AN EXPLORATORY ANALYSIS OF THE RELATIVE STRATEGIC SIGNIFICANCE OF DIFFERENT ORGANIZATIONAL FUNCTIONS IN INDUSTRIAL FIRMS PURSUING DIFFERENT GRAND CORPORATE STRATEGIES

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July, 1979

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ACKNOWLEDGMENTS

It is impossible to credit all the people who have helped to create this business policy thesis and shape its contents one way or another. I am deeply grateful to my Thesis Adviser Professor Michael A. Hitt for his constant support, expert guidance and encouragement throughout the duration of this study. Thanks to his wide research experience insights, his trenchant and penetrating analysis, and his penchant for conceptual clarity and methodological perfection, what started as a fuzzy, unwieldy mixture of ideas gradually took shape and emerged as a viable research project. In spite of his busy schedule as the Director, Office of Business and Economic Research, College of Business Administration, Professor Hitt always gave this study his topmost priority.

A similar gratitude is also expressed to Professor R. Duane Ireland for his guidance, encouragement and friendship throughout this study. He was always available to explore and clarify ideas and his comments and suggestions were always clear, specific and constructive.

I wish to express my appreciation to Professor Wayne A. Meinhart - the former chairman of my Doctoral Advisory Committee - for his direct interest and suggestions which have made this study richer. I am grateful to him for his infinite confidence in me, for his guidance, encouragement and help throughout my Ph.D. program, and for the 2 1/2

years of financial support in the form of graduate teaching assistantship. As the head of the Department of Administrative Sciences, he consistently provided his graduate students with an intellectually stimulating but relaxed atmosphere in which they could relate as friends while pursuing their professional development. He has provided a personal example of dedication to rigor and passion for intellectual pursuits balanced by a breadth of intellectual perspective and a humane commitment to people in his day to day world.

Professors Hitt, Ireland and Meinhart knew that I was pursuing doctoral studies in business administration to be a broadly educated and effective professional manager, rather than an educator or a researcher; they were also aware of my almost total fascination with the top management problems. They fully encouraged me to pursue a thesis topic wholly of my own interest and liking and even encouraged me to stick with what we knew to be a methodologically and conceptually difficult topic. I have never ceased to wonder what I have ever done in my life to deserve to work with these three brilliant and fine gentlemen.

I am grateful to Professor William D. Warde for his invaluable help in the statistical analyses of the data. This study has benefited immensely from his superior expertise and long experience in sample survey design and statistical analysis.

I wish to thank other members of my Committee: Professors Rudolph W. Trenton, Dale E. Armstrong and James F. Jackson for their support and encouragement throughout my Ph.D. program and for their helpful comments on the final manuscript.

I would like to thank the large number of American industrial firms which took the trouble to reply to our lengthy questionnaires, as also those firms, and individuals, who explained to us the circumstances which prevented them from responding. This thesis could never have been possible without the help of hundreds of busy senior executives who participated in this research. For someone who could not be more eager to join their elite fraternity, I do not think I can express my gratitude in a better manner than by quoting David E. Lilienthal. In his book,"Management: A Humanistic Art" (New York: Columbia University Press, 1967, p. 18),Lilienthal affirms: "This I believe and this my whole life's experience has taught me: the managerial life is the broadest, the most demanding, by all odds the most comprehensive and the most subtle of all human activities. And the most crucial."

This study also benefited greatly from my experience in teaching undergraduate courses in Business Policy at the College of Business Administration. I am particularly grateful to Professor Ireland for his constant cooperation and help in making my teaching job productive and fulfilling; thanks also to Professors Meinhart, Hitt and H. Kirk Downey: they made work fun.

My friend Professor Yezdi M. Godiwalla (University of Wisconsin - Whitewater) was a constant source of ideas and useful criticism. I would also like to thank him and our mutual friends Kelly and Pilloo Gheyara for the innumerable things they have done in my behalf throughout my Ph.D. program.

Special thanks are due to my superiors Khurshed J. Bardi and Nariman K. Dhabhar at the Godrej & Boyce Mfg. Co. Private Ltd., Bombay,

for all their encouragement and help to pursue doctoral studies in business administration in the U.S.A. Clearly, no amount of education can be a substitute for the experience of working for and with competent senior executives like them.

For her expert and cheerful typing assistance I am grateful to Sharon Hair, this thesis could never have been completed on time without her help and cooperation.

And finally, a profound debt of gratitude which can never be adequately expressed is due to my parents and my brother Sam, whose love, encouragement, guidance, and support have enabled me to grow and to fulfill my potential; and to Naoroji P. Godrej, an enlightened industrialist and a brilliant corporate strategist - they made all things possible. This thesis is dedicated to them.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

> Widsom is the ability to see the long-run consequences of current actions, the willingness to sacrifice short-run gains for larger long-run benefits, and the ability to control what is controllable and not to fret over what is not. Therefore the essence of wisdom is concern with the future. It is not the type of concern with the future that the fortune teller has; he only tries to predict it. The wise man tries to control it. Planning is the design of a desired future and of effective ways of bringing it about. It is an instrument that is used by the wise, but not by the wise alone. When conducted by lesser men it often becomes an irrelevant ritual that produces short-run peace of mind, but not the future that is longed for . . . The need for corporate planning is so obvious and so great that it is hard for anyone to be against it. But it is even harder to make such planning useful. Planning is one of the most complex and difficult intellectual activities in which man can enage. Not to do it well is not a sin, but to settle for doing it less than well is (Russell L. Ackoff, 1970, p. 1).
>
> Thinking well is wise; planning well, wiser; doing well wisest and best of all (Persian Proverb).

Nature and Objectives of the Study

This study in the field of business policy/corporate strategy[1] examines the nature of relationships between the grand corporate strategies pursued by industrial firms and their top managers' perceptions of relative importance (to effective strategy implementation) of different functional tasks. The study also examines the nature of influence of size, corporate diversity, industry type, production system, organizational structure and preceived environmental uncertainty, on the interrelationships between the grand corporate strategies pursued

and the relative importance of different functional tasks.

The field of business policy/corporate strategy deals with the management of the total organization, and therefore, it constitutes the heartland of business practice and management process. Unfortunately, the study of corporate strategy--its formulation, implementation, and evaluation--by both the management educators and practitioners, is embryonic and does not match its crucial importance to the survival and growth of contemporary business organizations. As a result, a predictive theory of business policy has not been developed and most of the research in this area has not been rigorous. This study attempts to provide new insights on the issues involving the effective implementation of grand corporate strategies in different types of industrial firms.

This study focuses primarily on top managers' perceptions of the relative importance of key result areas in different organizational functions to effective implementation of different grand corporate strategies. It seeks to identify critical or strategically significant function(s) for effective implementation of each type of grand corporate strategy. Therefore, the scope of this study is specific and limited. It does not purport to investigate the entire gamut of problems involved in the field of corporate strategy, in that it concentrates only on the problems of corporate strategy-implementation. Although the study utilizes the functional tasks' influence-mix approach to corporate strategy, only the influence of organizational functions on corporate strategy implementation is examined; their influence on the formulation and evaluation of corporate strategy is not within the purview of this study.

The field of business policy focuses on the total organization and deals with the problems and functions of the top management. It is therefore apparent that any business policy phenomenon may involve a vast array of variables; most of these variables are difficult to isolate, define and measure. The lack of omniscient human rationality is conspicuous by its absence in the field of business policy. In fact, even in the specific narrow area of implementing the corporate strategy, as Steiner and Miner (1977, pp. 607 and 608) point out, "the scope of managerial activities associated with implementation is virtually coextensive with the entire process of management." In large corporations, according to Mintzberg (1977, p. 93), "research shows that most work processes of senior managers are unstructured and that they require a profound integration of various aspects of the organization and its environment." Therefore, it is difficult to establish accurate cause- and effect relationships in a business policy study. Besides, the independent and dependent variables are generally influenced by a number of mediating or intervening variables that cannot be ignored without making the study too simplistic or unrealistic, but care must be taken to ensure that the study does not become too unwieldy and therefore infeasible. This study, therefore, examines the influence of six key mediating variables - size, corporate diversity, industry, production system, organizational structure and perceived environmental uncertainty - because of their potential conceptual importance to the key variables in this study.

Finally, it must be noted that the study's findings are based on managerial perceptions and opinions rather than on observations of real world actions and results.

The main objective of this study is to profile the relative strategic significance of seven different organizational functions to effective implementation of different grand corporate strategies, as perceived by the senior executives of large American industrial corporations. This study therefore, utilizes the functional areas' strategic significance-mix approach to the study of some of the problems involved in the implementation of grand corporate strategy; it recognizes the fact that an astute and judicious determination of strategic key result areas in different functional tasks during the corporate strategy-formulation stage considerably facilitates the process of strategy-implementation. In other words, the concept of "management by exception" is operationalized and top management attention is focused more on key result areas in the functional task(s), identified as critical or strategically significant to effective implementation of the grand corporate strategy pursued by the firm.

The study seeks answers to the following questions: (i) Is it possible to identify the strategic mixes of organizational functions for effective implementation of different grand corporate strategies? (ii) Do the strategic mixes of organizational functions for a particular grand corporate strategy vary: (a) among companies of different size, (b) among companies having different degree of corporate diversity, (c) among industries, (d) among companies having different production systems, (e) among companies having different organizational structures, and (f) among companies with dissimilar managerial perceptions of environmental uncertainty?

