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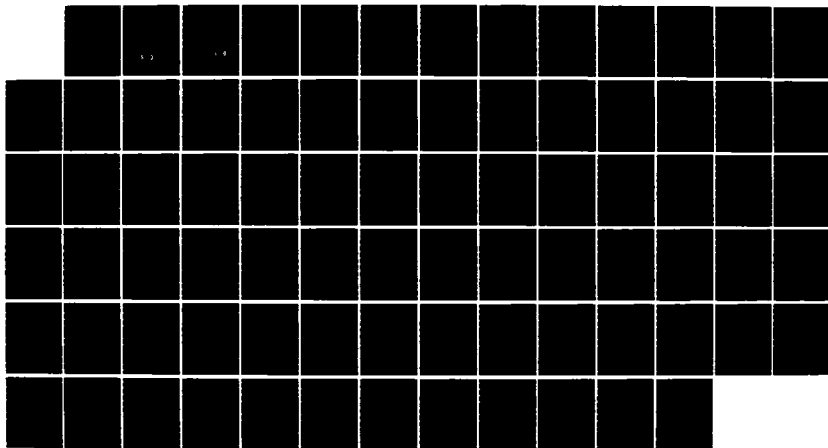
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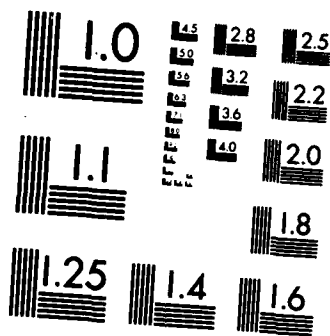
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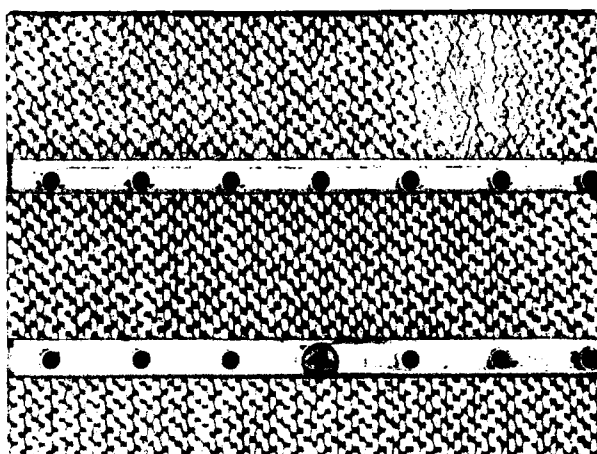
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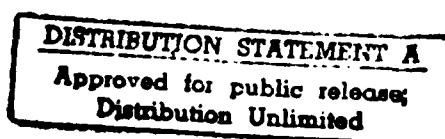
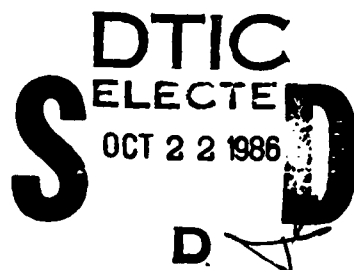
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Organizations As Information Processing Systems

Office of Naval Research
Technical Report Series



Department of Management
Texas A&M University



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and
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A Study of Organizational
"Framework" and "Process"
Modalities for the Implementation
of Business-Level Strategies

James Skivington
and
Richard Daft

TR-ONR-DG-21
September 1986

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A STUDY OF ORGANIZATIONAL "FRAMEWORK" AND "PROCESS" MODALITIES
FOR THE IMPLEMENTATION OF BUSINESS-LEVEL STRATEGIES

Abstract

Based on structuration theory, organization framework and process are proposed as two modalities for implementing intended business-level strategies. A model is developed in which the components of these two modalities are defined and related to the implementation of low cost and differentiation strategies. The implementation of fifty-seven strategies in integrated circuits, petroleum, and health care firms are used to test the research hypotheses. The findings suggest that strategy implementation in these firms utilized both framework and process structural elements, but that a different implementation gestalt characterized each strategy. Implications for strategy implementation and for structuration theory are discussed.

A STUDY OF ORGANIZATIONAL "FRAMEWORK" AND "PROCESS" MODALITIES
FOR THE IMPLEMENTATION OF BUSINESS-LEVEL STRATEGIES

How are business level strategies implemented? One answer is that top level decision makers formulate intended strategies which are then implemented downward through the organization (Andrews, 1971; Mintzberg, 1978). The organization is presumed to move ahead in deliberate fashion, with senior policy makers sensing the environment and posing intended changes. Organizational goals are clear and well-defined. The strategy ultimately realized by the organization is similar to the strategy intended by top management. This is a widely held view of strategy making, and is expected to occur in machine bureaucracies and other organizations characterized by central control and tight coupling (Mintzberg and Waters, 1985).

Another answer is that strategies are not implemented at all--they emerge from actions taken within the organization (Mintzberg and Waters, 1985). Each part of the organization is presumed to make decisions autonomously in response to environmental pressures (Weick, 1976). For example, in adhocracies and loosely coupled organizations, members search for solutions to their own problems, and each new solution represents an incremental change in strategy (Mintzberg and McHugh, 1985). Overall goals are ambiguous and imprecise. The implemented strategy emerges from the pattern of decisions and actions taken throughout the organization.

Deliberate versus emergent strategies represent end points on a continuum of strategy making (Mintzberg, 1978; Mintzberg and Waters, 1985). A growing body of research suggests that most organizations formulate some type of deliberate strategy which is then implemented, yet there has been little published research into how strategy implementation takes place (Gupta and Govindarajan, 1984; Higgins, 1983; Bourgeois and Brodwin, 1984). Research into how deliberate strategies are implemented has been slow to emerge

compared to the large body of research on how deliberate strategies are formulated. The purpose of the research reported in this paper is to explore how intended business level strategies are implemented and translated into action by organizations. This paper develops a model of strategy implementation based on the concept of organization structure as a duality (Benson, 1977; Ranson, Hinings and Greenwood, 1980). The implementation of 57 intended low cost and differentiation business strategies were analyzed to test whether implementation is associated with changes in the organization's structural framework or underlying interaction processes.

STRUCTURAL FRAMEWORK AND PROCESS

Organization structure is usually understood to imply an enduring configuration of tasks and activities. Within this general definition, organization structure has been defined to include two dimensions. One dimension of structure is the formal configuration of roles and procedures, which is the "framework" of the organization (Ranson, et. al., 1980). The other dimension is the pattern of interaction "processes" among members, which is the informal structure of the organization. Recent work has sought to integrate these two perspectives into a unified concept of structure (Bartunek, 1984; Giddens, 1976; Ranson, et. al., 1980; Willmott, 1981). Although their interdependence is important, counterposing the perspectives illustrates two modalities through which intended strategic changes can be implemented.

The framework aspect of organization structure includes rules, prescriptions of authority, division of labor, and hierarchy of authority. The concept of formal structure was influenced by the ideas of Weber (1949), and by subsequent work on the formal, impersonal aspects of bureaucracy (Blau

and Schoenherr, 1971; Child, 1972; Hall, 1963; Pugh, et. al., 1969).

Structure is the abstract, formally prescribed relationships that constrain day-to-day behavior. Structure exists outside human behavior, and includes the set of rules and expectations that specify acceptable conduct. Structure is a blueprint or template that guides member behavior. Each department and task is clearly specified and connected to one another. Roles locate members in positions and provide them with an articulated set of expectations. One metaphor of framework is the organization as a stage play. Actors play assigned parts in a script written by management.

Additional elements of the organization's framework include the subsystems that allocate resources and reinforce central control (Lorange and Vancil, 1977; Riley, 1983). In addition to the standing body of rule books, procedures, and policies, these systems include budgets, management information systems, technical training systems, and operational controls and reports that provide for resource allocation and vertical control (Child, 1984; Daft and Macintosh, 1984).

