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ENVIRONMENTAL PERCEPTION, ORGANIZATIONAL DESIGN AND ORGANIZATIONAL PERFORMANCE: A COMPARATIVE STUDY

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INTRODUCTION

An area that has been neglected within organizational theory research is the examination of the relationship among environmental perceptions, organizational structural configurations, and the performance of the organization.

The purpose of this paper is to examine this relationship through the use of a typology that encompasses these constructs. The authors examine whether high performing firms have similar perceptions of the environment and have similar structural dimensions. In addition, the authors also examine whether this relationship is consistent across different types of industries. The typology is empirically tested using data collected from both service and product based industries. The service based industry is Florida credit unions and the product based industries are food and kindred products, textile mill products, primary metal industries, and miscellaneous manufacturing.

The first section of the paper includes a summary of relevant research within the areas of characteristics of the environment, dimensions of organizational design, organizational design and performance, environmental perceptions and organizational design, and a typology integrating the three constructs.

The second section of the paper provides a description of data within the sample and the methodology used to test the relationships presented within the typology. The results of the study are then presented and are followed by the discussion and conclusions in the final section of the paper.

CHARACTERISTICS OF THE ENVIRONMENT

The environment is defined by Duncan (1972) as the physical and social factors that occur outside the organization that are relevant in the decision-making process of the managers and is often characterized based on levels of dynamism, heterogeneity, and/or complexity (Burns and Stalker, 1961; Lawrence and Lorsch, 1967; Mintzberg, 1979; Miller and Friesen, 1984; Miller, 1987b).

Dess and Beard (1984) refer to environmental dynamism as the degree of difficulty decision makers have in predicting the future of the environment. By identifying specific elements of the environment that lead to unpredictability, Miller defines environmental dynamism as "unpredictability of customers and competitors, rates of change in market trends, industry innovation and R&D" (1987b, p.62). Therefore, environmental dynamism can be considered as the level of instability in the marketplace over a certain time frame (Aldrich, 1979; Mintzberg, 1979).

Thompson (1967) refers to environmental heterogeneity as the degree to which elements in the environment are not similar. Extending the work of Thompson (1967), Miller describes environmental heterogeneity as the level of "differences in the marketing and production requirements of different market segments" (1987b, p.62).

Mintzberg (1979) defines environmental complexity as the level of comprehensive and advanced knowledge needed by the decision makers in order for the organization to effectively operate in the environment. Alternatively, environmental complexity has also been defined as "the degree of heterogeneity and the dispersion of an organization's activities" (McArthur and Nystrom, 1991, p.350).

DIMENSIONS OF ORGANIZATIONAL DESIGN

Numerous structural characteristics are common in the literature; however, four major structural dimensions are prevalent: formalization, integration, centralization, and complexity (Child, 1974; Van de Ven, 1976; Ford and Slocum, 1977; Hall, 1977; Fry, 1982; Fredrickson, 1986; Miller, 1987a; Miller, 1988).

Centralization has been defined as "the degree to which the right to make decisions and evaluate activities is concentrated" (Fredrickson, 1986, p. 282). This is supported by Miller and Droge's definition of centralization based on the "distribution of decision-making power in the organization" (1986, p. 543). In other words, a high degree of centralization within an organization means that the critical decisions are made at the top management level.

Formalization has been defined as "the extent to which an organization uses rules and procedures to prescribe behavior" (Fredrickson, 1986, p. 283). Miller and Droge define formalization as being "made up of variables such as the use of specialized positions, formal policies, job descriptions, organization charts, and cost and quality controls" (1986, p. 543).

Complexity has been described as "the condition (of the structure of the organization) of being composed on many, usually interrelated, parts" (Fredrickson, 1986, p. 283). Miller and Droge define complexity as "the number of levels in the hierarchy (vertical span), the number of operating sites, and occasionally, the size of the administrative component" (1986, p. 543).

Miller has defined structural integration as the use of "control systems, coordinative task forces and committees, intensive vertical and horizontal communications, and computerized management information systems" (1987b, pp. 57-58) in order to foster coordination and collaboration within the organization.