The answer to these two main research questions have been derived through a field study, involving survey-type instruments (mail question-

naires), of large U.S. industrial corporations listed in the 1978 Fortune Directories of the 500 largest U.S. Industrial Corporations and the Second 500 Largest U.S. Industrial Corporations. In order to help focus the research, a conceptual framework in a summary form (presented in Figure 1) emphasizing eight key concepts underlying this study has been developed.

Significance of the Study

This research contributes significantly to the development of the substantive area of business policy and furthers the progress towards a more predictive field of study. Since the functional tasks' strategic significance-mix approach to the study of effective implementation of different grand corporate strategies is rather new, this study is primarily exploratory in nature. It builds upon the existing research and develops and empirically tests a coherent body of concepts.

The contingency approach of this study strikes a middle ground between the traditional universalistic approach of prescriptive theories and the particularistic case-study approach devoid of any conceptual framework. It recognizes the fact that the concept of corporate strategy is dynamic and complex, and ". . . suggests that there are definable patterns of relationships for different types of organizations and that we can improve our understanding of how the relevant variables interact" (Kast and Rosenzweig, 1973, p. ix).

The increased use of an empirical approach to the study of business policy is all the more desirable since most management researchers have avoided this area. Although these problems are the most relevant to the business organizations throughout the world, the pertinent variables

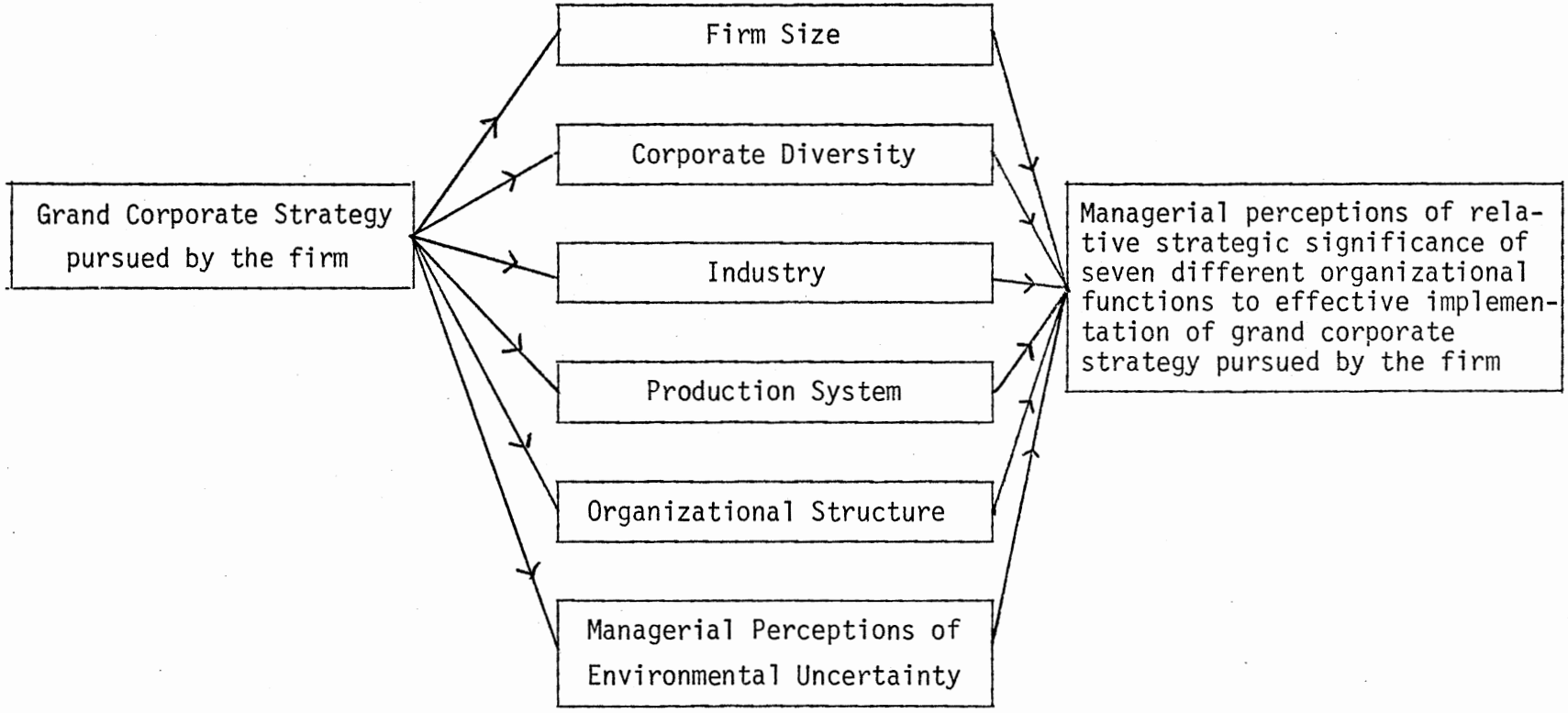


Figure 1. The Study's Conceptual Framework

cannot always be rigorously measured and therefore the research in this area typically is methodologically less elegant than in other more developed fields. Halpin (1968, p. 308), therefore, wonders whether the social scientists have "the courage to study what is really worth studying." Mintzberg (1977) points out that

> Researchers in management policy cannot use the most popular methodologies of other fields of management as models in their work. Their research must be related to the real world it purports to describe and be less obsessed with rigor as an end in itself . . . . Only by remaining open to the rich complexity of reality can effective theory-building be initiated in a new field (p. 94).

As mentioned earlier, this study is exploratory in nature and is intended to reveal more fully the relationships between the variables involved. The exploratory type of study "seeks what is rather than predicts relations to be found;" such a study has

> . . . three purposes: to discover significant variables in the field situation, to discover relations among variables and to lay the groundwork for later, more systematic and rigorous testing of hypotheses (Kerlinger, 1973, p. 406).

Commenting on the usefulness of his research, Heau (1976) makes the following remarks which seem equally applicable to this study:

> Research in business, as in any other social science, is not an end in itself, and the value of research is measured by its usefulness. In so far as a theory should possess the following attributes: explicability, generalisability, replicability and predictability, the present research is not a theory. Its aim is to provide an understanding, rather than to generate generalisations, allow replicative results or predict causality. Yet, Aristotle has remarked that an educated man demands no more than the exactitude that is allowed by the subject matter that is dealt with (Ch. I, p. 7).

The study also provides contributions to the effective management practice. It does not attempt to indulge in simplistic and premature prescriptions, but it does give the practitioners new insights into corporate strategies. However, by profiling the relative strategic

significance of different functional tasks to effective implementation of different grand corporate strategies, based on a collective perception of practicing managers, it lays the foundation for a systematic evaluation of this concept for effective theory-building and better management practice.

Outline of the Study

This study is organized into seven chapters. This chapter described the nature and objectives of the study and also its significance to theory and practice.

Chapter II provides a review of the pertinent literature, both theoretical and empirical, from business policy and organization theory, which provides a foundation for the conceptual framework developed in this study.

Chapter III presents the definitions and operational measures of variables involved in the study.

Chapter IV describes the conceptual framework, which the study is designed to investigate. The general relationships among the theoretical and empirical works supporting the study, and the research questions investigated by the study are posed and discussed.

Chapter V describes the research methodology used in the study.

Chapter VI provides the analyses of data collected for the study.

Chapter VII provides a summary and discussion of the major findings, discusses their implications for theory and management practice, and presents final conclusions.

FOOTNOTES

[1]Like most emerging fields of study, the field of policy/strategy has its own share of semantic problems and confusion. There are many different definitions of terms used by various distinguished scholars. There is a lack of consensus about the meaning of words like strategy and policy. These words have a long established meaning in common parlance and they seem to change meaning with new developments. It is, however, important to distinguish between strategy and policy. According to Haner (1976): "A strategy is a multiple-step approach to achieve a specific objective. It is controlled by a plan, involves coordinated use of selected components and resources of the company, and covers the time frame necessary to accomplish the objective" (p. 259). "A policy is a statement verbal, written or implied, of those principles and rules that are set by managerial leadership as guidelines and constraints for organizational thought and action" (p. 53). As a distinct discipline, the field of business policy lacks a commonly and universally accepted name, although "strategic management" seems to be currently very popular. For instance, according to Glueck and Willis (1979, p. 95): "Strategic management and business policy is the portion of management theory concerned with top management decisions affecting the future of the total enterprise." It is interesting to note that the Academy of Management's professional division in this field is still known as "Business Policy and Planning Division." In the business world, however, the terms "strategic planning" and "corporate planning" are more common [for an extended discussion of this subject see Steiner and Miner (1977, Part I)].

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Empirical research in corporate strategy is of a very recent origin. As Hofer (1975, p. 790) points out: "Since the concept of strategy was not developed extensively in the business literature until the late 1950s, almost no empirical research related to it was done until the early 1960s." During the last ten years or so, various research studies have been directed towards the theoretical development of the concept of corporate strategy.

This chapter broadly reviews important concepts in the field of business policy and organization theory which are directly relevant to the development of this study's conceptual framework discussed later in Chapter IV. Within this chapter, relevant parts of three major areas of literature are surveyed: corporate strategy, relative importance of different organizational functions, and contextual variables - environment, technology, size and structure.

Corporate Strategy

The word "strategy" has been used in military sciences for centuries. As Steiner and Miner (1977, p. 19) point out: "Strategy derives from the Greek strategos which meant general. The word strategy,

therefore, literally meant 'the art of general.' It refers to that which is of major concern to top managements of organizations."

Alfred Chandler (1962, p. 13), in his seminal work "Strategy and Structure: Chapters in the History of American Industrial Enterprise," defines strategy as "the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals."

