METHODS AND MATERIALS

This is a longitudinal study that involved investigating small firms from the year 2001 to 2005. Specifically the methodology involved discussions on construct conceptualization, variable specification, sampling, and data collection. Two major constructs namely: Managerial activities and Contingency were discussed in detail. The study formulated the following hypotheses:

- a) Hypothesis 1: Small firms would survive and adapt to the rigours of their environments by displaying similar managerial and structural characteristics.
- b) Hypothesis 2: Small firms would survive in their environments because they are driven towards configuration that dictates consistency between their managerial and structural characteristics and the environmental contexts.

Data were collected from firms in Lagos state. The data collection took place between 2001 and 2005. The sampling frame was drawn from a population of small established firms operating within the Lagos state (Nigeria) and with the following characteristics: Ownership - private; age - more than 5 years; Annual sales – between five million and ten million naira; Number of employees - between 10 and 150; and Industry affiliation - construction, services, and wholesaling.

A sample of 125 firms, meeting the above characteristics, was drawn from firms operating in Lagos state (Nigeria) using the systematic random sampling procedure. The survey was conducted by telephone because of its flexibility, speed, data quality. Of the 105 CEOs who were reached by telephone, 70 completed the interview. Another 30 agreed and completed the questionnaire in a mail form. In total, 90 firms were included in this study. Responses received from those who completed the mail version of the questionnaire were not significantly different. Over 82% of respondents were either owners or investors of their firms; 73% reported to no one else in the organization.

The average self-reported sales volume and number of employees in the sampled firms grew from N3.1 million to N4.2 million and from 35 employees to 47 employees over 3-year and 5-year periods respectively. The standard deviations for sales volume were N1.4 million to N2.2 million and for the number of employees were 12 to 19 for the periods. The average age of the sampled firms was 20 years, ranging between 3 and 35 years, with a standard deviation of 23.5 years. Table 1 displays means, standard deviations, and reliability measures of the study variables. The scale reliabilities are also reported and the alpha measures, ranging between 0.62 and 0.85 with a 0.72 average, are in agreement with those of reported studies and most exceed the levels set by Van de Ven and Ferry (1979).

Table 1: Means, standard deviations, and reliabilities

Variables	Means	Std, Dev.	Cronbach (Sample)	Cronbach (Reference)
Information Collection				
■ Scanning	3.66	1.28	0.70	0.73
■ Future	3.76	1.45	0.75	0.73
Processing Information				
■ Analysis	2.44	1.16	0.68	0.75
■ Interaction	3.18	1.43	0.83	0.84
Organization				
■ Decentralization	12.23	5.98	0.79	0.81
■ Specialization	3.79	3.36	0.82	0.80
Control				
■ Formal	4.42	3.02	0.68	0.64
■ Cost	3.85	1.48	0.79	0.77
Entrepreneurial Orientation				
■ Proactive	4.34	1.29	0.73	0.80
■ Innovative	3.10	1.44	0.59	0.76
Environmental Turbulence				
■ Dynamic	3.76	1.22	0.67	0.73
■ Hostile	3.20	0.87	0.74	0.54
■ Heterogeneous	3.86	1.47	0.80	0.83
Environmental Turbulence				
■ Dynamic	3.76	1.22	0.67	0.73
■ Hostile	3.20	0.87	0.74	0.54
■ Heterogeneous	3.86	1.47	0.80	0.83
SIZE				
No. of Employees	40.19	76.23		
Employee growth	12.65	25.85		
Naira sales in million	8.9	34.45		
Sales growth	2.6	8.75		
Average reliability		0.74		0.75

Note: All data are deduced from original longitudinal survey

Data analyzed in this study were carried out in two phases. A tentative classification of small firms was first developed using a two-stage clustering procedure. The resultant classification was then tested for its statistical significance.

The two-stage clustering procedure used in this study was based on a split sample of 90 firms, consisting of formation ($n_1 = 60$) and holdout ($n_2 = 30$) subsamples. The results identified four clusters of firms along eight managerial activities in the formation subsample. The statistical significance of each cluster was then tested using the procedure reported in Miller and Friesen (1984).