ORGANIZATIONAL DESIGN AND PERFORMANCE

In their extensive review of previous research examining the relationship between organizational design and performance, Dalton, Todor, Spendolini, Fielding, and Porter (1980) found the relationship between organizational design and performance to yield conflicting results. Dalton et al. (1980) suggested that associations between key structural dimensions and performance are not strongly supported. They further stated that the "association between specialization (complexity) and performance has not been clearly demonstrated (and)... we can (also) conclude that an association between levels of formalization and performance has not been convincingly demonstrated" (1980, p. 58). In a recent study examining the relationship between formalization and performance within hospital units, Hetherington (1991) found that high levels of formalization lead to higher performance in non-nursing or clinical services units.

Dalton et al. (1980) found only limited evidence to support the relationship between centralization and performance. They stated that "the limited evidence tends to support a negative relationship between centralization and performance for managers and professionals in studies using hard performance criteria. Otherwise, little is known of the association between centralization and performance" (Dalton et al., 1980, p. 59). Recent studies on the relationship between centralization and performance have reinforced the inconsistency of this relationship.

Droge and Germain (1989) found that the level of centralization of logistical activities is higher in the better performers, while Hill and Pickering (1986) found that higher levels of decentralization within operating divisions is more evident in higher performing companies.

Additionally, in their study of 100 small businesses, Nwachukwu and Tsalikis (1990) found that structural integration has a negative effect on the organization's performance: "the fewer structural integration devices employed, the higher the performance" (1990, p. 42).

ENVIRONMENTAL PERCEPTIONS AND ORGANIZATIONAL DESIGN

The relationship between the environment and organizational design has been examined for over three decades (Burns and Stalker, 1961; Lawrence and Lorsch, 1967; Thompson, 1967; Duncan, 1972; Yasai-Ardekani, 1986). An area that has been neglected is the examination of the relationship between the perceptions of the environment by managers, the structural design of the organization, and the performance level of the organization (Miller, 1988).

Yasai-Ardekani stated that the perceptions of the managers are critical in this relationship since "perceptions influence decisions about altering structural properties of organizations to meet the requirements imposed by environments" (1986, p. 9). Perceptions of the environment are critical in the examination of this relationship because managers in different organizations perceive the environment in a different manner. As a result, organizations react differently to the same environmental conditions because they are perceived differently (Miles, Snow, and Pfeffer, 1974; Starbuck, 1976; Yasai-Ardekani, 1986).

Lawrence and Lorsch (1967) stated that under high environmental uncertainty, organizations will have organic structure (i.e., low levels of centralization and formalization). However, recent research (Koberg and Ungson, 1987) has revealed that successful organizations do not always match an uncertain environment with organic structure. Koberg and Ungson found that

instead of relaxing control and becoming more flexible to meet the demands of an uncertain environment, organizational units in our study tended to develop more bureaucratic structures, centralize authority at upper levels, and simplify and standardize work procedures. Because of their familiarity with a rather routine organization, individuals in these units are likely to interpret an otherwise uncertain environment to be controllable and even more predictable (1987, p. 734).

As a result, the perception of the environment by decision makers plays a critical role in the determination of what type of organizational design is required to "fit" with the perceived environmental conditions.

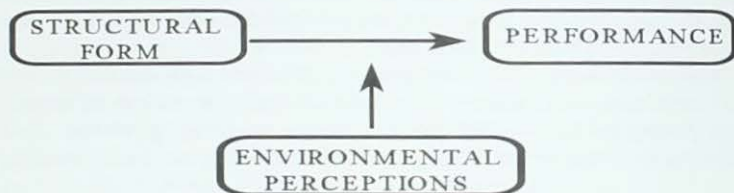
TYOLOGY: EXTERNAL ENVIRONMENTAL PERCEPTIONS, ORGANIZATIONAL DESIGN, AND ORGANIZATIONAL PERFORMANCE