Quinn (1962) defines a strategy "as a plan that determines how the organization can best achieve its desired ends in light of the opposing pressures exerted by competition and by its own limited resources" (Gilmore and Brandenburg, 1962, p. 68).

Glueck (1976, p. 3) defines strategy as "a unified, comprehensive, and integrated plan designed to assure that the basic objectives of the enterprise are achieved." Strategy, therefore, refers to an organization's master plan for achieving its mission, objectives, and goals. And, for those with an inclination for parsimony and brevity, "strategy indicates how the organization plans to get where it wants to go" (Thompson and Strickland, 1978, p. 12). Thus, it is clear that developing and sustaining an ongoing strategy is extremely vital to the long-range viability of the organization because it determines the major directions the organization takes and the momentum with which it moves.

Aguilar (1967) provides a more comprehensive definition of company strategy:

> Company strategy is an integrated and harmonious pattern of objectives which are of fundamental importance to the long-term survival and health of a company. As such, strategy defines the company's basic image, purposes, fields of present and future activity, and expected future position in these fields. Strategy should be responsive to both the

> risks and opportunities confronting the company in its external environment and the strengths and weaknesses - present and potential - within the firm itself (p. 4).

Steiner (1969b) believes that:

> Developing a strategy is usually a very difficult and fateful task. It usually means questioning old methods, exploring unfamiliar environmental waters, facing up to an objective evaluation of strengths and weaknesses, forcing important changes on people in the firm and organizational arrangements, and taking high risks with the firm's capital. This has to be done in a world of rapid change, and it has to be done continuously (pp. 238-239).

Textbook wisdom suggests that,

> . . . ideally, every corporate body has a strategy that meets three criteria: (1) It recognizes and understands how the forces of the past have affected the organization. (2) It is responsive to the current forces of change. (3) It is capable of implementing programs based on the first two considerations (Vance, 1970, p. 6).

As Tilles (1963, p. 112) notes, "while the notion of a strategy is extremely easy to grasp, working out an agreed-upon statement for a given company can be a fundamental contribution to the organization's future success."

The aforementioned definitions of corporate strategy highlight two important dimensions: scope and importance. A corporate strategy thus defined refers to a master strategy, a grand strategy or an overall strategy and encompasses "the entire pattern of company's basic mission, purposes, objectives, policies, and specific resource deployment" (Steiner and Miner, 1977, p. 20). Paine and Naumes (1974) distinguish an overall or grand strategy from corporate strategies in the following manner:

> . . . an <u>overall strategy</u> (or corporate strategy) may be defined as a plan which encompasses not only the mission, policies, objectives and more specific goals of the organization, but also a plan of action for achieving these objectives and goals. Subsequent decisions are

> based on the plan. On the other hand corporate strategies may be described as a stream of significant decisions which emerge over a period of time into a pattern. In this case the decisions, made on an ad hoc basis while trying to adapt to various uncertainties, determine the strategy (emphases supplied) (p. 7).

According to Newman (1967, p. 77), "a firm's success depends on its basic plan - its master strategy - for dealing with the elements of change, growth, and adaptation." Robert E. Wood while Chairman of the Board of Sears Roebuck & Company once commented: "Business is like war in one respect, if its grand strategy is correct, any number of tactical errors can be made and yet the enterprise proves successful" (Chandler, 1962, p. 235). As military strategists know, in any war if the overall strategy is right and effective, the ultimate victory in a war can be achieved in spite of some setbacks in a few battles. The final outcome of a war is determined not by a few abortive tactical maneuvers but by the effectiveness of the overall strategy. Similarly, a company can be financially successful if its grand corporate strategy is appropriate and efficacious even though it is inefficient in some areas or in the use of some of its resources.

In the business policy literature, few attempts have been made to provide an exhaustive scheme of classification of grand corporate strategies. Glueck (1976, pp. 120-121) provides a four way classification of grand strategies as outlined below:

1. Stability (most frequently used)
2. Growth
3. Retrenchment (least frequently used)
4. Combination (of two or more grand strategies, either simultaneously or sequentially).

Of the grand corporate strategies listed above, growth and retrenchment strategies have been subject to further analysis and classification by many authors. Product-market strategies at the business and/or division levels have been analyzed in detail. Similarly, strategies in different functional areas have also been variously described and analyzed. The analysis of one type of grand corporate strategy - external acquisitive growth - will be discussed in this section, since it highlights the importance of different organizational functions in different types of external acquisitive growth strategies.

Kitching (1967) in his study of corporate acquisitions, classified acquisitions into five different categories:

> Horizontal - Same industry as buying company, with approximately the same customers and suppliers.
> Vertical integration - Major supplier or customer of the buying company and in the same industry.
> Concentric marketing - Same customer types as buying company but different technology.
> Concentric technology - Same technology as buying company but different customer types.
> Conglomerate - Customers and technology different from those of buying company (p. 85).

Howell (1970) believes that existing schemes of classifying acquisitions (for example, FTC's horizontal, vertical and conglomerate) often fail to recognize the intrinsic organizational implications of different types of acquisitions. He proposes the following classification scheme generated by isolating acquisition candidates along functional business dimensions:

1. Financial
2. Marketing
3. Manufacturing

Financial acquisition growth strategies are conglomeratic in nature with the primary focus on the financial implications of the acquisition.

Marketing acquisition growth strategies are conglomeratic in nature with the primary focus on the marketing implications of the acquisition.

Manufacturing acquisition gorwth strategies are concentric technology in nature with the primary focus on the technological implications of the acquisition.

The firm's grand corporate strategy (both past and current) determines the nature of the firm's relevant environments and the resulting organizational states, it also suggests the range of feasible options for the firm's organization and management. Table I summarizes the major differences Allen (1972, pp. 62-63) "found between the high performing conglomerates and vertically integrated companies with regard to environmental requirements, organizational choices, and resulting organizational states."

Miles and Snow (1978, p. 29) have developed a typology of organizations: "Each of these types has its own strategy for responding to the environment, and each has a particular configuration of technology, structure, and process that is consistent with its strategy." These are:

1. Defenders - tend to follow "stability" strategy and are risk-avert outside their narrow product-market domains.

2. Prospectors - tend to pursue "growth" strategies and are perceived as risk-takers.

3. Analyzers - tend to be more cautious, risk-neutral and balanced; seek a "strategic fit" or "common thread" between their

TABLE I

SUMMARY OF MAJOR DIFFERENCES BETWEEN HIGH PERFORMING CONGLOMERATES AND VERTICALLY INTEGRATED FIRMS

	Conglomerate Firms	Vertically Integrated Firms
Environmental Requirements	Greater environmental diversity Higher environmental uncertainty Less complex required interdependence Less intensive internal funding requirements More uncertain patterns of funds flow	Lower environmental diversity Lower environmental uncertainty More complex required interdependence More intensive internal funding requirements More certain patterns of funds flow
Patterns of Organizational Choice	Higher degree of divisional self-containment Smaller headquarters units focusing mainly on policy issues Less complex integrative devices	Lower degree of divisional self-containment Larger headquarters units focusing on both policy and operating issues More complex integrative devices
Organizational States	Higher total differentiation Lower integrative effort Greater rapidity in responding to divisional requests Influence peaks at a lower (division general manager) level Performance evaluation systems with explicitly defined criteria, direct linkage between results and rewards and heavier emphasis on financial/end-result criteria	Lower total differentiation Higher integrative effort Less rapidity in responding to divisional requests Influence peaks at a higher (senior vice president) level Performance evaluation systems which are more informally administered, without direct linkage between results and rewards, and balanced emphasis on financial/end-result and operating/ intermediate criteria

Source: Allen, Stephen A. III. "Management Issues in Multidivisional Firms." Sloan Management Review, Vol. 13 (Spring 1972), p. 63.

existing and new product-market domains and pursue growth strategies in concentrically related areas.

4. Reactors - do not pursue any of the above-mentioned strategies; lack any long-term strategy or an effective and consistent strategy-structure relationship; are in a state of perpetual instability and are characterized by "management by crisis."

Relative Importance of Different Organizational Functions

Various research studies have been conducted to determine the relative importance of different functional tasks in different types of organizations.

In one of the earliest studies of this kind Stevenson (1968) considered the organizational attributes as corporate strengths and weaknesses, and grouped them under five functional categories; the factors considered important at top management levels (presidents and board chairmen) were organizational (42.4 percent), personnel (32.9 percent) and financial (15.3 percent) (Glueck, 1976, p. 91).

Aguilar (1967, p. 43) in his study of relative importance of different areas of external information found that market tidings (marketing management's sub-environment) accounted for 58 percent of all responses, based on the responses from managers 39 percent of whom were among the high echelons of management.

Steiner (1969a) tried to develop a profile of strategic factors in business success--both for current performance and future importance. Glueck (1976, p. 265) concludes from Steiner's (1969a) study that "the crucial aspects of the strategy that need to be evaluated are:

(1) Management quality and development, (2) Environmental appraisal, especially market tidings, and (3) Financial return."