From this view top managers implement an intended strategy by changing the rules, revising the organizational blueprint, or rewriting the script (Allen, 1979). In order to translate a strategy into action, managers may redefine duties and roles, reallocate budget resources, enact new operational performance criteria, or change the division of labor and task specialization. Top managers change the formal structure to implement the new behaviors appropriate to the new strategy (Chandler, 1962).

The process aspect of structure suggests a different mode of strategy implementation. Structure is the emergent yet patterned interactions among members that exist outside the rational rules and roles prescribed by the organization (Giddens, 1976; Ranson, et. al., 1980). This view of structure

arose from studies that discovered the importance of human interactions on organizational outcomes (Crozier, 1964; Garfinkel, 1967; Gouldner, 1955; Selznick, 1949). The importance of human interaction has also been revealed in the metaphors of organizations as loosely coupled systems (Weick, 1976) and organizations as organized anarchies (Cohen, March and Olsen, 1972; March and Olsen, 1976).

An important element of this view is the concept of meaning, and organizational "provinces of meaning" (Ranson, et. al., 1980). Members create provinces of meaning, conceptual schemes, and frames of reference that form the basis for their orientation within the organization (Schutz, 1972). The available body of knowledge and values define the relative worth of things to organizational groups and provide continuity of understanding. Provinces of meaning reflect diverse interests among groups, so the process of bargaining, confrontation, and negotiation ensues (Lawrence and Lorsch, 1967). Social order is created from these negotiations and social interactions (Strauss, 1978).

Organizations are webs of interaction (Stryker and Statham, 1985). Without interaction and shared meaning among members, behavior in the organization would be random and disorganized. Where interactions take place and meaning is assigned and consensus achieved, behavior is patterned and regular (Homans, 1961). In the extreme view, the organization of formal roles does not "exist," but is created and recreated in the minds of members as they interact and establish new organizational meanings. The organization is fluid, not static, and is continuously reconstructed by a definitional and interpretation process (Giddens, 1976; Harris and Cronen, 1979). The assignment of meaning organizes and regularizes members' behavior through the identification of significant symbols, values, and understandings.

In this view top managers implement an intended strategy through the creation of new meaning. Top leaders can use communications, power, and sanctions to transmit new ideas and values (Giddens, 1976; Willmott, 1981). Managerial implementation includes the creation of myth, symbols, and labels (Pettigrew, 1979). Managers traffic in images, and the appropriate implementation role is evangelist rather than accountant or engineer (Weick, 1979). Policy makers need ceremonial skills and a flair for the dramatic (Pfeffer, 1981; Trice and Beyer, 1984). In addition, managers can create shifts in meanings and values by changing the mix of participants through enforced turnover to bring in new intentions, values, and frames of reference more compatible with the new strategy (March, 1981). Significant meanings take on an almost moral quality, and the use of power and sanctions to signal and to enforce the correct values can be used by both managers and peers within the organization.

IMPLEMENTATION MODALITIES

The dual nature of organization structure means that two avenues or modalities exist through which intended strategies can be implemented. Strategy implementation theory and research traditionally have emphasized changes in tangible framework dimensions that are part of a firm's formal structure (Hrebiniak and Joyce, 1984; Pitts, 1977). Top managers have the authority to allocate resources and arrange reporting relationships as a primary means of transforming strategy into action (Rumelt, 1974). Structure and resources are considered "tools" because implementation is portrayed as technical adjustments in the formal structural and support systems of the organization (Galbraith and Nathanson, 1978).

The organizational framework as a medium of strategy implementation is

illustrated in the upper portion of Figure 1. The organization's structural framework is subdivided into two components: structure and systems. Formal structure is the formal division of labor, and is represented by two variables, task specialization and formalization. Specialization refers to the creation of additional tasks and task categories as a means of implementation. Formalization pertains to changes in written rules and procedures that govern role behavior. Changes in formal structure have been related to strategy implementation in previous research (Daniels, Pitts, and Tretter, 1984; Grinyer and Yasai-Ardekani, 1981; Horowitz and Thietart, 1982).

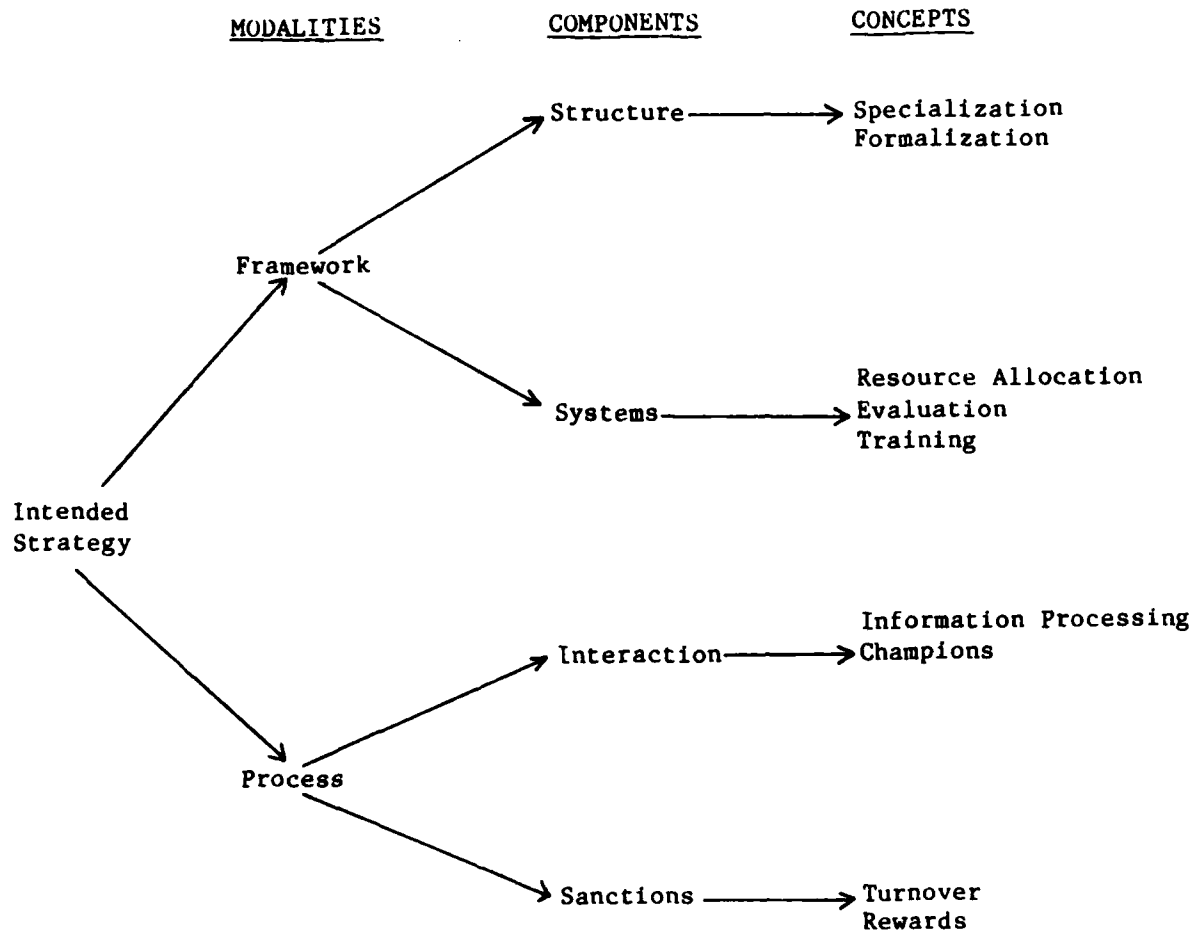
Organizational systems are the means for allocating and redistributing organizational resources. Systems are a formal means of implementation because top managers can operationalize strategy through established budget, personnel, evaluation and training systems (e.g. Hambrick and Schecter, 1983). Implementing a strategy through the budget system might involve an increase in budgeted resources for market-related tasks such as advertising or promotion, or for operations-related tasks intended to improve internal production (Hambrick, 1983). Implementation through the evaluation system uses operational reporting systems as part of the production process and output management (Daft and Macintosh, 1984). Another internal system is for employee training. A new strategy may require that employees be retrained through company sponsored technical training programs. Skill acquisition by employees is considered to be one determinant of a firm's competitive ability (Devanna, Fombrun, and Tichy, 1981).