The inconsistent empirical results of the relationship between organizational design and organizational performance may be due, in part, to the omission of the impact that perceptions of the environment by top-level managers have in the decision-making process. Previous research has examined the relationship between the perceptions of the environment, organizational characteristics, and performance. Ansoff and Sullivan (1993) described successful organizations as those that are environmentally driven. Environmentally driven firms are able to develop a strategic fit between the level of environmental turbulence and the level of strategic aggressiveness

and responsiveness of the general managers within the organization. As a result, the proper alignment between the environment and the organizational characteristics of the firm leads to high performance levels (Ansoff and Sullivan, 1993). A number of other researchers have also demonstrated the benefits of a strong fit between the environment and characteristics of the organization (Cowen and Midaugh, 1990; Chorn, 1991; Naman and Slevin, 1993). These researchers state that organizations are rewarded with high performance by having a proper fit between the environment and strategy, organizational culture, organizational structure, and management style. Therefore, the authors propose that the effects of structural form on performance is dependent on the environmental perceptions of decision makers. The proposed model is presented in Figure 1.

FIGURE 1
ENVIRONMENTAL PERCEPTIONS, ORGANIZATIONAL DESIGN,
AND PERFORMANCE

where: (1) structural form = consistency or inconsistency across structural characteristics



(2) environment perceptions = environmental heterogeneity, dynamism, and complexity

(3) performance = perceptual indicators of efficiency, effectiveness, and adaptability

It is proposed that successful organizations will be consistent in their fit between the perception of the environment and their organizational design. In addition, it is suggested that this "matching" by successful organizations will be consistent across different industries. Therefore, two hypotheses to be empirically examined are:

Hypothesis 1: High performing organizations will have similar perceptions of the environment by top level managers and will have similar structural dimensions.

Hypothesis 2: The results of Hypothesis 1 will be consistent across different industries.

In order to empirically test the hypotheses previously presented, two separate samples are taken. The first sample includes service firms while the second sample involves product firms. The use of more than one product-type should lead to a stronger test and possibly increase the generalizability of any results.

Sample 1: Data for the study were gathered from a statewide survey in Florida of all the credit unions belonging to the Florida Credit Union League (FCUL). At the time of the study, membership in the FCUL represented nearly 90% of all Florida credit unions and included 325 firms. A single mailing was directed to the president of each credit union during the Spring of 1991. Included in each mailing was a four-page questionnaire and a cover letter. A copy of the summary results was promised to responding credit unions. Of those responding, 92% were presidents and 8% were marketing directors.

This approach for Sample 1 yielded 125 usable surveys, a 38.5% response rate. A Chi-Squared test of the respondents versus the sampling frame indicates that the responding credit unions are significantly different from the membership firms based on asset size (Chi-Sq = 20.73, d.f. = 7, $p < .01$). Thus, the results of the study should not be generalized to all FCUL-member credit unions. Further analysis of the sample indicates that the smaller asset groups are under-represented, with a concentration in the middle range.

Sample 2: The second sample includes both consumer and industrial product firms from four randomly selected SIC groups across the United States. A systematic sample of twelve hundred (three hundred in each group) was drawn from the four groups: food and kindred products, textile mill products, primary metal industries, and miscellaneous manufacturing. Again, a single mailing was sent to the chief executive officer in each of the selected firms. A personalized cover letter, a two-page questionnaire, and a self-addressed stamped return envelope were sent to each executive. Of those responding, 81% were either chief executives or owners, while the remainder were mostly functional managers.

This procedure for Sample 2 yielded 141 usable surveys and 45 undeliverable letters, a 12.2% response rate. A Chi-Squared test of the respondents versus the sample indicates that the responding firms are evenly distributed across the four SIC groups (Chi-Sq = 0.84, d.f. = 3, $p < .80$). Additionally, an analysis of variance is performed to determine if the respondents from the various SIC groups differ by firm size. Neither annual sales ($p < .15$) nor number of employees ($p < .20$) are different across groups. Thus, Sample 2 appears to represent a cross-section of industrial and consumer products firms in their respective industries.