The adequacy of the four-cluster solution was further evaluated. The results of one-way multivariate analysis of variance (MANOVA) showed that the four-cluster solution was highly significant (Wilk's $F = 49.80$, d.f. = 3,354, $p = 0.000$) in the total sample. Further, univariate F-tests were conducted on each clustering variable. The results reported in Table 2 indicate statistically

significant differences for all variables across four clusters, except dynamic (in environmental turbulence).

In addition, the internal validity of the four-cluster solution was evaluated by conducting a split-sample multiple discriminant analysis. This was first run on the formation subsample using the eight managerial activity variables. The resultant scores were then used to reclassify the firms in this sample into their original clusters. The reclassification rate was 91 percent for the total sample.

To evaluate the discriminating power of contingency variables, stepwise multiple discriminant analysis was used. Five contingency variables, hostility, heterogeneity, proactive, innovative, and employment size were included in the final discriminant equations. Scores from these variables correctly classified 42.44 percent of the firms into the four clusters, indicating a 71 percent increase in accuracy over what could be expected by chance.

RESULTS AND DISCUSSION

The findings presented in this study clearly support the stated hypotheses that small firms are perceived differently in terms of strategy, structure, and environments they face; and, they display managerial and structural consistency when faced with similar contexts. The classification developed in this study suggests four distinct configurations pertaining to managerial profiles among small firms. To reflect profile similarities and differences, the mean scores of managerial activities and contingency variables are shown in Table 2, and ranked in Table 3. Furthermore each profile and associated characteristics are compared in Table 4.

The firms in Profile I represent 26% of the sample. These firms are highly centralized in decision making. Collection of information on market and industry, cost and operating information are carried out with minimal efforts. In other words these firms are least engaged in the collection and evaluation of information when compared with other small firms in other profiles. Also decision making seems to be in short term and impulsive. Such decisions are centered at the CEO level. In addition, there is little need for formalized operating procedures. Thus, the firms profiled in this classification use few written work rules, job descriptions, or other managerial control devices.

Specifically, the CEOs of these firms perceive their environments as extremely placid with the lowest levels of dynamism, hostility, and diversity. This perception may not be unconnected with the CEOs' lack of information. This is because they gather and process little external information. Compared with other profiles, firms in this group display the lowest degree of been proactive and innovative. Together, the low perception of environmental diversity and low entrepreneurial orientation may indicate a limited and narrow product or service mix. From table 5, 60% of firms in Profile I are in business services and manufacturing. These firms have the smallest size and growth in the number of employees. Their sales volume and growth is the second smallest among profiles.

The firms in profile II (in Table 4) represent 30% of the sample. CEOs in this Profile accord importance to information and they emphasize the collection of market and industry as well as cost and operating efficiency information. Unfortunately, their perceived lack of emphasis on analysis and consensus seeking suggests a short-term and impulsive decision-making orientation. Decision making is centered at the top management level and the amount of formalization in terms of written work rules, job controls, and other operating procedures is the lowest among profiles. Notwithstanding these shortcomings, these firms widely use internal cost control mechanisms, second highest among profile.

Table 2: Cluster means of managerial activities and contingency variables

VARIABLES	Cluster I	Cluster II	Cluster III	Cluster IV	MEAN	F
<i>[Managerial Activities]</i>						
Information Collection	-0.799	0.234	-0.176	0.911	-0.003	
■ Scanning	-0.879	0.043	0.247	0.925	-0.016	
■ Future						
Processing Information						
■ Analysis	-0.556	-0.476	0.565	0.717	-0.017	
■ Interaction	-0.587	-0.554	0.576	0.915	-0.012	
Organization						
■ Decentralization	-0.445	-0.225	0.798	0.081	-0.011	
■ Specialization	-0.471	-0.223	0.098	-0.017	-0.003	
Control						
■ Formal	-0.229	-0.656	0.656	-0.651	-0.011	
■ Cost	-0.845	0.218	0.081	0.806	-0.012	
<i>Situational Variables</i>						
Entrepreneurial Orientation						
■ Proactive	-0.332	0.086	0.112	0.302	0.014	
■ Innovative	-0.337	-0.221	0.029	0.414	0.001	
Environmental Turbulence						
■ Dynamic	-0.228	-0.042	0.046	0.059	-0.045	
■ Hostile	-0.252	0.177	0.146	0.110	0.032	
■ Heterogeneous	-0.175	-0.129	0.139	0.312	0.007	
Growth						
■ No. of Employees	-0.334	-0.276	0.956	-0.072	0.012	
■	-0.132	-0.202	0.577	-0.043	0.013	
■						
■ Naira sales in million						