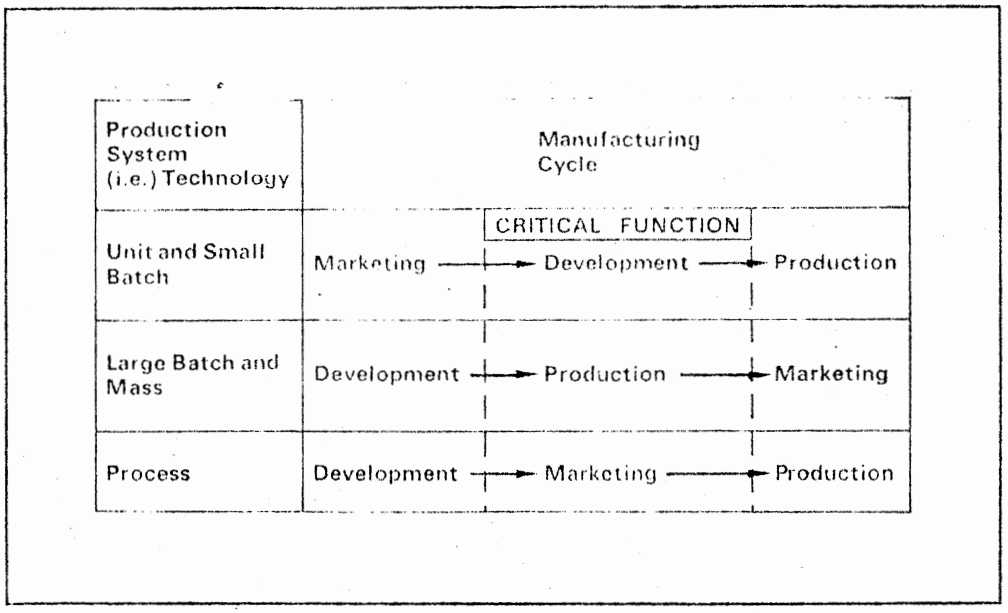
Woodward (1965) studied the relationship between the type of production system (unit, mass and process) and three organizational functions (development, production and marketing). She concluded that firms having different production systems can be expected to have different "critical functions." Specifically, "there seemed to be one function that was central and critical in that it had the greatest effect on (organization's) success and survival" (p. 126). Figure 2 presents the manufacturing cycle and the critical function for each of the three types of production system.

Lawrence and Lorsch (1967b) found "that marketing had more influence than production in both container-manufacturing and food-processing firms, apparently because of its involvement in (uncertain) innovation and with customers" (Hickson et al., 1971, p. 219).

Kitching (1967), investigated both the relative payoff values from synergy after acquisition and the ease with which synergy is released in each of the five business functions. The usual notions about potential for synergy indicate that business functions can be ranked in order of importance in the following manner:

1. Production
2. Technology (including R&D)
3. Marketing
4. Organization
5. Finance

However, Kitching's research findings contradict the traditional notions. Far from producing the lowest payoff, finance had the highest



Note: The critical function is the one on which the cycle relies for success, these functions will be the most prestigious and those who perform them will have high influence in the firm.

Source: Woodward, Joan (1965), "Industrial Organization: Theory and Practice," Oxford University Press. Reproduced from P. T. Terry "Organizational Implications for Long Range Planning." Long Range Planning, Vol. 8 (February, 1975), p. 29.

Figure 2. The Manufacturing Cycle and Technology

payoff in all types of mergers except one - horizontal mergers - where marketing had the highest payoff followed very closely by finance. Technology and production on the other hand produced the lowest relative payoff values from synergy after acquisition. Finance was also found to be the function in which it was easiest to release synergy in all types of mergers except one - concentric technology - where synergy was achieved with the greatest ease in the area of technology.

Kitching points out that his findings are subject to two major limitations. First, his sample dealt with companies acquired two to seven years ago, and it probably takes longer to realize production synergy than any other type. This might partly account for the low relative payoff values in production. Second, 45% of his sample constituted conglomerates, where by definition, companies with dissimilar technological/production skills merge together. The characteristic also partly explains the lower relative payoff values assigned to the production function by the corporate executives. However, the most important conclusion of this study is that effective management of the finance function is very crucial to the success of mergers.

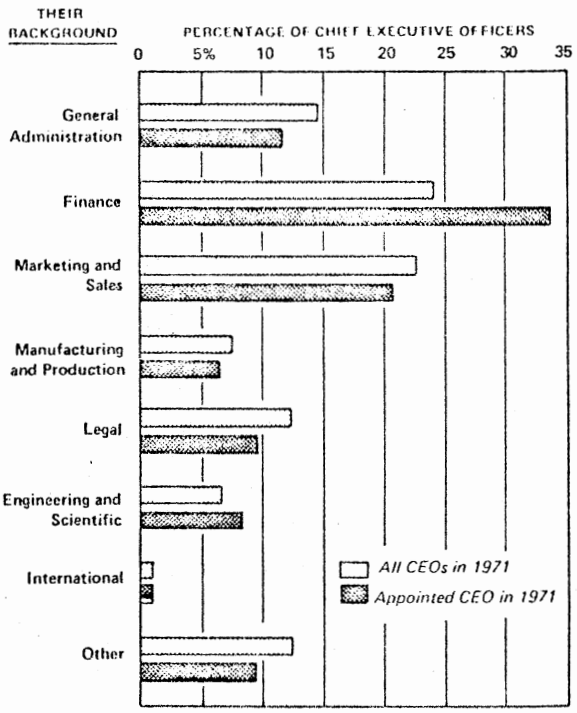
Many authors have noted the increasing importance of the finance function. With the increasing trend toward multi-plant operations, the traditional argument of scale economies (resulting into lower costs and higher capital efficiency), does not seem valid even in the case of large, single and dominant business firms. And for large multi-industry and multi-national conglomerates the only synergistic benefit arises from a possible financial synergy. This outcome indicates a noticeable

trend toward an increase in direct involvement of the chief financial officers in the strategic issues handled by top management. As Pohl (1973) points out:

> These two factors - taking the lead in resolving important issues of general concern to the company and working more closely with the major executives throughout the company - should enhance the financial executive's stature in the organization. In the United States, in fact, the financial executive has already become a favored contender for the chief executive's chair. According to two recent surveys, chief executive officers with financial background accounted for 24 percent of all CEO's in 1971, an increase from 15 percent in 1967.[1] Moreover, of all CEO's appointed in 1971, about 33 percent had financial backgrounds, exceeding all other backgrounds by a wide margin [Figure 3].
>
> This trend, which does not seem to have reached its peak yet in the United States, is expected to gain momentum in Europe during the next few years as a result of the changing demands on the financial executive. It is a direct reflection of the important contribution the financial executive can and must make to his company in the years to come (p. 22).

Fox (1973) (as quoted by Hofer, 1975, pp. 790-791) studied the influence of the product life cycle on business strategies and on the importance of the appropriate functional policies. He identified a specific functional focus for each of the five stages of the product life cycle. For instance, he determined that during the "decline" stage of the product life cycle, the functional focus of the business strategy should be on finance. Hofer (1977, p. 7) also identified the major functional concern for each of the seven distinct stages of product-market evaluation.

Heau (1976) examined the relationship between strategy (defined in terms of product relatedness) and corporate structure. For this purpose the firms were grouped under four strategy categories: (1) Vertically Integrated, (2) Technology Diversifiers, (3) Market



Source: Analysis of data published by Forbes (May 1972) on 724 largest U.S. corporations. The analysis was published in Management Practice (Summer 1972). Reproduced from Pohl, Herman H. "The Coming Era of the Financial Executive." Business Horizons, Vol. 16 (June 1973), p. 22.

Figure 3. Shifts on the Way to the Top

Diversifiers, and (4) Conglomerates. According to Heau, a comparison of the four categories of firms along their corporate organizational structure would show the tendencies depicted in Figure 4. Aside from showing the characteristics of organizational structure and information flow for each category of firms, he also identified the corporate culture or the orientation of top management for each category. In terms of this study, the latter relationships could be restated as follows:

	Growth Strategy	Critical Function
1.	Vertical integration	Production
2.	Concentric technology diversification	Engineering and R&D
3.	Concentric marketing diversification	Marketing
4.	Conglomerate diversification	Finance

In a recent study of functional managements' influence on the overall corporate strategy, Godiwalla (1977) found that for firms having unit production system, marketing was the significantly strategic functional management. This outcome was also true for firms having mass manufacturing production system but for firms having process type of production, marketing was found to be the strategic functional management. For all the firms (of different sizes and production systems) taken together, marketing, finance and production were found to be the three most influential functions.

Miles and Snow (1978, p. 196) in their study of "interindustry comparisons of strategy: electronics and food processing" developed the concept of "strategic function," it "refers to those functional areas within the organization considered by members of the dominant

Structure/Strategy	Vertically Integrated	Technology Diversifiers	Market Diversifiers	Conglomerates
Corporate structure				
1) functions existing at the top (in addition to control, finance, legal, personnel)	almost all	R&D Engineering	Marketing Purchasing	None
2) size of the corporate staff	very large	quite large	quite large	very small
3) role of the Group Vice-President (if any)	small	optional	optional	essential
Information flow				
4) dominant nature of information flow between corporate and divisions	operational	technology/ biased	marketing/ biased	financial
5) amount of information between corporate and divisions	very high	high	high	low
Corporate culture				
6) orientation of top management	industry (capacity)	technology	marketing (market segmentation) (market share)	financial (product/ market portfolio)

Source: Heau, Dominique G. Long Range Planning in Divisionalized Firms: A Study of Corporate Divisional Relationships. Unpublished doctoral dissertation, Harvard Business School, 1976, Ch. IV, p. 9.

Figure 4. Relationship Between Strategy (Defined in Terms of Product Relatedness) and Corporate Structure

coalition to be of strategic importance to successful competition in their industry." They found that the chief executives' perceptions of the top three strategic functions vital to their competitive success were different in the two industries.