Insert Figure 1 about here

The lower portion of Figure 1 defines the modality of organizational

FIGURE 1

BUSINESS STRATEGY IMPLEMENTATION MODEL



process. In comparison to framework, organizational process pertains to actions or events that are episodic and attributable to individuals rather than to systemic organization wide actions (Giddens, 1976). Empirical evidence suggests that process dimensions play an important role in maintaining organizational stability (Meyer, 1982b) and in contributing to organizational change (Mackenzie, 1986; Quinn and Cameron, 1981). Organizational processes in Figure 1 are subdivided into interaction and sanction components. Interaction is the information processing behavior in organizations. Information processing includes the written or oral communications by top management describing the instrumental value of the strategy to be implemented. These communications include public statements, speeches to employees, or written materials explaining a strategy and the reason for it. Other communications are employee conversations and the use of symbolic mechanisms and rich media to express values as well as the instrumental meaning of the intended strategy (Daft and Lengel, 1984). These communications would include the creation of slogans, or informal talks with employees to encourage changes in understanding and values to accept new strategic behaviors.

Another aspect of interaction in Figure 1 is the concept of idea champion. This pertains to the activity of an employee outside the requirements of formal job descriptions. Champions take on responsibility to promote changes in which they believe. New strategies not easily programmed through the formal hierarchy can become lost in the organization unless a champion provides the focus of attention and energy needed to change meaning and values for acceptance within the organization. Champions have been noted for technology innovation (Maidique, 1980), new venture creation (Burgelman, 1983), capital budgeting (Bower, 1972), and the implementation of both

administrative and educational changes (Daft and Becker, 1978; Daft and Bradshaw, 1981). Champions for a strategy are senior managers that work to bring about changes in shared meaning and to build consensus concerning the new strategy.

The second major component of the process modality in Figure 1 is sanctions. Sanctions are the use of power to provide support to new meanings and actions. Two uses of sanctions are proposed in Figure 1: turnover and rewards. Turnover may be initiated by superiors through demoting, firing, or easing employees out of the firm as a way to attain agreement and alignment of meanings and values within the organization. Dissidents are let go. New people may be hired who are compatible with the intended strategy. Subordinates may contribute to sanctioning in the form of resignations. Some employees may quit if they disagree with a new course of action. Monetary and nonmonetary rewards are ways of using sanctions to reinforce new behaviors in organizations. Rewards include promotions, bonuses, salary increases, letters of recommendation, citations, and public awards. Rewards provide both direct and symbolic approval of actions or behaviors. Together, interaction and sanctions are the behavioral manifestation of organization process.

In summary, the framework in Figure 1 defines components of organizational framework and process that may be used to implement intended organizational strategies. The Figure 1 framework provides a way to understand the diversity of implementation mechanisms within organizations and why implementation may occur through the reshaping of the formal blueprint or through the creation of new meaning and values within the organization.

RESEARCH HYPOTHESES

The purpose of this research was to determine how business level

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strategies are implemented. Business level strategies can be roughly divided into two generic classifications: low cost and differentiation (Hall, 1980; Miles and Snow, 1978). Low cost strategy refers to competitive effort to reduce a firm's operating cost so that its product can be sold at a low price relative to competitors. Differentiation strategy is an attempt to distinguish a firm's product by providing special product attributes that clients will value (Porter, 1980). Low cost and differentiation strategies have been reported as basic methods of competing in several studies of business level strategies (Anderson and Zeithaml, 1984; Woo and Cooper, 1980).

Low cost strategy. Low cost strategies are often found in markets where commodity-like products and price sensitive buyers collectively pressure firms to engage in price competition (Porter, 1980). Khandwalla (1973) reported that price competition was not associated with changes in top management authority and control structures. One explanation is that price competition and the resulting low cost strategy are rather routine and well understood. Required changes are within the firm and under management's control. For some firms, price competition may be a primary method of competing. A new round of price fluctuations is likely to be viewed as a familiar strategic problem.

If price competition is considered to be a familiar event and within the firm's repertoire, firms either have or are likely to develop a systematic response to it. An intended change in low cost strategy may be, in effect, a programmable decision that is implemented by activating organizational routines that are already operational rather than by creating a new organizational structure or province of meaning. The low cost strategy can be implemented through extant systems, such as budget, operational expenditures, and plant performance evaluations. This logic suggests the following hypotheses:

Hypothesis 1: The implementation of low cost strategy will not be associated with changes in organizational structure.

Hypothesis 2: The implementation of low cost strategy will be associated with the use of organizational systems.

Assuming that intended changes in low cost strategy are relatively well understood, the organization may also make use of the process modality for implementation. Well understood strategic changes can be readily assigned to organizational departments without first having to interpret and make sense of novel or ambiguous circumstances (Weick, 1979). Alterations in the underlying meaning and value system of organizational members is unnecessary. A low cost strategy does not entail a major shift in strategic direction. The important element of process is to reinforce the low cost procedures. By both signaling and sanctioning the value of intended lower costs, future circumstances can be handled in a similar fashion (Fiol and Lyles, 1985). This reasoning suggests that intended low cost strategies will be implemented through sanctions but not through the use of interaction in the Figure 1 model.

Hypothesis 3: The implementation of low cost strategy will not be associated with the use of organizational interaction.

Hypothesis 4: The implementation of low cost strategy will be associated with the use of organizational sanctions.

The hypothesized implementation of low cost strategy is analagous to the concept of single-loop learning proposed by Argyris and Schoen (1978). Single-loop learning occurs when organizations make modest changes in operating techniques within the extant framework of norms, values, and member beliefs. Intended low cost strategies are hypothesized to be processed through existing systems and sanctioning mechanisms in the Figure 1 model.

Differentiation strategy. Differentiation strategies are frequently

employed in markets with diverse customer needs where product differences are important (Porter, 1980). Product competition is nonroutine in that product obsolescence occurs at a variable rate and new products emerge from divergent, previously unrecognized firms (Jewkes, Sawers, and Stillerman, 1958). Intended differentiation strategies are based on efforts to understand a complex and changing environment, so the firm creates new and distinct products to meet anticipated and changing environmental needs. Successful new product development requires linkages between the marketplace and the organization, as well as coordination among functional departments within the organization (Mansfield and Wagner, 1975; Miller and Friesen, 1984). The quality of these linkages may be determined by a firm's systems (Khandwalla, 1973) or formal structure (Pfeffer and Leblebici, 1973). Moreover, new or differentiated products may require the establishment of a new department and new jobs, and the reallocation of resources away from traditional activities into these new departments (Miles and Snow, 1978). Differentiation strategies thus tend to be nonroutine, and are expected to be implemented through both components of the organization's structural framework.

Hypothesis 5: The implementation of differentiation strategy will be associated with changes in formal organization structure.

Hypothesis 6: The implementation of differentiation strategy will be associated with the use of organization systems.