MEASURES

The measures used in the study are shown in the Appendix for both the service and product samples. The measures included in the study are organizational performance, organizational structure, and the environment of the organization. For each of the constructs, the measures were subjected to a factor analysis using principal factors (squared multiple correlations on diagonal) followed by a varimax rotation. Thus, six analyses were performed—one for each construct in each sample. In each case, for each factor, the factors are represented by summing those highly loading items. Reliability was evaluated using Cronbach's coefficient alpha for each of the composite scales.

For the organizational structure characteristics in the service sample, the analysis resulted in three components that explained 60% of the original variance: formalization, structural integration, and a combination of centralization and complexity. Reliabilities were as follows: .7909 for formalization, .6960 for centralization/complexity, and .6416 for integration. In the product sample, the analysis resulted in four components that explained 67% of the original variance: formalization, centralization, structural complexity, and integration. Reliabilities were as follows: .7999 for formalization, .7419 for integration, .8415 for centralization, and .7710 for

complexity. A median split was used to divide each of the components into high and low categories in order to facilitate the derivation of the structural-form variable.

For the organizational performance characteristics, the study used perceptual measures as suggested by Ruekert, Walker, and Roering (1985), who proposed that a performance measure should address three domains: effectiveness, efficiency, and adaptiveness. Perceptual measures avoid the variable accounting methods associated with objective measures (Sharma and Mahajan, 1980; Frazier and Howell, 1983; Varadarajan, 1986; Miller, 1987a; Keats and Hitt, 1988; Miller, 1988). Subjective performance measures have also been shown to strongly correlate with objective measures of the same firm (Dess and Davis, 1984; Pearce, Robbins, and Robinson, 1987).

For performance in the service sample (Note: the last four items shown in the Appendix were not included in the analysis), the analysis resulted in two factors that explained 57% of the variance. Those two factors are efficiency and a combination of effectiveness and adaptability. Reliabilities were as follows: .8701 for efficiency and .8824 for effectiveness/adaptability. For the product sample, the analysis resulted in a single factor that explains 59% of the variance. The resulting reliability was .9376.

Perceptual indicators were also used to measure the environment in which the firms operate. In the service sample, the analysis resulted in three factors comprised of two items each: (1) dynamism, (2) heterogeneity, and (3) complexity. In the product sample, the analysis resulted in two factors which explained 44% of the original variance: (1) heterogeneity and dynamism, and (2) complexity. The reliabilities were as follows: .7058 for heterogeneity/dynamism and .5584 for environmental complexity.

ANALYSIS/RESULTS

To test the hypotheses concerning environmental perceptions, structural forms, and performance, the firms in each sample (separately) were profiled by their four structural characteristics (i.e., high or low integration). Each of the firms was classified as "consistent" or "inconsistent" as follows. The "consistent-form firms" are those that are described as either high on all the structural dimensions or low on all the structural dimensions. An "inconsistent-form firm" has a mixture of high and low structural characteristics. To note the frequencies, 38.7% (46/119) were classified as consistent form in the service sample, while 18.5% (25/136) were classified as consistent form in the product sample.

To test the hypotheses regarding environmental perceptions, organizational design and performance, the variables were regressed with performance. Table 1 summarizes the results of this analysis for the service sample while Table 2 summarizes the analysis for the product sample.

As noted in Table 1 (services), the models are significant. Regarding both performance efficiency and effectiveness/adaptability, the main effect of structural form (consistency) is insignificant. However, structural form does interact with the environmental factors to influence performance for both efficient performance and effective/adaptive performance.

The interaction between environmental dynamism and structural form exhibits a negative influence on both efficiency and effectiveness/adaptability of performance. Thus, consistent structural forms are more efficient and effective/adaptive in less dynamic environments.

In addition, the interaction between environmental complexity and structural form exhibits a positive influence on efficiency and effectiveness/adaptiveness. Thus, consistent structural forms are more efficient and effective/adaptive in more complex environments.

As noted in Table 2 (products), the overall model is significant. Again, the main effect of structural consistency is not significant. However, the variable does interact with the environmental factors to influence performance.