Rockart (1979) discusses a new approach - called the "critical success factor (CSF) method" - to defining the managerial information needs, currently being actively researched and applied at the Center for Information Systems Research, Sloan School of Management, Massachusetts Institute of Technology. According to Rockart (1979), for any business, critical success factors (CSFs) are

> The limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization. They are the few key areas where 'things must go right' for the business to flourish. If results in these areas are not adequate, the organization's efforts for the period will be less than desired. . . . As a result the critical success factors are areas of activity that should receive constant and careful attention from management. The current state of performance in each area should be continually measured, and that information should be made available (p. 85).

Contextual Variables: Environment, Technology, Size and Structure

This study also examines the nature of influence of size, corporate diversity, industry type, production system, organizational structure, and perceived environmental uncertainty, on the interrelationships between the grand corporate strategies pursued and the relative importance of different functional tasks. Accordingly, pertinent literature relating to these contextual variables will be reviewed briefly in this section.

Environment and Strategic Planning

Schendel and Hatten (1972) take a broader view of the emerging discipline of business policy, a view they call "Strategic Management." An important characteristic of Strategic Management is its prime concern with environmental change, its anticipation and adaption to it. According to Schendel and Hatten (1972):

> Strategic Management is the managerial process of determining and maintaining a viable relationship between the organization and its environment through the use of selected objectives, and efficient resource allocations to major programs and policies. Strategic management seeks a stable and viable match between the organization, its needs and resources, and the demands imposed by the environmental setting (p. 100).

Rawls, Rawls and Radosevich (1975) also contend that strategic management is mainly concerned with relationships between the firm and its environment. Strategic managers have roles and functions that are different from those of the operations managers. Rawls et al. reviewed the attributes of successful managers, and enterpreneurs and organizational innovators. They compiled a tentative list of attributes of successful strategic managers (see Table II).

In one of the earliest studies of environmental influences relevant to organizational planning, Dill (1958) examined the influence of environmental constraints on the structure of organizations and the behavior of organizational participants. He studied the influence of the structure of the environment, the accessibility of information about the environment, and the managerial perceptions of the meaning of environmental information on managerial autonomy and concluded that "behavior depends on the patterns of inputs from the environment to an organization and on the interpretation of these inputs as taken by

TABLE II

POSTULATED CHARACTERISTICS OF SUCCESSFUL STRATEGIC MANAGERS

Aggressive
Self-confident
Self-reliant and independent
High achievement needs
High initiative
Persistent
Persuasive
Extroverted
Flexible
Receptive to change
High tolerance for ambiguity and frustration
Charismatic leadership ability
Organizing skills
Creative and imaginative
Risk-takers, (but not gamblers)
Above-average intelligence
Self-learners
Broad experience base with frequent initial specialization
High energy level

Source: Rawls, J. R., D. J. Rawls and R. Radosevich. "Identifying Strategic Managers." Business Horizons, Vol. 18 (December 1975), p. 78.

members of the organization " (p. 409).

Carter's (1971, p. 423) research suggests "that the goals of an organization can be closely related to the degree of uncertainty in its general environment and to the uncertainty in a particular project's forcasts." He hypothesizes the relationship as follows: "The greater the uncertainty of outcome in the total environment of the organization, the greater the number of criteria, that is, goals, which will be sought to guide the strategic decisions."

In an exploratory study of the impact of the business environment on the long-range planning process, Lindsay and Rue (1978) found,

> . . . that large business firms in a variety of industries are attempting to 'fit' their long-range planning processes to their perceived environmental conditions. That a number of the strategies used to achieve this 'fit' are in line with concepts developed by organization theorists (p. 119).

Their study (p. 119) also focused on the specifics of the boundary-spanning process of long-range planning and the findings suggest, "that environmental turbulence and firm size are important 'contigent variables' to consider in the design of an effective and efficient long-range planning process."

Since grand corporate strategy or master strategy reflecting the grand design of an organization is formulated on the basis of organization-environment interactions, it must be consistent with the prevailing and anticipated environmental conditions. As Richards (1978, p. 32) points out: "To be viable over long periods, the master strategy . . . must be viable in the light of the environmental conditions." Therefore, a change in the grand corporate strategy results mainly from actual or anticipated changes in the external environment (Hofer, 1973). In a research covering 358 companies, over a 45-year period, Glueck

(1976) tried to determine the challenges the companies were facing; and found general environmental challenges to be the most important challenges, followed by market challenges. Glueck (1976, p. 48) offered the following proposition: "The major causes of growth, decline and other large-scale changes in firms are factors in the environment, not internal developments." Hofer and Schendel (1978) sum up the argument by stating that,

> . . . research by Hofer (1973) and Glueck (1976) indicates that almost all the strategic opportunities that a business will face stem from fundamental changes in the market and the industry in which it competes, its sources or conditions of supply, the action of its competitors, the broader environmental forces that have impact on these areas, or the ways that all of these factors interact with one another (p. 110).

Since a firm's external environment is one of the major determinants of its corporate strategy, the inclusion of environmental variables in any research dealing with corporate strategy cannot be too strongly emphasized. Taylor (1973b, p. 37) therefore argues that strategic decisions are "concerned with effecting major changes in the 'linkages' between the enterprise and its environment.

Classification of Environemnts

Duncan (1972) distinguished between an organization's internal and external environment and based on his research constructed a list of environmental components (Table III) particularly relevant to industrial organizations. He conceptualized four different types of environments as shown in Table IV: (a) Simple-Static (Cell 1); (b) Complex-Static (Cell 2); (c) Simple-Dynamic (Cell 3); and (d) Complex-Dynamic (Cell 4); he also hypothesized the degree of uncertainty that will be experienced by decision units in each of these

TABLE III

FACTORS AND COMPONENTS COMPRISING THE ORGANIZATION'S INTERNAL AND EXTERNAL ENVIRONMENT

Internal Environment
(1) Organizational personnel component
(A) Educational and technological background and skills
(B) Previous technological and managerial skill
(C) Individual member's involvement and commitment to attaining system's goals
(D) Interpersonal behavior styles
(E) Availability of manpower for utilization within the system
(2) Organizational functional and staff units component
(A) Technological characteristics of organizational units
(B) Interdependence of organizational units in carrying out their objectives
(C) Intra-unit conflict among organizational functional and staff units
(D) Inter-unit conflict among organizational functional and staff units
(3) Organizational level component
(A) Organizational objectives and goals
(B) Integrative process intergrating individuals and groups into contributing maximally to attaining organizational goals
(C) Nature of the organization's product service
External Environment
(4) Customer component
(A) Distributors of product or service
(B) Actual users of product or service
(5) Suppliers component
(A) New materials suppliers
(B) Equipment suppliers
(C) Product parts suppliers
(D) Labor supply
(6) Competitor component
(A) Competitors for suppliers
(B) Competitors for customers
(7) Socio-political component
(A) Government regulatory control over the industry
(B) Public political attitude towards industry and its particular product

TABLE III (Continued)

(C) Relationship with trade unions with jurisdiction in the organization
(8) Technological component
(A) Meeting new technological requirements of own industry and related industries in production of product or service
(B) Improving and developing new products by implementing new technological advances in the industry

Source: Duncan, Robert B. "Characteristics of Organizational Environments and Perceived Environmental Uncertainty." Administrative Science Quarterly, Vol. 17 (1972), p. 315.

TABLE IV

ENVIRONMENTAL STATE DIMENSIONS AND PREDICTED PERCEIVED UNCERTAINTY EXPERIENCED BY INDIVIDUALS IN DECISION UNITS

	Simple	Complex
	Cell 1: low perceived uncertainty	Cell 2: moderately low perceived uncertainty
Static	(1) Small number of factors and components in the environment (2) Factors and components are somewhat similar to one another (3) Factors and components remain basically the same and are not changing	(1) Large number of factors and components in the environment (2) Factors and components are not similar to one another (3) Factors and components remain basically the same
	Cell 3: moderately high perceived uncertainty	Cell 4: high perceived uncertainty
Dynamic	(1) Small number of factors and components in the environment (2) Factors and components are somewhat similar to one another (3) Factors and components of the environment are in continual process of change	(1) Large number of factors and components in the environment (2) Factors and components are not similar to one another (3) Factors and components of environment are in a continual process of change

Source: Duncan, Robert B. "Characteristics of Organizational Environments and Perceived Environmental Uncertainty," Administrative Science Quarterly, Vol. 17 (1972), p. 320.

four types of environments.

Environmental constraints, contingencies, opportunities and problems affect the strategies, structure and size of the organizations. The character of the environment determines the degree of pressure for change, the immediacy for change, and uncertainties facing the organization. Relatively "placid" environments, because of their predictability, permit varying organizational strategies. In contrast, "turbulent" environments are dynamic and are characterized by complex and rapidly changing conditions impinging on the organizations, which tend to increase uncertainty, reduce control and make prediction more difficult (Terreberry, 1968).

Emery and Trist (1965) developed a typology of environments in which the environments were seen as being causal for the organizations within them, the four types of environments were:

Type 1 - Placid, Randomized

Type 2 - Placid, Clustered

Type 3 - Disturbed Relative

Type 4 - Turbulent Field

Each type affects the size, structure and functioning of the organizations in different ways. For instance, the Type 4 environment is associated with greatly increased uncertainty owing to highly complex and rapidly changing nature of the environment. Organizations facing such environments tend to be more R & D conscious. Public relations function in such organizations also become increasingly important since organizations have to constantly struggle to seek and maintain social and economic legitimacy.