The nonroutine aspect of an intended differentiation strategy means that it may create novel and unclear conditions for members, and upset traditional understandings within the organization. The correct action is not clear because no organizational routine exists to handle the intended strategic change. To gain compliance, management may seek to construct new meaning

within the organization (Daft and Weick, 1984; Weick, 1979). Management will interpret the environment and communicate this interpretation through the organization to reduce equivocality and provide clarity and direction for employees (Daft and Lengel, 1986). Negotiation and consensus building may occur. The creation of new meaning, and the reinforcement of a value for product differentiation will involve both symbolic acts and organizational sanctions (Pfeffer, 1981). Both formal and informal communications can signal the new meanings to employees; champions may be engaged to build consensus and gain agreement. Moreover, sanctions may be used to reinforce the intended strategy by layoffs and by rewarding behaviors congruent with the new strategy and new values.

Hypothesis 7: The implementation of differentiation strategy will be associated with the use of organizational interactions.

Hypothesis 8: The implementation of differentiation strategy will be associated with the use of organizational sanctions.

In terms of the organizational learning model proposed by Argyris and Schoen (1978), the implementation of a differentiation strategy is similar to double-loop learning. Double-loop learning cuts deeper into the organization than single-loop learning, and involves the restructuring of organizational norms, assumptions, and meanings to be congruent with the larger change in organizational strategy. The implementation of an intended differentiation strategy is therefore hypothesized to be associated with the use of all four components of the two implementation modalities proposed in Figure 1.

Integrating modalities. Each hypothesis thus far has treated the framework and process modalities as independent elements of structure, and has posited discrete correlations between intended strategy and structure

variables. However, the research is based on structuration theory, which assumes that the two modalities are interactive and interdependent. Strategy implementation may be related to several structural variables simultaneously. Structural variables from both modalities may hang together in logical patterns for the implementation of low cost or differentiation strategies. Variables identified as significant in Hypotheses 1 through 8, therefore, are expected to cluster into meaningful groups. Moreover, if framework and process variables fit the intended strategies, the implementation cluster should be different for low cost and differentiation strategies.

Hypothesis 9: Framework and process variables that are correlated with the implementation of low cost or differentiation strategies will cluster into two groups that will distinguish low cost and differentiation strategies.

RESEARCH METHODS

The goal of this research was to link intended strategic decisions with framework or process modalities used for implementation. Success in establishing this linkage depends in large measure on the extent to which intended strategic changes can be identified and both framework and process characteristics measured.

Pilot Study

There are very few precedents in the literature studying how intended business level strategies are implemented. Most work on strategy implementation is prescriptive, suggesting how strategy should be implemented (Allaire and Firsirotu, 1985; Dundas and Richardson, 1982). Virtually no empirical research has investigated the relationship between an intended business unit plan and the organizational events used to implement it. The

1.

absence of research led to the decision to undertake a pilot study to ground the theoretical concepts in the real world of organizations (Glaser and Strauss, 1967), and to learn whether procedures for identifying strategic decisions and implementation procedures were feasible.

The pilot study included open-ended interviews with the chief executives of two banks, one hospital, and one newspaper. The executives were asked several questions about how strategies were developed and put into operation. The executives described implementation in terms of budget allocations; structural changes such as creating new jobs; frequent communications, especially to gain support for the new strategy; and rewards. For example, the strategy described by the newspaper chief executive was the change from an evening to a morning newspaper. This represented a major shift in philosophy toward becoming an aggressive competitor. The shift to a morning newspaper included expanded news coverage and the use of color. This strategy was rated as differentiation rather than low cost, and involved the use of several implementation techniques described in the Figure 1 model. The depth of the change was illustrated by the turnover of more than 60 percent of the paper's division heads. Some were fired; others left because they refused to accept the new philosophy. The interviews with the four executives provided tentative support for the concept of implementation as a complex phenomenon that could include changes along several framework and process dimensions.

Sample

Three industries were selected for the research project. Petrochemical, integrated circuits, and health care industries were considered favorable settings for data collection because each was characterized by some environmental change during the years prior to the study. Environmental

change is likely to induce some type of competitive action (Steiner, 1979). Health care firms were experiencing increased competition between community controlled and investor owned institutions; petrochemical firms were faced with an oversupply of feed stock, declining prices, and a wave of takeovers; and integrated circuits firms were simultaneously engaged in developing new markets for products and attending to increased price competition from international competitors. The size of the organizations varied from a very small (23 employees) entrepreneurial integrated circuit firm to a very large (over 10,000 employees) petrochemical firm. Gulf, Tracor, and Parkland Memorial Hospital were some of the larger organizations while the smaller organizations included ITR Petroleum, Intermedics, and Raleigh Hills Hospital. A total of 60 business units were included in the study, 20 from each industry.

Within each firm an interview was held with a top manager in a position to be familiar with the firm's strategy and its implementation. Top managers in the smaller firms held titles such as chief executive officer, president, and hospital administrator. Top managers interviewed in the larger organizations held titles such as chief operating officer, senior vice president in charge of strategic planning, and head of business planning and development. Managers were contacted by telephone to request their participation in the research and to ensure that the executives' title reflected their actual responsibility. These top managers, 60 key informants, were the source of the research data. Personal interviews were held in the office of the respondents. This provided an opportunity to answer questions and ensure mutual understanding about the strategy making process. A single interviewer gathered data from all respondents.

A comment on the use of single key informants is appropriate. Key

informants are a useful source of information, especially in strategy research where access to top level decision makers is limited. Seidler (1974) reported that single key informants are a valid source of organizational data when the questions pertain to objective, noncontroversial events. Huber and Power (1985) noted weaknesses in this approach and suggested several guidelines for improving the accuracy of retrospective data from key informants. Key informant's bias may be a problem when the individual is emotionally involved, does not have access to information, or displays low motivation to participate. Informant bias can be reduced by clear and well framed questions, and by a questionnaire with good psychometric properties. This project made every attempt to reduce the opportunity for informant bias. The participants were volunteers and without exception expressed a strong motivation to talk about their firm's strategy. No method of assessing emotional involvement was developed, but the questions pertained to objective, nonemotional aspects of the organization. Access to accurate information was a problem for three respondents who were not familiar with the strategy, implementation, or both. The data from these respondents were dropped from the study, reducing the sample to 57. Psychometric properties of the questionnaire, discussed below, were considered acceptable.

Strategic decisions. The initial part of the interview consisted of open-ended questions that asked the informant to describe an important strategic decision that was made and acted upon during the previous four years. The informant was asked to think in terms of a specific strategic incident that was intended to alter the firm's relationship with its environment, and required the cooperation of at least two departments to implement or operationalize it. Based on this discussion all respondents were able to identify a significant strategic decision that was relevant to the

purpose of the research. Twelve examples of strategic decisions, four from each industry, are listed in Table 1.

Insert Table 1 about here

During this part of the interview the respondent was also asked to classify the strategic decision according to low cost and differentiation properties. The assumption was that low cost and differentiation strategies are not mutually exclusive. Recent thinking suggests that both can be pursued simultaneously (Dess and Davis, 1984; Hambrick, 1983; Miller and Friesen, 1984). Since a specific strategy may contain elements of both low cost and differentiation, two scales were developed and the intended strategy was rated along each scale. These two scales provided data on the "intended" low cost or differentiation outcome of the strategy. Strategic decisions could be rated as important on one scale and not on the other, as important on both strategy scales, or as unimportant on both scales. The intended strategy identified by the rating procedure for twelve example strategies are in the right hand column of Table 1.

Table 2 shows a breakdown of the distribution of competitive decisions across the two scales. Fourteen intended strategies were low cost, and twenty-six were differentiation. Ten strategies were intended to both lower cost and differentiate products, while seven decisions were rated as not important on either dimension.