The interaction between environmental heterogeneity/dynamism and consistency of structural form exhibits a positive influence on performance. Thus, with products, consistent

structural forms are better performers in more heterogeneous/dynamic environments. As a result, support is offered for Hypothesis 1. Successful organizations do have a "fit" between the perceptions of the environment and the design of their organization. However, there was not support for Hypothesis 2. The type of "fit" between environmental perceptions and organizational design is not consistent across samples.

TABLE 1
REGRESSION ANALYSIS: ENVIRONMENT, STRUCTURE AND PERFORMANCE:
SERVICES

Dependent Variable: EFFICIENCY

Parameter	Estimate	T for H0: Parameter = 0	Pr > T	Std Error of Estimate
CON	0.4937	0.144	0.886	3.436
CON*DYNA	-0.8843	-2.246	0.026*	0.393
CON*HETE	-0.2134	-0.499	0.618	0.427
CON*COMP	0.8906	2.313	0.022*	0.384

R Square = 0.0938

F = 3.0310

Adjusted R Square = 0.0629

Signif F = 0.0203

*Signif at 0.05

Dependent Variable: EFFECTIVENESS/ADAPTABILITY

Parameter	Estimate	T for H0: Parameter = 0	Pr > T	Std Error of Estimate
CON	0.2187	0.082	0.934	2.662
CON*DYNA	-0.7055	-2.292	0.023*	0.307
CON*HETE	-0.5216	-1.565	0.120*	0.333
CON*COMP	0.9606	3.227	0.001*	0.297

R Square = 0.1476

F = 4.9807

Adjusted R Square = 0.1180

Signif F = 0.0010

*Signif at 0.05

Note: CON refers to structural consistency and is scored as 0 (inconsistent) or 1 (consistent)

DYNA = DYNAMISM

HETE = HETEROGENEITY

COMP = COMPLEXITY

TABLE 2
REGRESSION ANALYSIS: ENVIRONMENT, STRUCTURE, AND PERFORMANCE:
PRODUCTS

Dependent Variable: PERFORMANCE

Parameter	Estimate	T for H0: Parameter = 0	Pr > T	Std Error of Estimate
CON	-25.979	-1.535	0.127	16.926
CON*HETE/DYNA	1.343	2.977	0.003*	0.451
CON*COMP	-0.458	-1.375	0.171	0.333

R Square = 0.0893

F = 4.4127

Adjusted R Square = 0.0690

Signif F = 0.0054

*Signif at 0.05

Note: CON refers to structural consistency and is scored as 0 (inconsistent) or 1 (consistent)

HETE/DYNA = DYNAMISM & HETEROGENEITY

COMP = COMPLEXITY

DISCUSSION

The empirical testing of the proposed model in different industries has highlighted some interesting findings. Based on the results of this study, high performing organizations do "match" the structural design of the organization with their perceptions of the environment. However, the match of the environment and organizational design is different across industries.

The results support, in part, the work of Koberg and Ungson (1987) who discovered that high performing organizations do not always match dynamic environmental conditions with a loosely structured organization. In the product based industry sample, consistency in the structural dimensions was evident for successful organizations in a dynamic and heterogeneous environment.

The contrast of the results in the two different samples may show the impact of the perceptions of the environment by the decision makers. In the service industry sample, the perception of a stable environment and the implementation of a consistent structural form are characteristics of successful companies.

The results of the service sample could be explained, in part, by the nature of the credit union industry. The credit union industry is highly regulated by both state and federal laws and is monitored by the federal government's National Credit Union Administration (NCUA). Some aspects of deregulation within the credit union industry did occur from the mid-1970's to the mid-1980's when credit unions were allowed to offer a more comprehensive line of services. This deregulation allowed the credit unions to compete more directly with banks and other financial institutions. However, there is still a high degree of regulation within the credit union industry that

could result in the perception of a high level of stability in the environment. As a result, high performing credit unions may perceive a stable environment and implement high levels of routineness in their operations that are supported by their structural design.