Burns & Stalker (1961) classified organizations into two polar

extremes: mechanistic and organic. When the rate of technical and commercial change is high, organizations assume organic form, whereas the mechanistic organization is appropriate for stable conditions when the rate of technical and commercial change is low.

Thompson (1967) classified the organization's environment into four types: stable and homogenous, stable and heterogeneous, unstable and homogenous, and unstable and heterogeneous; and argued that heterogeneity and instability in the environment have significant implications for organizational structure.

Organization - Environment Interaction

Hrebiniak (1978) very aptly sums up the gist of the main thesis of Lawrence and Lorsch's (1967) classic study:

> Degree of differentiation depends on the uncertainty facing the organization; the greater the uncertainty, the greater the organizational differentiation necessary to cope with external demands; the greater the differentiation (including both task and attitudinal differences), the greater the integration needed to insure goal-directed behavior (pp. 349-350).

Lorsch (1973) commenting further on the Lawrence and Lorsch (1967) study mentioned earlier states that

> . . . there must be a fit between internal organizational characteristics and external environmental requirements if the organization is to perform effectively in dealing with its environment. This fit between an organization and its environment, as we have examined it, has two related aspects. First, each functional unit (e.g. sales, production, and research) must have internal characteristics consistent with the demands of its particular sector of the total environment . . . The second aspect of the organization-environment relationship which we have found to be important is that the total organization must achieve, in spite of the differentiation among its units, the pattern of integration required by the total environment (p. 132).

The latter aspect stresses the importance of general administration role and functions at the corporate level.

Hofer (1973) believes that

> In general, the leading authors in the field - Andrews, Ansoff, Cannon, Ewing, Guth, Katz, McNichols, Newman, and Tilles - agree that strategic planning is concerned with the development of a viable match between the opportunities and risks present in the external environment and the organization's capabilities and resources for exploiting these opportunities (p. 47).

Hofer (1973), for his preliminary research on patterns of strategic behavior, developed detailed systems for classifying strategic challenges and responses under different sets of categories (Table V). A closer examination of this table would reveal that most of the strategic challenges faced by organizations are in fact environmental challenges. He then developed a simple conceptual scheme for the strategic challenge-response process and hypothesized:

> (1) That alterations in a firm's strategy set (objectives, strategy, functional policies) result from either actual or forecast changes in its external environment and/or in its resources and capabilities . . .; (2) that different types of strategic challenges would elicit different strategic responses; and (3) that the type of strategic response adopted for a specific strategic challenge would, in general, significantly influence the future success or failure of the firm (p. 47).

The result of his preliminary study indicated "that different types of strategic challenges do indeed elicit different types of strategic responses" (p. 51).

Since the strategy formulation process is considered to be a crucial part of organization-environment interaction, Anderson and Paine (1975) have developed a perceptually based strategy model (see Figure 5) to provide some insights on the environment/strategy formulation/internal properties interaction. The model is based on two perceptual variables: (1) environmental uncertainty, and (2) need for internal change.

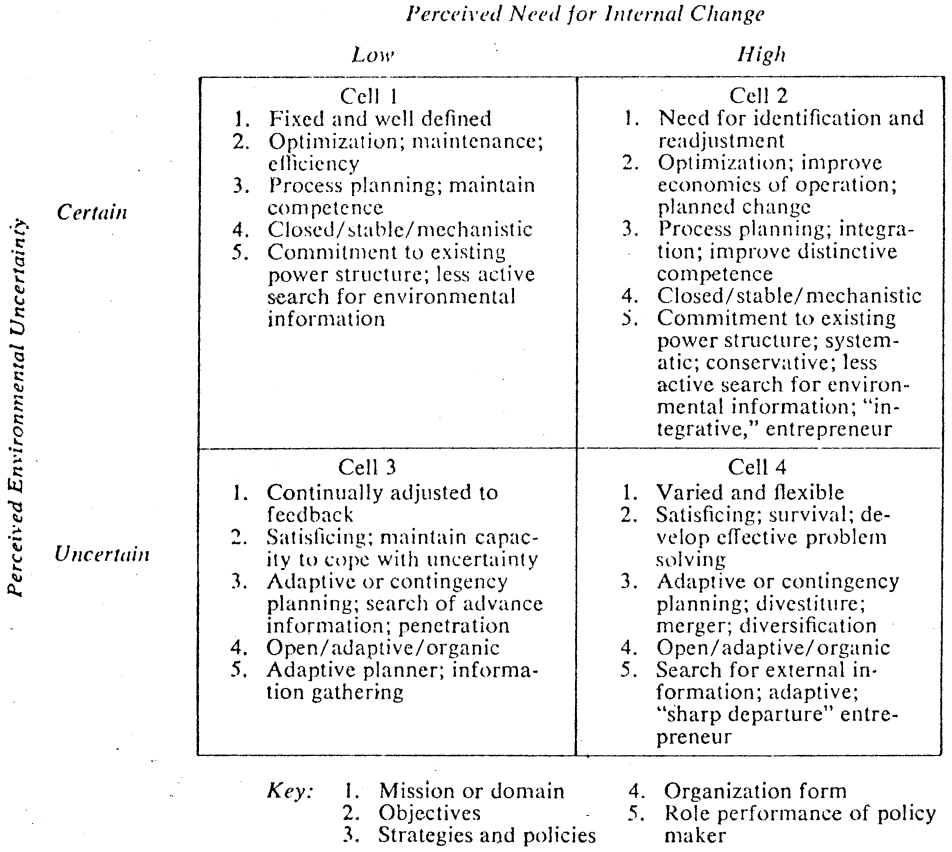
> In order to enhance understanding, each perceptual variable has been reduced to two dimensions: perceptions of environmental certainty and uncertainty, and low and high perceived

TABLE V

DETAILED SYSTEMS FOR CLASSIFYING STRATEGIC CHALLENGES AND RESPONSES

Strategic Challenges	Strategic Responses
I. Market Related Challenges -Major changes in market structure -Major changes in the product life cycle -Major changes in demographic structure -Major changes in the types of customers served -Major changes in the price elasticity of demand -Major increases in total demand (other than above) -Stagnation of or major decreases in total demand (other than above) II. Industry Related Challenges -Major changes in the nature of product differentiation -Major changes in the economies of scale -Major changes in the price/cost structure -Major changes in product or process technology -Major changes in the distribution system -Major change in barriers to entry (other than above) III. Competitor Related Challenges -Entry of new competitors -Exit of old competitors -Major changes in the market share of existing competitors IV. Supplier Related Challenges -Major changes in the availability of raw materials -Major changes in the conditions of trade -Entry of new suppliers or exit of old suppliers V. Resource and Capability Related Challenges -Major excess of capital or cash flow -Major shortage of capital or inadequate cash flow -Major threat of outside takeover -Major excess of production facilities -Major inadequacy or sudden loss of production facilities -Major inadequacy or loss of top management VI. Broader Environmental Challenges -Major changes in economic conditions -Major changes in political/legal constraints -Major changes in social/cultural values	I. Changes in Objectives -Change growth objectives -Change profitability objectives -Change other objectives II. Changes in Strategy -Major expansion in product/market scope .Increase penetration .New markets/existing products .New products/existing markets/existing needs .New products/existing markets/different needs .Forward integration .Backward integration .Concentric diversification: marketing .Concentric diversification: production .Conglomerate diversification -Major contraction of product/market scope .Major contraction of market coverage .Major contraction of product line -Major expansion of geographic scope -Major contraction of geographic scope -Major changes in distinctive competences .Major increase in marketing competence .Major improvement in distribution capability .Major increase in production competence .Major increase in R & D competence .Major increase in financial capability .Major increase in managerial competence III. Change functional policies IV. Liquidation -Liquidation of product line -Liquidation of division -Liquidation of corporation V. No Response

Source: Hofer, Charles W. "Some Preliminary Research on Patterns of Strategic Behavior." Academy of Management Proceedings, 1973, p. 48.



Source: Anderson, Carl R. and Frank T. Paine. "Managerial Perceptions and Strategic Behavior." Academy of Management Journal, Vol. 18 (1975), p. 817.

Figure 5. The Perceptually Based Strategy Model

> need for change. The resulting four quadrants present different kinds of strategy formulation problems which require different strategies for effective solution. The model is intended as a framework for analysis of the strategy formulation process (p. 816).

In a discussion of strategic moves in each of the four quadrants Anderson and Paine note that,

> While there is (depending on the stage of development, share of market, and forcasted market growth rate) an opportunity to exercise a great deal of discretion in each quadrant, each of the four quadrants seems to be associated with a set of possible strategic moves (or outputs) for the organization or division, based on the appropriate perceptions (p. 819).

Khandwalla (1976) views an organization's strategy as a response to its environment. His study of 79 firms generally confirmed that a comprehensive or multifaceted strategy denotes a dynamic, complex, and uncertain environment.

Segal (1974, p. 212) opines that "organizational response to its environment" is related to the organization's internal structure (interrelationship and overall management of units). It is also related to the organization's decision-making process (basis of decision and assessment), and its boundary-spanning strategy (basis of support and extent of decentralization).

Salancik, Pfeffer and Kelly (1974) discussed the source of influence in organizational decision-making and argued that

> . . . influence derives from an individual's ability to reduce organizational uncertainty and that, when the nature of this uncertainty varies across organization decision contexts, the characteristics associated with this capability are also likely to vary . . . influence determination works through a communication process which serves to define the source of uncertainty and to locate individuals capable of coping with the uncertainty (p. 55).