Insert Table 2 about here

The pattern of strategies in Table 2 lends some face validity to the

TABLE 1

SELECTED COMPETITIVE EVENTS DESCRIBED BY KEY INFORMANTS

INTEGRATED CIRCUITS

- . Change to an OEM supplier of voice recognition components from an independent supplier of voice recognition equipment to end users
- . Build an electronics plant that uses robotics and collaborative management
- . Produce and sell entire electronic systems rather than individual electronic components
- . Cancel a line of home computers

STRATEGY TYPE

- . Differentiation
- . Low Cost & Differentiation
- . Differentiation
- . Low Cost

PETROLEUM

- . Build additional refining capacity to handle low grade crude oil
- . Participation in synthetic fuel development
- . Sell natural gas through the spot market
- . Sell a group of marginally profitable retail outlets

- . Low Cost
- . Differentiation
- . Low Cost
- . Low Cost

HEALTH CARE

- . Change to a drug dependency hospital from a short term, acute care facility
- . Add a special unit for bulimia
- . Develop a children's specialty unit
- . Enlarge a widely recognized specialty burn unit

- . Differentiation
- . Differentiation
- . Differentiation
- . Low Cost & Differentiation

TABLE 2

STRATEGIES UNDERTAKEN IN THREE INDUSTRIES

INDUSTRY	<u>STRATEGY</u>				Totals
	Low Cost	Differentiation	Low Cost and Differentiation	Neither Low Cost or Differentiation	
Integrated Circuits	5	9	3	2	19
Petrochemical	8	4	4	3	19
Health Care	<u>1</u>	<u>13</u>	<u>3</u>	<u>2</u>	<u>19</u>
Totals	14	26	10	7	<u>57</u>

rating procedure. Some strategies are more likely to be undertaken than others in a specific industry (Hatten, Schendel, and Cooper, 1978; Porter, 1980). The petrochemical industry, for example, is dominated by commodity products. The lack of differentiable products suggests that firms are more likely to exhibit strategic decisions that emphasize lower costs. Hospitals, on the other hand, were constrained from competing on a low cost basis because costs were traceable to constituent groups over which administrators had little authority, such as physicians, insurance companies, and regulatory agencies. Health care institutions were offering new products with higher profit margins in less competitive markets. Integrated circuits depended on both differentiated products and lower costs. Many integrated circuits firms were differentiating their products in some lines, but several executives stated that their firms were addressing price competition by making decisions in tune with low cost strategy.

Implementation Questionnaire

A series of closed ended questions were developed to measure the concepts of task specialization, formalization, training, evaluation, champions, rewards, information processing, resource allocation, turnover and rewards. The closed ended questions were developed from the pilot study interviews with chief executive officers and from written sources that described strategy implementation (Galbraith and Nathanson, 1978; Hambrick, 1983; Hrebiniak and Joyce, 1984). After the questions were deemed to be clear and understandable, they were pilot tested with a chief executive officer and a health care researcher not previously involved in the research. The pilot test included the entire procedure of identifying a strategic critical incident and going through the list of thirty-five closed ended questions about implementation.

The questions were revised based on the pilot test. Mindful that questionnaires can be a source of inaccuracy in key informant studies (Huber and Power, 1985), each variable scale was assessed for construct validity. Two ways of establishing scale validity are factor analysis and reliability coefficients (Mitchell, 1985).

Factor analysis. Each scale had to be factor analyzed separately because the total number of observations was not sufficient to permit simultaneous analysis of all questionnaire items. For several scales, the factor analysis supported the original written questions that were inductively derived. These scales--specialization, formalization, training, and champions--each loaded on a single factor. The questionnaire items and loadings after varimax rotation for each scale are displayed in Table 3.

Insert Table 3 about here

For other scales, the factor analysis indicated two subscales for the theoretical construct. Analysis results for resource allocation, information processing, rewards, and turnover are displayed in Table 4. The two factors derived from resource allocation appear to represent an internal-external dichotomy. A concern for external clients and markets loaded on one factor while employees and equipment, which pertain to internal operations, loaded on the other factor. The internal-external emphasis of resource allocation is consistent with Miles and Snow's (1978) prospector and defender organization types. Factor analysis of information processing items yielded two subscales. The two subscales appear to represent different levels of communication formality, a distinction that has been reported by Daft and Lengel (1984). The two factors derived from the reward items seem to represent monetary and

TABLE 3

FACTOR ANALYSIS FOR SCALES WITH A SINGLE FACTOR

ITEMS	LOADINGS
<u>Specialization Scale</u>	
New jobs requiring technical skills	.88
New jobs requiring administrative skills	.83
Special job descriptions necessary	.72
<u>Formalization Scale</u>	
New or revised written procedures for:	
purchasing	.83
stocking inventory	.70
media advertising	.63
quality control	.62
equipment maintenance	.77
<u>Training Scale</u>	
Number of individuals trained to:	
use specialized equipment	.84
improve equipment maintenance	.84
do their jobs more efficiently	.86
<u>Champions Scale</u>	
People who really went out of their way to implement strategy by:	
working after hours	.84
coming up with creative solutions to problems	.79
reducing conflict	.72
coalescing support	.68

nonmonetary rewards, which are consistent with the motivational concepts of extrinsic and intrinsic rewards (Pinder, 1984). Finally, the turnover scale also resulted in two factors. One factor measures whether employees are intentionally removed from employment, presumably because they are not considered adequate performers. Demoting, firing, and easing people out of the firm is consistent with Meyer's (1982a) finding that executives use strategic change as an opportunity to rid themselves of unwanted employees. Layoffs and quits, the second dimension displayed in Table 4, appear to be unrelated to performance.

Insert Table 4 about here

High factor loadings suggest that each item in a scale tap a similar construct. Factor loadings for the a priori scales and the derived scales in Tables 3 and 4 are considered acceptable for exploratory research (Nunnally, 1978). Where a priori scales represented one factor, they were left intact. New subscales were used to measure theoretical constructs whenever factor analysis indicated the presence of subscales. Transformation from the theoretical constructs displayed in Figure 1 to the factor analysis derived scales used in the data analysis is displayed in Table 5.

Insert Table 5 about here

Inter-item reliability reported in terms of Cronbach alpha are in Table 6. Table 6 shows each variable, the number of items measuring the variable, and the reliability of each multi-item scale. Variable scales range from a low of .41 to a high of .88 with most of the scales measured at or above .60.

TABLE 4

FACTOR ANALYSIS FOR OTHER SCALES

ITEMS	FACTOR 1 LOADINGS	FACTOR 2 LOADINGS
<u>Resource Allocation Scale</u>		
Market Related Expenditures		
Market Research	<u>.84</u>	-.09
Quality Control	<u>.78</u>	.24
Operations Related Expenditures		
Salaries	-.03	<u>.78</u>
Efficient Equipment	.14	<u>.76</u>
<u>Information Processing Scale</u>		
Formal Communication		
Employee Speeches	<u>.87</u>	-.10
Community Speeches	<u>.81</u>	.29
Informal Communication		
Employee Talks	-.11	<u>.86</u>
Slogans	.30	<u>.77</u>
<u>Rewards Scale</u>		
Monetary Rewards		
Promotions	<u>.85</u>	.17
Bonuses	<u>.82</u>	.09
Salary Increases	<u>.72</u>	.28
Nonmonetary Rewards		
Citations	.11	<u>.93</u>
Informal Recognition	.26	<u>.86</u>
<u>Turnover Scale</u>		
Performance Related Turnover		
Demotions	<u>.85</u>	-.05
Firings	<u>.81</u>	.16
Easing Out	<u>.72</u>	.42
Not Performance Related Turnover		
Layoffs	-.01	<u>.93</u>
Quit	.30	<u>.79</u>

TABLE 5
REFORMULATION OF IMPLEMENTATION SCALES
BASED ON FACTOR ANALYSIS

<u>Theoretical Construct</u>	<u>Original Scales</u>	<u>Reformulated Scales</u>
Specialization	Specialization	Specialization
Formalization	Formalization	Formalization
Resource Allocation	Resource Allocation	Market Related Expenditures Operations Related Expenditures
Evaluation	Client Type Evaluation Plant Use Evaluation Post Sales Service Evaluation	Client Type Evaluation Plant Use Evaluation Post Sales Service Evaluation
Training	Training	Training
Information Processing	Information Processing	Formal Communication Informal Communication
Champions	Champions	Champions
Rewards	Rewards	Monetary Rewards Nonmonetary Rewards
Turnover	Turnover	Performance Related Turnover Not Performance Related Turnover

21

Cronbach alphas in the range above .60 are considered satisfactory for exploratory research (Nunnally, 1978). Three scales were problematic with respect to reliability, but were maintained because they were relevant to the theory. The relatively high reliability scores for the other scales suggest they are consistent measurement devices across respondents in the sample. The inter-item reliability scores, coupled with the high factor loadings, imply that the questionnaire has reasonable psychometric properties that would not significantly bias the information provided by the key informant.