In contrast, in the product industry sample, a consistent organizational form in a heterogeneous and dynamic environment is characteristic of successful organizations. Therefore, as Koberg and Ungson (1987) state, the "routineness" of the operations even in a dynamic environment may lead to highly consistent structural forms. Consequently, in different industries, the organizational design to "match" the environmental conditions may depend on the decision makers interpretation of the characteristics of the environment. Therefore, an important issue to consider for future research is not only the subjective perception of the environment, but also the interpretation of what organizational design is required for those environmental conditions.

In addition, the results of this study may extend the scope of environmental perceptions by considering different perceptions on an industry-wide basis. Starbuck stated that "...the same environment one organization perceives as unpredictable, complex, and evanescent, another organization might see as static and easily understood" (1976, p. 1080). The results of this study show that different organizations in different industries may also have different perceptions of the characteristics of the environment.

There are a number of limitations that should be addressed in future research. The first limitation is the sample used in the study. The response rate of the product sample is small (12.2%) compared to that of the service sample (38.5%). In addition, the service sample included a single industry while the product sample included four different industries. Furthermore, the analysis suggests that the service firms are not representative of smaller credit unions. While this might seem to question the validity of generalizations, it must be recognized that the vast majority of the firms in the sampling frame are of average to large asset size. Thus, the findings do seem to apply to the general firm in that industry. However, future studies should focus on trying to increase the response rate of the firms and on including additional service based industries. It would also be beneficial to obtain a larger sample size that would include a strong representation from various organizational sizes. This would enhance the generalizability of the results of the study.

CONCLUSIONS

The paper presents a proposed model and empirically examines the relationship between the environmental perceptions by decision makers, the structural dimensions of an organization, and the subsequent performance of the organization. The authors find that the relationship between the perception of the environment, the structural dimensions of the organization, and the overall performance of the organization are different across two different types of industries.

APPENDIX

Organizational Structure Measures: Services

1. decision making is highly controlled (form)
2. most jobs are highly specialized (form)
3. decision making follows formalized policies and procedures (form)
4. decision making is highly centralized (form)
5. the ratio of administrative personnel to clerical personnel is high (cent/comp)
6. services production is highly mechanized (cent/comp)
7. you have many branch sites (none)
8. there are many levels of management (cent/comp)

9. the ratio of clerical personnel to all personnel is high (cent/comp)
10. committees are used extensively in decision making (inte)
11. divergent viewpoints are reconciled systematically through discussions (inte)
12. task forces are often used to assess uncertain decision areas (inte)

Organizational Structure Measures: Products

1. responsibilities are clearly specified (form)
2. strict operating procedures exist (form)
3. decision making is highly formalized (form)
4. policies exist for most decisions (form)
5. a few people make most of the decisions (cent)
6. decision making is highly centralized (cent)
7. little decision making leeway exists (cent)
8. decisions are reserved for a few people (cent)
9. committees are often used to make decisions (none)
10. coordination among departments is high (inte)
11. resources are shared among departments (inte)
12. divergent views are reconciled with discussions (inte)
13. many hierarchical levels exist (comp)
14. activities occur at many different locations (comp)
15. the firm is widely dispersed (comp)
16. the organization has a complex structure (comp)

Organizational Performance Measures

1. efficiency/(profits) versus your competitors
2. efficiency/(profits) versus your goals/expectations
3. efficiency/(profits) versus previous years
4. efficiency/(profits) versus your potential
5. growth of overall efficiency/(profits)
6. effectiveness/(market share) versus your competitors
7. effectiveness/(market share) versus your goals/expectations
8. effectiveness/(market share) versus previous years
9. effectiveness/(market share) versus your potential
10. growth of effectiveness/(market share)
11. adaptations made to changing environment
12. adaptations made to competitor activities
13. adaptations made to customer needs
14. adaptations made to stockholder/owner demands
15. improvements in adapting to change

Environment Measures: Services

1. stable/unstable (dyna)
2. variable/not variable (none)
3. volatile/not volatile (dyna)
4. homogeneous/heterogeneous (hete)
5. similar/different (hete)
6. diverse/not diverse (cmpl)

7. complex/simple (cml)
8. understandable/confusing (none)
9. comprehensible/incomprehensible (none)