Hickson et al. (1971) propose a strategic contingencies' theory of intraorganizational power which seems relevant to our concepts of

environmental uncertainty and relative importance of different organizational functions. Modern organizations have to cope with environmentally derived uncertainties in: (a) the sources and composition of inputs, (b) the processing of throughputs, and (c) the disposal of outputs; in order to ensure adequate task performance. Hickson et al. (1971, p. 220) related coping with uncertainty by a subunit to its power and offered the following hypothesis: "The more a subunit copes with uncertainty, the greater its power within the organization." However, in terms of this study, this hypothesis can be restated as follows: The more a functional unit copes with uncertainty, the greater is its strategic significance within the organization. Thus, the subunit that enjoys the greatest power in the organization is not necessarily the one facing the most uncertainty but the one that copes most effectively with the most uncertainty. The source of power, therefore, lies not in the high level of uncertainty per se, but in the subunit's ability to cope effectively with high uncertainty. Such a subunit acts as a "shock absorber" for the whole organization in that it diminishes the impact of uncertainty on other subunits which tend to see themselves as more and more dependent on that subunit. Thus the perceived effectiveness of a subunit in coping with high level of uncertainty, and the increased number and degree of dependencies created by such coping behavior result in that subunit acquiring more and more power within the organization.

Miles and Snow (1978) examined the relationship between the managerial perceptions of environmental uncertainty and the relative strategic importance of different organizational functions.

> The findings of this study suggest some support that when the organization faces high environmental uncertainty, it

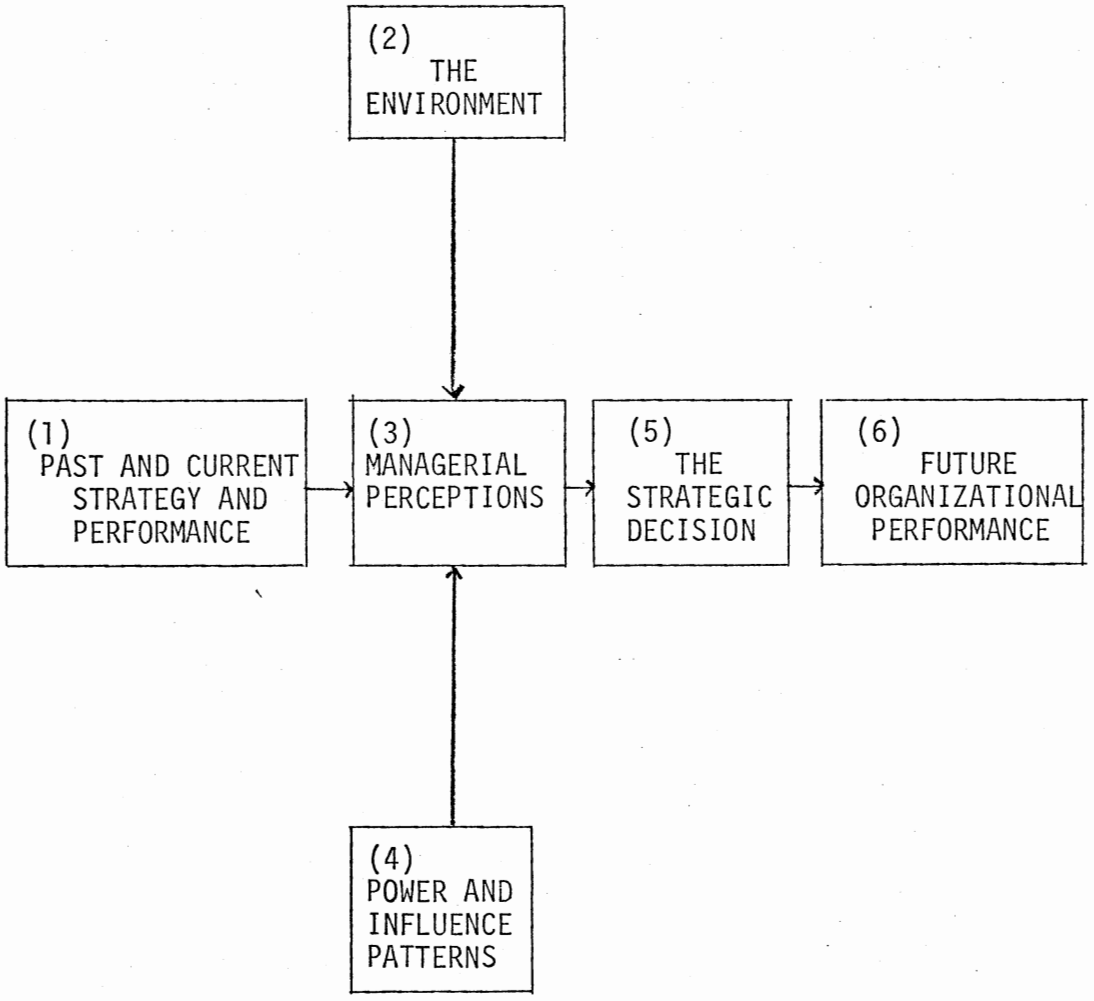
> places greater emphasis on externally oriented functions such as market research and product development. Conversely, when an organization faces low uncertainty, internally oriented functions (such as production) assume strategic importance (p. 213).

Hambrick and Snow (1977) believe that

> . . . in order to understand fully why a particular strategic alternative is chosen also requires knowledge of the environmental and organizational context in which the decision is made . . . Because of their importance, strategic decisions must be closely linked with each other to form a consistent pattern. This pattern is called strategy, an on-going stream of decisions aimed at effectively 'matching' or aligning organizational resources with environmental opportunities and constraints (Thompson, 1967) (p. 109).

Their contextual model of strategic decision making is shown in Figure 6. Hambrick and Snow believe that the role of managerial perceptions of environmental and organizational variables in the strategic decision making process is extremely important; and that a useful conceptualization of this role requires a sequential view of the perceptual process. In the first place, a manager's field of vision cannot and does not encompass every aspect of the organization and its environment. Thus, a manager's perceptions are primarily determined by (or limited to) those areas comprising his field of vision. Secondly, a manager does not exhaustively scan his own field of vision. Therefore, his perceptions are also limited to those areas (within his field of vision) selectively perceived by him. And finally, a manager's age, his functional orientation, his position in the managerial echelon, and his value system collectively constitute a filter through which, the mass of information to be processed by him is interpreted. According to Hambrick and Snow (1977):

> This <u>field of vision</u> - <u>selective perception</u> - <u>interpretation</u> sequence for considering the conversion of information into a set of managerial perceptions that subsequently guides decision making appears to be useful in organizing the relevant literature (p. 110).



Source: Hambrick, Donald C. and Charles C. Snow. "A Contextual Model of Strategic Decision Making in Organizations." Academy of Management Proceedings, 1977, p. 110.

Figure 6. A Contextual Model of Strategic Decision Making

Duncan (1972, p. 325) also suggests that the environmental characteristics are "dependent on the perception of organizational members and thus can vary in their incidence to the extent that individuals differ in their perceptions."

According to Starbuck (1976), organizations select those aspects of the environment with which they would deal based on their perceptions of the environment. Thus the organizational strategies to deal with the environment are based on the process of selection and perception of environment. This is similar to Weick's (1969, 1977) contention that organizations do not merely respond to their external environments; they in fact "enact" or shape their own environments through a series of strategic decisions over a period of time.

The recognizable pattern of an organization's responses to environmental issues, according to Miles, Snow and Pfeffer (1974), Child (1972a), and Richards (1973), is determined, not so much by the objective characteristics of organization-environment interactions as by the managerial perceptions of the environmental conditions. This study's approach is based on the managerial perceptions of the strategic significance of key result areas in different organizational functions.

Various authors (e.g., Emery and Trist, Thompson, Burns and Stalker, Lawrence and Lorsch, Duncan, and Downey et al.) have tried to describe and measure the environment in a manner that is conceptually and analytically useful. Generally the attention is focused on change as an important dimension. However, some authors have not recognized the distinction between the rate of environmental change and the degree of environmental uncertainty or the unpredictability of change. Where an organization is faced with rapid but mostly predictable change in

the environment; such an organization is not really faced with environmental uncertainty, since it can predict reasonably well the kind of environmental conditions it will have to face in the future. This study will utilize Miles and Snow's (1978, Ch. 12) framework for determining the managerial perceptions of environmental uncertainty, in which the behavior of the various sub-environments will be rated on the degree of their predictability (or certainty).

Technology

The primary production system employed by the organization significantly affects the strategic, structural and scale (size) aspects of the organization, it also affects the strategic mix of organizational functions through its impact on the degree of labor intensity, capital intensity (and therefore automation), knowledge (and therefore research) intensity, and energy intensity. Woodward (1965) suggests that a relationship exists between the organization's technology and its control system, and therefore structural dimensions of an organization might be related to the level of its technical achievement.

Perrow (1970) has classified organizations into four technology types based on the analyzability of the search process and the number and frequency of exceptions to normal problem-solving processes. These four technology types are: (1) Craft, (2) Nonroutine, (3) Routine and (4) Engineering. Perrow contends that problems faced by each organization type are different and therefore the technological and structural requirements of each are also different.

The predominant production system used in the organization determines the nature of its technological subenvironment as also the pattern

of organization's responses to that subenvironment. For instance in the Lawrence and Lorsch (1967) study, the findings indicated that

> Special organizational divisions were established (research and development) to keep the organization current; in other organizations, departments such as industrial engineering, management analysis, and so on, are so designated (Hall, 1977, p. 304).