Insert Table 6 about here

FINDINGS

Data Overview

This research seeks to determine whether implementation entails framework and process dimensions. One way to assess the relative use of each dimension is to examine the means of each variable associated with the dimensions. Table 7 reports the means and standard deviations for each variable. Champions, with a mean score of 4.2, has the highest mean score of all variables. Champions, a process variable, was reported by key informants to be a common feature of implementation across both low cost and differentiation strategies. Other process and framework variables that have mean values above 3.0 are formal and informal communications, nonmonetary rewards, and all three evaluation system variables. Although the means in Table 7 do not directly test the hypotheses, the data suggest that both framework and process variables are used to implement strategies.

TABLE 6

CRONBACH ALPHAS FOR QUESTIONNAIRE SCALES

<u>SCALE</u>	<u>NUMBER OF ITEMS</u>	<u>CRONBACH ALPHA</u>
Market Related Expenditures	2	.56
Operations Related Expenditures	2	.41
Client Type Evaluation	1	NA
Plant Use Evaluation	1	NA
Post Sales Service Evaluation	1	NA
Training	3	.86
Specialization	3	.74
Formalization	5	.87
Formal Communication	2	.66
Informal Communication	2	.51
Champions	4	.88
Monetary Rewards	3	.76
Nonmonetary Rewards	2	.80
Performance Turnover	3	.75
Not Performance Turnover	2	.70

Insert Table 7 about here

The rating scales for low cost strategy and differentiation strategy are included in a correlation matrix in Table 8. The finding of primary interest to the subsequent analysis is the correlation between low cost and differentiation strategies which is negative and statistically significant ($r = -.34$). The correlation suggests that intended low cost and differentiation strategies in this research are dissimilar but not independent. Since many intended strategies contained elements of both low cost and differentiation, partial correlations were used to control the other type of strategy when testing each hypothesis. This provided a more direct test of the association between intended low cost or differentiation strategy and the organizational characteristics associated with implementation.

Insert Table 8 about here

Hypotheses

Low cost strategy. Partial correlations between low cost strategy and framework and process variables are displayed in Table 9. Hypothesis 1, which posited that low cost strategy would not be implemented through structure, and Hypothesis 3, which predicted no relationship between the generic strategy and interaction, are supported. No statistically significant partial correlation was discovered between low cost strategy and structure or interaction variables.

TABLE 7

MEANS AND STANDARD DEVIATIONS
(N = 57)

<u>COMPONENT</u>	<u>VARIABLE</u>	<u>MEAN</u>	<u>STD. DEV.</u>
Structure	Specialization	2.4	1.0
	Formalization	2.0	1.0
Systems	Service Evaluation	3.7	1.8
	Plant Use Evaluation	3.6	1.8
	Client Type Evaluation	3.2	1.7
	Market Related Expenditures	2.4	1.1
	Operations Related Expenditures	2.4	1.0
	Training	2.2	1.2
Interaction	Champions	4.2	1.0
	Informal Communication	3.3	1.4
	Formal Communication	3.2	1.3
Sanctions	Nonmonetary Rewards	2.9	1.1
	Monetary Rewards	2.3	1.0
	Not Performance Turnover	1.5	0.7
	Performance Turnover	1.4	0.5

Scales from 1-6 with 1=low and 6=high.

TABLE 4

CORRELATION MATRIX
(N = 52)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Specialization																	
2. Formalization	.06																
3. Market Related Expenditures	.09	.08															
4. Operations Related Expenditures	.37 ^{***}	.54 ^{***}	.14														
5. Client Type Evaluation	-.10	-.10	.31	-.10													
6. Plant Use Evaluation	-.06	-.01	.24 [*]	.24 [*]	.36 ^{***}												
7. Post Sales Service Evaluation	.18	-.10	.46 ^{***}	.09	.38 ^{***}	.27 ^{***}											
8. Training	.20	.55 ^{***}	.26 [*]	.69 ^{***}	-.24 [*]	.03	.14										
9. Formal Communication	.04	-.02	.19	.25 [*]	.07	.43 ^{***}	.27 [*]	.12									
10. Informal Communication	-.02	.05	.42 ^{***}	.07	.19	.34 ^{***}	.50 ^{***}	.11	.24 [*]								
11. Champions	.15	.01	.02	.11	.07	.11	.29 [*]	-.06	.33 [*]	.34 ^{***}							
12. Monetary Rewards	.51 ^{***}	.18	.20	.62 ^{***}	.03	.06	.34 ^{***}	.51 ^{***}	.12	.07	.24 [*]						
13. Nonmonetary Rewards	-.01	-.04	.37 ^{***}	.37 ^{***}	.06	.36 ^{***}	.38 ^{***}	.24 [*]	.40 ^{***}	.38 ^{***}	.24 [*]	.39 ^{***}					
14. Performance Related Turnover	.45 ^{***}	.35 ^{***}	.25 [*]	.51 ^{***}	-.10	-.09	.26 [*]	.44 ^{***}	.06	.12	.25 [*]	.41 ^{***}	.19				
15. Not Performance Related Turnover	-.09	.47 ^{***}	-.01	.16	-.04	-.18	-.15	.09	-.10	-.16	-.06	-.05	-.14	.40 ^{***}			
16. Low Cost Strategy	.07	.10	-.08	.23 [*]	-.14	-.07	-.30 [*]	.06	.11	-.16	.04	.26 [*]	.14	.10	.15		
17. Differentiation Strategy	.06	.05	.31 ^{***}	.02	.27 [*]	.03	.24 [*]	.24 [*]	.09	.34 ^{***}	.27 [*]	.03	.23 [*]	.20	-.08	-.34 ^{***}	

* = $p < .05$
 ** = $p < .01$
 *** = $p < .001$

Insert Table 9 about here

Hypothesis 2, which predicted that low cost strategy would be implemented through an organization's systems, appears to have moderate support. Operations-related expenditure is significantly related to low cost strategy, as is service evaluation, although the latter is inversely related to low cost. Low cost strategy's positive correlation with operations-related expenditure and negative correlation with service evaluation is consistent with the explanation that firms gain a competitive advantage by investing in efficiency oriented production technology and by reducing other, nonessential operating costs (Hambrick and Schecter, 1983). Firms implementing low cost strategies in this sample are reallocating resources to operations, perhaps by reducing their marketing and service evaluation function, a potentially nonessential element in firms that produce standard products for a price sensitive market.

Hypothesis 4 stated that low cost strategy would be implemented through organization sanctions. Hypothesis 4 received some support because two variables, monetary rewards and nonmonetary rewards, were significantly correlated with low cost strategy. Monetary rewards have been associated with various types of corporate level strategies (Kerr, 1985), but there has been little previous research to suggest that firms simultaneously try to cut costs and provide monetary benefits. Similarly, the use of nonmonetary rewards in low cost strategy implementation is new to the literature. Instrumental and affective rewards appear to play implementation roles, even in firms where the new strategy is to cut costs.