Note: All data are deduced from original longitudinal survey

Table 3: Ranking of managerial activities and contingency variables across clusters

Variables	Cluster I	Cluster II	Cluster II	Cluster IV
Managerial Activities				
Information Collection				
■ Scanning	3	2	3	1
■ Future	3	4	2	2
Processing Information				
■ Analysis	3	3	2	1
■ Interaction	3	3	2	2
Organization				
■ Decentralization	3	3	2	2
■ Specialization	3	2	1	3
Control				
■ Formal	2	3	2	2
■ Cost	3	2	3	1
Situational Variables				
Entrepreneurial Orientation				
■ Proactive	3	3	2	1
■ Innovative	3	3	3	2
Environmental Turbulence				
■ Dynamic	3	3	3	1
■ Hostile	3	2	3	2
■ Heterogeneous	3	3	3	1
Growth				
■ No. of Employees	3	3	2	2
■ Naira sales in million	3	3	2	2

Note: All data are deduced from original longitudinal survey

Table 4. Summary of demographic characteristics in Profile II

Average per Profile	Profile I	Profile II	Profile III	Profile IV
Average No. of Employees	22.45	23.34	66.34	56.54
Average Growth	5.65	7.09	29.45	22.56
Sales Volume in millions	N3.28	N2.77	N5.67	N5.54
Average Sales growth in millions	N1.45	N0.97	N3.45	N2.87
Profit Margin	7.56%	5.56%	3.65%	5.23%
Turnover	0.32	1.45	1.32	1.31

Note: All data are deduced from original longitudinal survey

The CEOs perceive environments as less dynamic and less diverse compared with other profiles. However, environmental hostility is perceived to be the highest among firms. Firms in this group tend to be somewhat entrepreneurial. Managers in this classification are more proactive on the average. This suggests, perhaps, a predicament for firms that are willing to innovate in products, services, or processes, but lack necessary resources or know-how to make that happen. Firms' size and growth, in terms of Naira sales and the number of employees, are somewhat smaller in this profile.

In Profile III, firms in this profile represent 21% of the sample. They are characterized by high levels of specialization and decentralization. The CEOs are highly supportive of specialization. As such, they have a tendency to delegate authority and to empower their lower managers to make various decisions compared with other small firms. They interact with others and emphasize consensus building and rational decision-making.

CEOs in Profile III are analyzers and are moderately active in long-term planning; however, they have little use for the external scanning of environments, including the scanning of customers, competitors, and industry technologies. Managerial control is emphasized via the use of formalized operating procedures such as written work descriptions, business plans, and organizational charts.

From a contingency perspective, firms in Profile III face environments that are more dynamic and unpredictable, more hostile and diverse than average. Their entrepreneurial outlook is more proactive than average while their innovativeness is about average compared with other profiles. Firms in Profile III are also the largest in terms of Naira sales and the number of employees. They have experienced the highest growth in sales and employees in the past 5 years (Table 4).

Profile IV is the last profile representing 23% of the sample. Firms in this Profile can be characterized as fervent gatherers and analyzers of internal and external information. They have deliberate, long-term planning horizons. They are moderately specialized and maintain a much formalized operating procedures with extensive cost control systems. While the decision making is rational and centralized, it is highly collaborative and seeks consensual input from subordinate man-

agers. This resembles a divisionalized form of organization in which lower-level managers' work together to make routine operating decisions subject to upper-level management approval.

The perceived environments faced by firms in Profile IV are highly dynamic, hostile, and multifaceted. As a result, firms in this group are highly entrepreneurial. They are highly proactive and innovative. They also enjoy relatively good size, in terms of Naira sales and the number of employees, growth level, and productivity.