Environment Measures: Products

1. our supply markets are diverse (hete/dyna)
2. the market environment is heterogeneous (hete/dyna)
3. few mandated product standards exist (none)
4. we must adhere to many diverse regulations (none)
5. our customer markets are quite diverse (hete/dyna)
6. labor and materials requirements are few (none)
7. other industries often influence our business (none)
8. production is concentrated geographically (comp)
9. firms produce a small number of products (comp)
10. industry sales are concentrated geographically (comp)
11. sales are often unstable (comp)
12. relevant technologies are quickly changing (hete/dyna)
13. employment levels continually fluctuate (none)
14. customer preferences are always changing (hete/dyna)
15. competitive offerings are rapidly evolving (hete/dyna)

REFERENCES

- Aldrich, Howard E. **Organizations and Environments**. Englewood Cliffs, NJ: Prentice-Hall, 1979.
- Ansoff, H. Igor and Patrick A. Sullivan. "Optimizing Profitability in Turbulent Environments: A Formula for Strategic Success," **Long Range Planning** 26, no. 5 (October 1993): 11-23.
- Burns, Tom and G. M. Stalker. **The Management of Innovation**. London: Tavistock, 1961.
- Chandler, Alfred D. **Strategy and Structure**. Cambridge: MIT Press, 1962.
- Child, John. "Comments on Reimann and Mansfield's 'Bureaucracy'," **Administrative Science Quarterly** 19, no. 2 (June 1974): 247-250.
- Chom, Norman H. "The 'Alignment' Theory: Creating Strategic Fit," **Management Decision** 29, no. 1 (1991): 20-24.
- Cowen, Scott S. and J. Kendell Middaugh. "Matching an Organization's Planning and Control System to its Environment," **Journal of General Management** 16, no. 1 (Autumn 1990): 69-84.

- Dalton, Dan, William D. Todor, Michael Spendolini, Gordon J. Fielding, and Lyman W. Porter. "Organization Structure and Performance: A Critical Review," **Academy of Management Review** 5, no. 1 (January 1980): 49-64.
- Dess, Gregory G. and Donald W. Beard. "Dimensions of Organizational Task Environments," **Administrative Science Quarterly** 29, no. 1 (March 1984): 52-73.
- Dess, Gregory G. and Peter S. Davis. "Porter's (1980) Generic Strategies as Determinants of Strategic Group Membership and Organizational Performance," **Academy of Management Journal** 27, no. 3 (September 1984): 467-488.
- Droge, Comelia and Richard Germain. "The Impact of the Centralized Structuring of Logistics Activities on Span of Control, Formalization and Performance," **Journal of the Academy of Marketing Science** 17, no. 1 (Winter 1989): 83-89.
- Duncan, Robert B. "Characteristics of Organizational Environments and Perceived Environmental Uncertainty," **Administrative Science Quarterly** 17, no. 3 (September 1972): 313-327.
- Ford, Jeffrey D. and John W. Slocum Jr. "Size, Technology, Environment and the Structure of Organizations," **Academy of Management Review** 2, no. 4 (October 1977): 561-575.
- Frazier, Gary L. and Roy D. Howell. "Business Definition and Performance," **Journal of Marketing** 47, no. 2 (Spring 1983): 59-67.
- Fredrickson, James W. "The Strategic Decision Making Process and Organizational Structure," **Academy of Management Review** 11, no. 2 (April 1986): 280-297.
- Fry, Louis W. "Technology-Structure Research: Three Critical Issues," **Academy of Management Journal** 25, no. 3 (September 1982): 532-551.
- Hall, Richard H. **Organizations: Structure and Process**. Englewood Cliffs, NJ: Prentice-Hall, 1977.
- Hetherington, Robert W. "The Effects of Formalization on Departments of a Multi-Hospital System," **Journal of Management Studies** 28, no. 2 (March 1991): 103-41.
- Hill C. W. and J. F. Pickering. "Divisonalization, Decentralization and Performance of Large United Kingdom Companies," **Journal of Management Studies** 23, no. 1 (January 1986): 26-50.
- Keats, Barbara W. and Michael Hitt. "A Causal Model of Linkages Among Environmental Dimensions, Macro Organizational Characteristics, and Performance," **Academy of Management Journal** 31, no. 3 (September 1988): 570-598.
- Koberg, Christine S. and Gerardo R. Ungson. "The Effects of Environmental Uncertainty and Dependence on Organizational Structure and Performance: A Comparative Study," **Journal of Management** 13, no. 4 (Winter 1987): 725-737.