Differentiation strategy. Partial correlations between differentiation

TABLE 9

PARTIAL CORRELATIONS BETWEEN LOW COST STRATEGY
AND IMPLEMENTATION VARIABLES
(N = 52)

<u>COMPONENT/VARIABLE</u>	<u>PARTIAL CORRELATION</u>
Structure	
Specialization	.10
Formulation	.13
Systems	
Market Related Expenditures	.03
Operations Related Expenditures	.24*
Client Type Evaluation	-.06
Plant Use Evaluation	-.06
Post Sales Service Evaluation	-.23*
Training	.16
Interaction	
Formal Communication	.15
Informal Communication	-.05
Champions	.10
Sanctions	
Monetary Rewards	.29**
Nonmonetary Rewards	.24**
Performance Turnover	.18
Not Performance Turnover	.12

* $p \leq .05$

** $p \leq .01$

strategy and framework and process variables are displayed in Table 10.

Hypothesis 5 posited that differentiation strategy is implemented through structure, but was not supported by the data. Measures of specialization and formalization were not correlated with differentiation. If formal structure has a role in strategy implementation, it may be with long term strategy rather than with discrete competitive decisions studied here.

Insert Table 10 about here

Hypothesis 6, which predicted that differentiation strategy would be implemented through organization systems, is partially supported. Three systems variables--training, market-related expenditures, and client-type evaluation--are significantly correlated with differentiation. Market-related expenditures and additional attention to client services have been associated with differentiation strategy in earlier research, and suggest that firms can distinguish their products by maintaining close surveillance of their customer groups and providing marketing support for products (Woo and Cooper, 1981). Increased training has been conceptually associated with, but not empirically related to, differentiation (Wissema, Brand, and Van der Pol, 1981). These three relationships express a focus on the marketplace: step up the firm's marketing efforts, upgrade employee expertise, and evaluate the extent to which this effort results in gaining clients' repeat business.

Hypotheses 7 and 8 predicted that differentiation strategy will be implemented through the process modality, and both hypotheses received moderate support. Two interaction variables--champions and informal communication--and two sanction variables--nonmonetary rewards and performance related turnover--were significantly related to differentiation strategy. The

TABLE 10

PARTIAL CORRELATIONS BETWEEN DIFFERENTIATION STRATEGY
AND IMPLEMENTATION VARIABLES
(N = 52)

<u>COMPONENT/VARIABLE</u>	<u>PARTIAL CORRELATION</u>
Structure	
Specialization	.09
Formulation	.10
Systems	
Market Related Expenditures	.31**
Operations Related Expenditures	.11
Client Type Evaluation	.24*
Plant Use Evaluation	.01
Post Sales Service Evaluation	.15
Training	.28*
Interaction	
Formal Communication	.14
Informal Communication	.31**
Champions	.30**
Sanctions	
Monetary Rewards	.11
Nonmonetary Rewards	.30**
Performance Related Turnover	.24*
Not Performance Related Turnover	-.04

* $p \leq .05$

** $p \leq .01$

statistical significance of these variables suggests that differentiation strategy implementation entails "process" variables to change organizational meanings and gain support, which is substantively different than low cost strategy implementation. Nonmonetary rewards is the only implementation variable associated with both low cost and differentiation strategy.

Cluster analysis. Hypothesis 9 predicted that the framework and process variables used for implementation would cluster into two groups that would distinguish low cost from differentiation strategies. Cluster analysis was used for this analysis because it groups cases together based on similarity in relationships among specified variables. The ten variables specified for the analysis were those that correlated with low cost or differentiation strategies, and include operations and market related expenditures, client type and post sales service evaluations, training, informal communication, champions, monetary and nonmonetary rewards, and performance related turnover. Forty strategies (cases) were included in the cluster analysis that had been previously classified as either low cost or differentiation. The 17 strategies rated as both or neither low cost and differentiation were not used.

The first step in the analysis was to use the ten framework and process variables to organize the strategies into two distinct clusters. Results of the cluster analysis are displayed in Figure 2. At the left side of the figure the clustering procedure started with 40 independent cases and looked for similarities based on the 10 framework and process variables. The cases were clustered into groups based upon the arithmetic average of similarities among the values for the 10 variables (Sneath and Sokal, 1973) until two clusters emerge at step 36. The two cluster solution was chosen because the cases represent two strategies. Twenty-four cases were clustered in one tier

and fourteen cases clustered in the other tier. Two cases were eliminated because of missing data.

Insert Figure 2 about here

The key question for the cluster analysis is whether the strategy clusters are similar to the low cost and differentiation classifications used in the research. The classification of the 40 strategies are listed in the far right column of Figure 2. The 24 cases in cluster 1 consist of 21 differentiation strategies and 3 low cost strategies. The 14 cases in cluster 2 consist of 9 low cost and 5 differentiation strategies. The makeup of the 2 strategy clusters are significantly different ($p \leq .001$, $\chi^2 = 10.95$, $df = 1$).

The point of the cluster analysis is that the 24 strategies in cluster 1 (differentiation) tend to be implemented in a similar fashion based upon values among the 10 structural variables. Likewise, the 14 strategies in cluster 2 (low cost) tend to be associated with common values for the implementation variables, and are distinct from cluster 1. Although cluster analysis has been criticized for instability of results (Jardine and Sibson, 1971), the findings suggest that the low cost and differentiation strategies are associated with different values for the framework and process variables used for implementation. A difference between this test and the correlations between strategy and structure in Tables 9 and 10 is that the cluster analysis included only structural variables. Working from the values of structural framework and process variables used for implementation, the procedure was able to predict the type of strategy being implemented, thereby suggesting that the structural variables hang together in distinct ways for the implementation of each type of strategy.