Table 5: Cross-tabulation of firms by profile and industry affiliation

Industry	Profile I	Profile II	Profile III	Profile IV
Construction	12 (17%)	21 (20%)	11 (18%)	11 (19%)
Wholesale	21 (23%)	28 (29%)	27 (29%)	29 (30%)
Business Services	31 (38%)	30 (31%)	32 (33%)	26 (31%)
Manufacturing	20 (22%)	15 (20%)	16 (20%)	10 (20%)
Total	84	94		

The managerial activities construct is defined in this study to broadly encompass planning, organizing, and controlling activities of executives in small firms. Planning is characterized by information gathering and information processing. The information gathering is defined in terms of scanning and considering the futurity of the firms. Information processing is defined in terms of analysis and interaction. These variables are used to delineate strategy making in organizations.

Organizing is described in terms of decentralization and specialization. As small firms grow, their CEOs face the challenges of large-scale operations and administrative complexity. In response, these CEOs depart from simple and highly centralized structures—where decisions are made more informally, intuitively, and individually to more decentralized, specialized, and interactive structures. The concept of control is represented by two variables: formality and cost control.

The contingency constructs considered in this study are threefold namely: entrepreneurial orientation, environmental turbulence, and past growth performance. These, defined with respect to small firms can influence managerial activities. A firm's entrepreneurial orientation can dictate its competitive orientation. Miller and Friesen (1983) attributed a firm's entrepreneurial tendency to the personality and socio-cultural characteristics of its CEO or top managers. Toulouse (1980) referred the environmental and structural features of the firm as the force behind entrepreneurial activities. Miller and Friesen (1978) emphasized the firm's decision-making and strategy factors as the main influence behind its entrepreneurship.

This study however considered entrepreneurial orientation as the firm's degree of proactive approach in the choice of product-market unit and its willingness to innovate and create new offerings. This definition is consistent with the conceptual schemes developed by Miller and Friesen (1984) and supported empirically by Morris and Paul (1987). The measures of proactiveness and innovativeness used in this study were taken from Miller (1983) and Miller and Friesen (1982).

The second factor, environmental turbulence has been considered important to the survival and continued growth of small firms. This may not be unconnected to the fact that due to their size, small firms are presumed to be rather sensitive to changes in their operating environments. Although their small size makes them flexible and responsive to environmental changes, small firms are also challenged by unfavorable and hostile environments.

The environmental turbulence construct is defined in terms of dynamism: (*i.e.* unpredictable environmental changes; hostility: (*i.e.* environmental threats to the firm's vitality); and heterogeneity: (*i.e.* diversity of the firm's environments). Environmental hostility has been found to be an effective explanatory variable in studying entrepreneurial orientation (Covin and Slevin, 1989),

innovativeness (Miller and Friesen, 1984), organizational structure, and financial performance (Covin and Slevin, 1990). Likewise, environmental dynamism and diversity have been reported to influence both strategy and structure (Miller and Friesen, 1983). Dynamism, hostility, and heterogeneity were measured in this study using scales from Miller (1983) and Miller and Friesen (1982).

The role of a firm's past growth performance as an important contextual construct has been studied and reported in small business literature (Fombrun and Wally, 1989; Hambrick and Crozier, 1985). Past growth seems to influence firm's managerial activities. Thus, decisions on centralization, formalization, specialization, coordination, and control are more likely to be made in light of firms' continued growth. Growth was measured by using the actual change in (1) the number of employees over a 5-year period and (2) the Naira sales volume over a 4-year span. Absolute changes in employment and sales volume were deemed to be better indicators of growth than relative measures.

CONCLUSION

The study findings show that; there are profiles that encompass common managerial, structural, and environmental factors in small firms; and, that small firms' managerial and structural characteristics are consistent with their environments.

Concerning the first hypothesis, the four-cluster solution clearly identified distinct behavioural differences in the management of firms' operations by CEOs. As such, each profile exhibited distinctive characteristics in terms of information gathering, information processing, structural complexity, and use of control mechanisms.