- Lawrence, Paul R. and Jay W. Lorsch. **Organization and Environment**. Boston: Harvard Business School, 1967.
- McArthur, Angeline W. and Paul C. Nystrom. "Environmental Dynamism, Complexity, and Munificence as Moderators of Strategy-Performance Relationships," **Journal of Business Research** 23, no. 4 (December 1991): 349-361.
- Miles, Raymond E., C. Snow, and Jeffrey Pfeffer. "Organization-Environment: Concepts and Issues," **Industrial Relations** 13, no. 3 (October 1974): 244-264.
- Miller, Danny and Peter H. Friesen. "A Longitudinal Study of the Corporate Life Cycle," **Management Science** 30, no. 10 (October 1984): 1161-1183.
- Miller, Danny. "Configurations of Strategy and Structure: Towards a Synthesis," **Strategic Management Journal** 7, no. 3 (May/June 1986): 233-249.
- Miller, Danny. "Strategy Making and Structure: Analysis and Implications for Performance," **Academy of Management Journal** 30, no. 1 (March 1987a): 7-32.
- Miller, Danny. "The Structural and Environmental Correlates of Business Strategy," **Strategic Management Journal** 8, no. 1 (January/February 1987b): 55-76.
- Miller, Danny. "Relating Porter's Business Strategies to Environment and Structure: Analysis and Performance Implications," **Academy of Management Journal** 31, no. 2 (June 1988): 280-308.
- Miller, Danny and Cornelia Droge. "Psychological and Traditional Determinants of Structure," **Administrative Science Quarterly** 31, no. 4 (December 1986): 539-560.
- Mintzberg, Henry. **The Structuring of Organizations**. Englewood Cliffs, NJ: Prentice-Hall, 1979.
- Naman, John L. and Dennis P. Slevin. "Entrepreneurship and the Concept of Fit: A Model and Empirical Tests," **Strategic Management Journal** 14, no. 2 (February 1993): 137-153.
- Nwachukwu, Osita C. and John Tsalikis. "Environmental Heterogeneity, Strategy-Making, Structure and Small Business Performance: A Path Analytic Model," **The Journal of Applied Business Research** 7, no. 2 (Spring 1990): 38-44.
- Pearce, John A., D. Keith Robbins, and Richard B. Robinson, Jr. "The Impact of Grand Strategy and Planning Formality on Financial Performance," **Strategic Management Journal** 8, no. 2 (March/April 1987): 125-134.
- Ruekert, Robert W., Orville C. Walker, Jr., and Kenneth J. Roering. "The Organization of Marketing Activities: A Contingency Theory of Structure and Performance," **Journal of Marketing** 49, no. 1 (Winter 1985): 13-25.
- Sharma, Subhash and Vijay Mahajan. "Early Warning Indicators of Business Failure," **Journal of Marketing** 44, no. 4 (Fall 1980): 80-89.

Starbuck, Willian. H. "Organizations and Their Environments," in Marvin D. Dunnette (ed.) **Handbook of Industrial and Organizational Psychology**. Chicago: Rand McNally, (1976): 1069-1123.

Thompson, James. **Organizations in Action**. New York: McGraw-Hill, 1967.

Van de Ven, Andrew H. "A Framework for Organization Assessment," **Academy of Management Review** 1, no. 1 (January 1976): 64-78.

Varadarajan, P. Rajan. "Product Diversity and Firm Performance: An Empirical Investigation," **Journal of Marketing** 50, no. 3 (July 1986): 43-57.

Yasai-Ardekani, Masoud. "Structural Adaptations to Environments," **Academy of Management Review** 11, no. 1 (January 1986): 9-21.

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