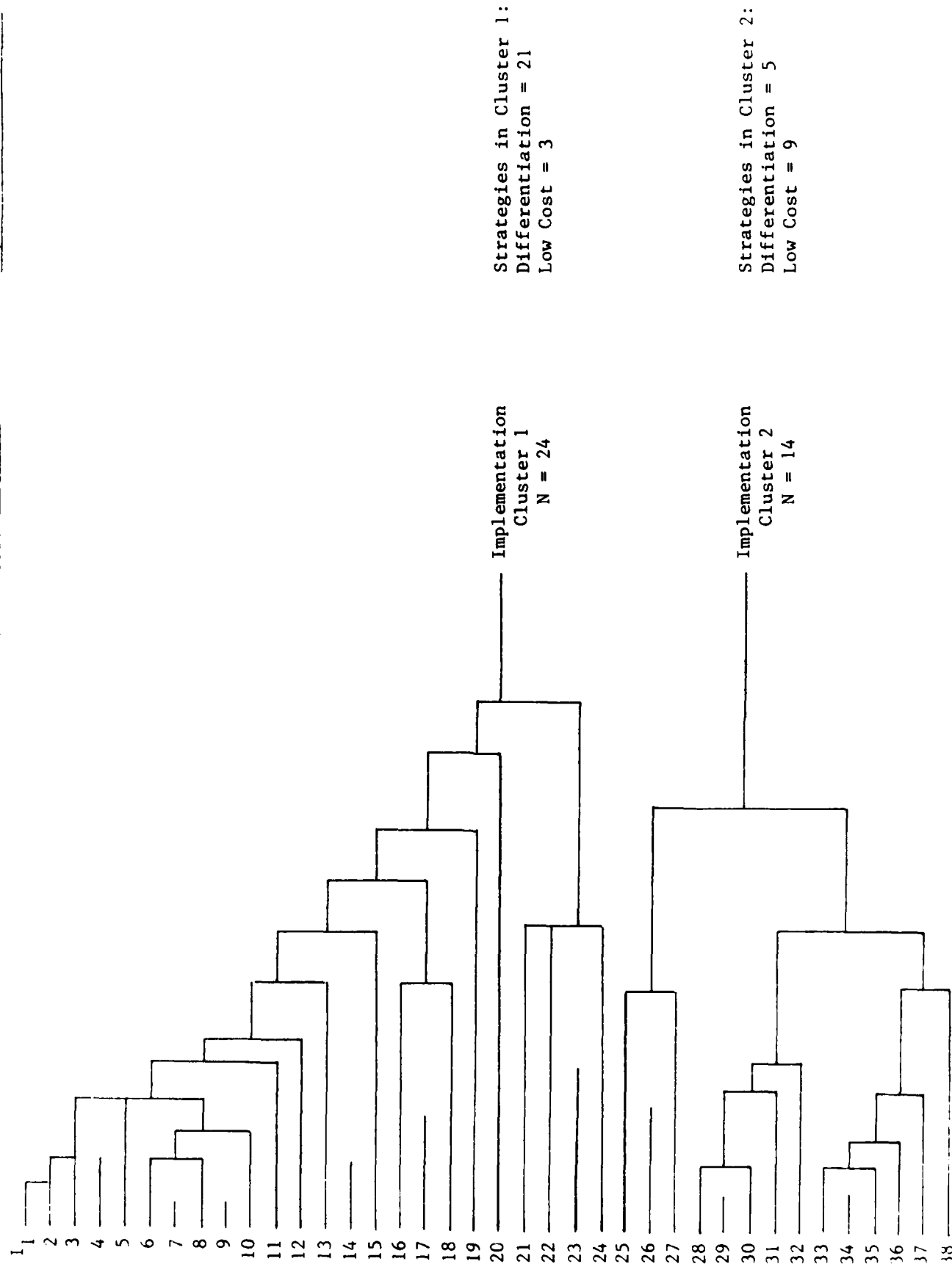
Figure 2

A priori Classification

Two Cluster Solution

Clusters

Case



DISCUSSION AND CONCLUSIONS

The purpose of this research was to study how intended business level strategies were implemented in integrated circuits, petroleum, and health care organizations. Concepts from the strategic management literature were integrated with concepts from structuration theory in the organization theory literature. Two generic strategies, low cost and differentiation, were hypothesized to be implemented through two organization modalities: framework and process. The organization's framework is represented by rules and resources. The organization's process is represented by interactions, meanings, and sanctions.

What has been learned about strategy implementation from this research? First, at an operational level, low cost and differentiation strategies are associated with selected characteristics of the structural modalities. The implementation of intended low cost strategy was not associated with changes in formal structure, nor with the use of communications and interactions to alter the internal meaning system. Low cost strategy was implemented primarily through internal systems. These systems were used to allocate more resources to operations and fewer resources to the evaluation of customer service. Low cost strategies are characterized by increasing the investment in efficiency deriving production activities. In addition, there was some use of sanctions because managers reported the use of monetary and nonmonetary rewards for low cost strategy implementation.

Differentiation strategies also were implemented through changes in formal structure. Major changes in departmentation and jobs may be associated with long term strategic changes rather than with smaller, discrete strategic decisions studied here. Differentiation strategy was associated with the use

of systems for implementation, but resources were allocated in a different way than for low cost. Resources were allocated to market and client evaluation activities and to training. The firms seemed to implement product distinction by investing in closer surveillance of customer groups, by providing additional marketing support for products, and by training employees in required tasks. Differentiation also made greater use of organizational process variables of champions and informal communications than did low cost strategy. This suggests that differentiation requires a greater effort to alter the internal meaning system and to build support for the strategic change. Managers also reported the use of nonmonetary rewards and turnover to gain compliance with the differentiation strategy.

In addition to these specific relationships, a number of theoretical conclusions can be derived from the research. First, the relationship of strategy implementation with multiple organizational elements, both framework and process, is the clearest finding. Previous research has proposed that strategies require implementation mechanisms drawn primarily from a reorganization of framework variables (Daft and Macintosh, 1984; Daniels, Pitts, and Lretter, 1985; Dundas and Richardson, 1982; Grinyer and Yasai-Ardekani, 1980; Horovitz and Trietart, 1982). Framework variables are an essential component of strategy implementation, but the empirical findings support conjectures in the literature that intraorganizational processes are important implementation mechanisms (Bourgeois and Brodwin, 1984; Stonich, 1982). The research findings begin to bridge the gap empirically between framework and process views to capture the multidimensionality of business level strategy implementation.

The second theoretical interpretation is that low cost and differentiation strategy implementation employed different variables, and that

a gestalt of variables may exist for each type of strategy. Several authors have suggested that organizations can be understood as a gestalt of structure, process, and strategy variables (Chandler, 1962; Miller, 1980; Quinn and Cameron, 1983; Ranson, et. al., 1980). For instance, Chandler (1962) recognized that a different pattern of resource allocation was needed to implement specific strategies. The findings here suggest that distinct gestalts emerge and that these gestalts include both framework and process variables. For the low cost strategy, resource allocation systems combined with sanctions seemed especially important. For differentiation strategy resource allocation variables were salient, and so were the process variables of champions and communications. Thus a small gestalt seems to exist for the implementation of each generic strategy much as a large gestalt of framework and process variables characterizes the organization itself.

Implicit in this interpretation is that a pattern may exist for when the implementation gestalt should emphasize framework or process elements. A major opportunity for future research would be to assess a wider range of strategies based upon ideational content and the organizational gestalts used for implementation. Formulated strategies tend to be ideational and intangible, and the implementation elements may be a function of the intended strategy's attributes (Berman, 1980). Strategies that are specific, that are easily disaggregated into explicit stages, or that pertain to a concrete referent such as a product or technology may be implemented primarily through the framework variables of formal structure and systems. Berman (1980) refers to this as programmed implementation because much activity necessary for successful implementation can be routinized.

Strategies that are not specific, cannot be disaggregated, and pertain to a way of thinking rather than to a concrete product or technology may be

implemented through interaction processes. These strategies are non-programmed, and implementation is not easily routinized because the strategy is not explicit and responsibility among subordinates for new actions is not clear. The new or unfamiliar strategic idea may pertain to new ways of thinking that create uncertainty for members. The non-programmed implementation may emphasize the process modality because new meaning and interpretation of strategy is the essential component of organization change.

Another inference implicit in this research pertains to the interdependence between framework and process during implementation. The structurationist view of organizations suggests that the two modalities interpenetrate and influence one another (Giddens, 1976, 1984). This research did not address the structurationist perspective directly, but changes in both framework and process were observed for both types of strategy implementation. Moreover, the cluster analysis of ten framework and process variables was able to distinguish low cost from differentiation strategies. Future research could explore the interplay between organizational framework and process variables. From the structurationist perspective, unraveling the dynamics among these linkages would provide valuable new insight. Another question is whether a large change in strategy (Miller and Friesen, 1980) might be characterized first by a sudden, major alteration in formal framework, followed by a long period of adjustment in interpretive processes. A smaller, incremental change in strategy (Quinn, 1977), especially one that is abstract and does not have a tangible referent, may first entail a shift in meaning and process, followed by adjustments in systems, and culminating in formal structure changes to reflect the new understanding. This unfolding is similar to the strategy process described by Mintzberg and others (Mintzberg and McHugh, 1985; Mintzberg and Waters, 1982).

The validity of the theoretical explanations and inferences discussed here can be explored for other types of strategy and in other organization settings. This study is the start of a research program designed to identify the deeper structure of change associated with strategy implementation, to develop an explanation of strategy implementation that is based in theory, and to obtain empirical data relevant to both framework and process dimensions of organization. The complexity of strategy implementation is just beginning to be realized and explored. New research can help determine how and under what conditions strategy implementation embraces the interplay of people and formal structure. Such exploration can further our appreciation of the complexity and symmetry of organizational elements, and can ultimately help us understand what organizations are by answering questions about how they change.

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