In support of the second hypothesis, the measures of contingency factors were significantly related to the patterns of managerial activities identified. The results of MANOVA and multiple discriminant analysis showed the significant ability of the contingency variables in predicting a firm's membership in a given managerial profile. The amount of interdependence among managerial and contextual variables signifies harmony between the two and furthers the understanding of contingency relations among small firms' task environment, entrepreneurial orientation, and growth measures.

The firms, characterized in four distinct profiles in this study, portray certain features shared in Mintzberg's typology of organizational structure (1979) and Miller and Friesen's entrepreneurial configurations (1984). Firms in Profile I resemble Mintzberg's 'simple structure' and Miller and Friesen's 'simple firm' types. These firms are typically young and small with little growth; they use minimum planning and control; they are highly centralized and operate in homogeneous environments.

Firms in Profile IV are the opposite in planning, organizing, and control activities. These firms approach the typology of 'adhocracy' in Mintzberg (1979), 'organic' in Miller and Friesen (1984). They tend to operate in environments that are highly dynamic, diverse, and hostile. To meet the challenges of their environments, these firms operate entrepreneurially, become decentralized with little formality, delegate authority to lower management levels, engage in scanning and analysis of environments, and promote interaction via internal communication among personnel.

Firms in Profile III resemble Mintzberg's 'divisionalized form' and Miller and Friesen's 'planning firms'. Given their relative large size, these firms are more specialized, somewhat bureaucratic and yet entrepreneurial. Their structure characterizes high formality and decentralization of activities with a certain degree of cost control. They face environments that are similar to those of Profile IV; that is, dynamic, diverse, and competitive.

Firms in profile II does not conform to any particular type characterized in Mintzberg (1979) or Miller and Friesen (1984). Firms in this profile are hybrids of firms in Profiles I and IV. From scanning, futurity, formality, productivity, and cost control perspectives, these firms resemble those in Profile IV (organic); that is, they search environments for opportunities and plan for the future.

However, they are less analytic, interactive, specialized, and innovative, and more centralized and intuitive, and face stable, predictable environments, similar to firms in Profile I. It may be assumed that these firms are in transition and are striving to become 'organic' later on.

The identification of different profiles of managerial activities has several implications both for executives, management practitioners and students. The profiles can be used diagnostically to uncover differences in firms' strategy-making activities and the strategic focus of certain structural and operational characteristics. As recognized by Hambrick and Mason (1984), Hambrick (1987), and Norburn and Birley (1988), organizational performance is ultimately influenced and guided by top managers. As such, surveys of executive staff can uncover important differences in managerial roles and responsibilities, skills and creative talents, and opinions and value judgments that potentially affect the firm's strategic and operational effectiveness as well as its direction of growth. Moreover, the adequacy of a firm's managerial activities can be evaluated by benchmarking the performance and characteristics of similar firms in reference profiles and identifying the contextual factors that affect them. The research implication of the study is in growth management and entrepreneurship. The ability to discern managerial activities in their contextual setting has a potential to enhance the exploratory power of research on organizational performance and effectiveness.

REFERENCES

- Chrisman, J. J. and J. Leslie (1989) *Strategic, administrative, and operating problems: The impact of outsiders on small firm performance*, *Entrepreneurship: Theory and Practice*, pp. 37-51.
- Covin, J. G. and D. P. Slevin (1989). *Strategic management of small firms in hostile and benign environments*, *Strategic Management Journal*, 10 (1), pp. 75-87.
- Cragg, P. B. and M. King (1988). *Organizational characteristics and small firm performance revisited*, *Entrepreneurship: Theory and Practice*, 13 (2), pp. 49-64.
- D'Amboise, G. and M. Muldowney (1988). *Management theory for small business: Attempts and requirements*, *Academy of Management Review*, 13 (2), pp. 226-240.
- Fann, G. L. and L. R. Smeltzer (1989). *The use of information from and about competitors in small business management*, *Entrepreneurship: Theory and Practice*, 13 (4), pp. 35-46.
- Fombrun, C. J. and S. Wally (1989). *Structuring small firms for rapid growth*, *Journal of Business Venturing*, 4, pp. 107-122.
- Gable, M. and M. T. Topol (Fall 1987). *Planning practices of small-scale retailers*, *American Journal of Small Business*, pp. 19-32
- Galbraith, J. R. (1973). *Designing Complex Organizations*. Addison-Wesley, Reading, MA
- Gatewood, R. D. and H. S. Feild (1987). *A personnel selection program for small business*, *Journal of Small Business Management*, 25 (4), pp. 16-24
- Hage, J. and M. Aiken (1970). *Social Change in Complex Organizations*. Random House, New York.
- Hambrick, D. C. (1983). *High profit strategies in mature capital goods industries: A contingency approach*, *Academy of Management Journal*, 26 (4), pp. 687-707.
- Hambrick, D. C. (1984). *Taxonomic approaches to studying strategy: Some conceptual and methodological issues*, *Journal of Management*, 10 (1), pp. 27-41.
- Hambrick, D. C. (Fall 1987). *The top management team: Key to strategic success'*, *California Management Review*, pp. 88-108
- Hambrick, D. C. and P. A. Mason (1984). *Upper echelons: The organization as a reflection of its top managers*, *Academy of Management Review*, 9 (21), pp. 193-206.
- Khandwalla, P. N. (1977). *The Design of Organizations*. Harcourt Brace Jovanovich, New York

- Miller, D. and P. Friesen (1978). *Archetypes of strategy formulation*, Management Science, 24, pp. 921-933.
- Miller, D. and P. Friesen (1980). *Archetypes of organizational transition*, Administrative Science Quarterly, 25, pp. 268-299.
- Miller, D. and P. Friesen (1982). Innovation in conservative and entrepreneurial firms, Strategic Management Journal, 3 (1), pp. 1-27.
- Miller, D. and P. Friesen (1984). *Organizations: A Quantum View*. Prentice-Hall, Englewood Cliffs, NJ.
- Miller, D. and J.M. Toulouse (Winter 1986b). *Strategy, structure, CEO personality and performance in small firms*, American Journal of Small Business, pp. 47-62.
- Miller, D., C. Droge and J.-M. Toulouse (1988). *Strategic process and content as mediators between organizational context and structure*, Academy of Management Journal, 31 (3), pp. 544-569
- Mintzberg, H. (1973). *Strategy making in three modes*, California Management Review, 16, /pp. 4-58.
- Mintzberg, H. (1979). *The Structuring of Organizations*. Prentice-Hall, Englewood Cliffs, NJ
- Nahavandi, A. and S. Chesteen (Fall 1988). *The impact of consulting on small business: A further examination*, Entrepreneurship: Theory and Practice, pp. 29-40.
- Norburn, D. and S. Birley (1988). *The top management team and corporate performance*, Strategic Management Journal, 9 (3), pp. 225-238)
- Pearson, J. N., J. S. Bracker and D. E. White (1990). *Operations management activities of small high growth electronics firms*, Journal of Small Business Management, 28 (1), pp. 20-29
- Peterson, R. A. and V. Mahajan (1976). *Practical significance and partitioning variance in discriminant analysis*, Decision Sciences, 7, pp. 649-658.
- Smeltzer, C. B., C. L. Mulford and V. L. Blackburn (1989). *Strategic and operational planning, uncertainty, and performance in small firm*, Journal of Small Business Management, 27 (4), pp. 45-60.
- Smeltzer, L. R., G. L. Fann and V. N. Nikoliasen (1988). *Environmental scanning practices in small business*, Journal of Small Business Management, 26 (3), pp. 55-62.
- Smith, K. G., M. J. Gannon, C. Grimm and T. R. Mitchell (1988). *Decision making behavior in smaller entrepreneurial and larger professionally managed firms*, Journal of Business Venturing, 3, pp. 223-232.
- Stevenson, H. H. and C. J. Jarillo (1990). *A paradigm of entrepreneurship: Entrepreneurial management*, Strategic Management Journal, Summer Special Issue, 11, pp. 17-28.
- Van de Ven, A. H. and D. Ferry (1979). *Measurement and Assessment of Organizations*. Wiley, New York.