Thompson (1967) developed a series of propositions about organizations with technology as a major determinant of structure. He examined the interrelationships between technology and other variables like size, environment, and structure. He classified technology into three basic groups: mediating, intensive and long linked. The efforts needed to coordinate and control the organization's "technical core" are different for each and therefore the technology employed significantly impacts the structural dimensions and processes.

Murphy (1972) investigated the effects of technology on organizational decentralization and concluded that the change and complexity arising from the adoption of new technological processes have a direct and specific impact on the decentralization in the organization. His findings suggest,

> . . . . that other things being equal: (1) firms with a more complex technological process tend to be more decentralized than firms with a less complex technological process, and (2) firms with a more dynamic technological process tend to be more decentralized than firms with a less dynamic technological process (p. 65).

Hickson, Pugh and Pheysey (1969) in their study of work organization in Birmingham, England found no support for the sweeping "technological imperative" hypothesis that technology and structure are strongly related. However, the technology-structure relationship was more profound and pervasive in small organizations. In large organizations, operations technology was shown to affect only those variables related

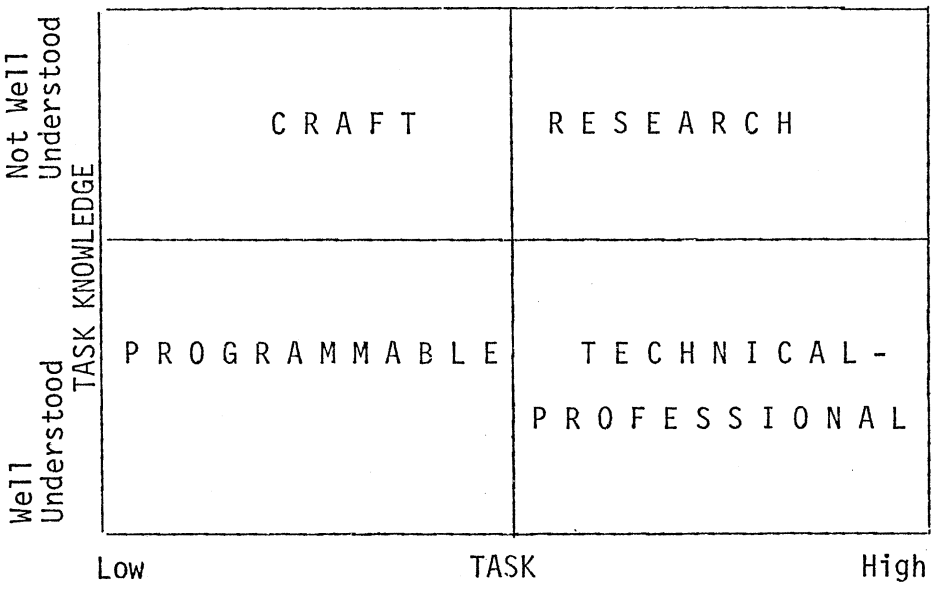
to the workflow rather than the broader administrative and hierarchical aspects of structure.

Daft and McIntosh (1978) based on Perrow's work, developed a technology grid by combining two dimensions of technology: (1) task knowledge (known ways of responding to problems) and (2) task variety (frequency of unexpected and novel problems). The grid then forms the basis for classifying work unit technology into four categories - programmable, technical-professional, research, and craft (see Figure 7).

Woodward's classification scheme was chosen for this study because it is the least abstract and almost self-explanatory and therefore the practicing executives would be able to identify their predominant production systems without the need for lengthy explanation of terms used.

Size and Structure

Size of the organization also has important influence on the various strategic and structural variables. It dictates organization's strategic postures and affects such variables as complexity, span of control of senior executives, management levels and the size of the administrative component. Besides, size may be a function of age, organization's past strategies and performance, and the stage the organization finds itself in the organizational life cycle. Size is also interrelated with the industry structure (Burack, 1975) and the predominant production system used in the organization. However, most of the empirical work in the area of organizational size relates to its impact on organizational structure. The research findings suggest that size cannot be considered as the major determinant of structure. Other variables must be taken into account for understanding organizational structure.



Source: Daft, Richard L. and Norman B. McIntosh. "A New Approach to Design and Use of Management Information." California Management Review, Vol. 21 (Fall 1978), p. 85.

Figure 7. Classification of Work Unit Technologies

The Aston group[2] found technology to be of much less importance than size to organization structure. However, Aldrich (1972) reanalyzed the Aston group findings using path analysis and technology emerged as a variable of major importance.

In a survey article on the role of size as a variable in studies of organization structure, Kimberly (1976, p. 571) argues "that size has generally been defined in terms too global to permit its relation to organizational structure to be understood adequately." He advocates the need for a more differentiated view of size, so that researchers can study differential relationships between different aspects of size and different dimensions of structure. And therefore,

> A more flexible view in which at certain times and under certain conditions certain aspects of size may be conceptualized as dimensions of context seems preferable. The question of causality, of the causal connection between size and structure, becomes similarly redefined. No longer does it make sense to ask whether size causes structure or structure causes size, but rather under what conditions aspects of size are determinants of dimensions of structure, under what conditions the two covary, and under what conditions dimensions of structure are determinants of aspects of size (p. 594).

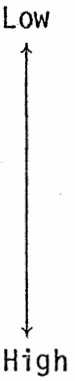
Pugh et al. (1969) analyzed the relationships between the structure of an organization and the context in which it functions. Using contextual variables as independent variables in a multivariate prediction analysis of the structural factors, the researchers found size to be the first predictor ($r = 0.69$) of structuring of activities; however with workflow integration (a technological dimension) added as a predictor, the multiple correlation increased to 0.75. The researchers concluded that,

> The size of the correlations inevitably raise the question of causal implications. It is tempting to argue that these clear relationships are causal - in particular, that size, dependence, and the charter-technology-location nexus largely determine structure (p. 112).

Child (1975) investigated the nature of influence of company performance and environmental variability on the rate of development in organization structure as company size increases. He found that the different categories of companies could be arranged in the following sequence (p. 22):

Rate of development in organization structure as company size increases

1. Below average performers in stable environments
2. Below average performers in variable environments
3. Above average performers in variable environments
4. Above average performers in stable environments



Child (1975) further observes:

> The relative order of high performers in variable and stable environments suggests that environmental contingencies may interact with scale contingencies . . . It appears, then, that management has to pay regard to multiple contingencies, such as those of environment and scale together, when planning the design of its organization (pp. 22-24).

Child (1970) (as quoted in Child, 1972b, p. 174) in relating the concepts of structuring of activities and decentralization with strategies of administrative control offers an alternative interpretation of the Aston group's[3] findings:

> . . .within certain limits imposed by the organization's operating situation, managers appear to have a choice between: (a) maintaining control directly by confining decisions to fairly senior levels. This economizes on the need for systems of procedures and paperwork and reduces the overhead of indirect specialized personnel to operate and maintain the systems, or (b) maintaining control indirectly by relying on the use of procedures, paper records, and on the employment of expert specialists to take decisions at lower levels (within the limits on discretion imposed by the indirect controls) (p. 378).

Theoretical Synthesis of the Concepts of Size, Technology, Environment and Structure

In a review of literature pertaining to the influence of three contingency variables - size, technology and environment - on different dimentions of organization structure, Ford and Slocum (1977) summarize the relationship between structure and contingency variables (see Table VI). As is evident from Table VI , each of the three contingency variables can offer similar predictions of structural dimensions. It is therefore possible that relationships observed in studies that considered only one contingency variable might be attributable to one (or two) of the contingency variables not considered by the researcher. Since few studies considered all three contingency variables simultaneously the patterns of contingency-structure causality are far from clear. Aside from the issue of effect independence, there is also a high degree of interrelationships between technology, size and environmental uncertainty, the researcher must therefore consider the interrelationships and their impact on the contingency-structure relationships. Aside from this problem of independence, Ford and Slocum identified two other problems in previous research. First, all the variables involved (technology, size, environment and structure) have serious measurement problems; and second, units and levels of analysis are different in different research studies. Ford and Slocum conclude their review with the following remarks:

> Additional research might be directed toward better understanding the relationship between contingency variables and structure, and toward understanding the interrelationships among the contingency variables themselves. That these variables are significantly interrelated and appear to influence each other's relationship to structure indicates that the current 'single variable' approach may be misleading. (p. 572).

TABLE VI

SUMMARY OF CONTINGENCY-STRUCTURE RELATIONSHIPS

	Administrative Intensity	Complexity				Formalization	Centralization
		Horizontal	Vertical	Spatial	Personal		
Technology (Task Routineness)	+	+	+		-	+	+
Size (Number of Members)	-	+	+	+		+	-
Environment (Perceived Uncertainty)	+	+				-	-

Source: Ford, Jeffrey D. and John W. Slocum, Jr. "Size, Technology, Environment and the Structure of Organizations." Academy of Management Review, Vol. 2 (1977), p. 571.

Dewar and Hage (1978, p. 132) contend that "the relationships among size, complexity, technology, and structural differentiation are more complex than has been previously thought." They offer theoretical arguments (summarized in Table VII) relating levels and rates of technology and size to complexity and structural differentiation. Their findings suggest that task scope (a technological dimension) and not organizational size, is the most important determinant of differentiation in the division of labor. Dewar and Hage (1978) conclude that

> . . . by examining associations of levels and change rates it is possible to better understand how growth and increase in task scope affect both the complexity of the division of labor and structural differentiation. . . Their indicators are different; the causal arguments are different; and the relative importance of size and technology as causal forces are different. Thus, we need to develop theories for each of these processes. They cannot, at least at this point, be theoretically synthesized (p. 129).

Strategy and Structure

The importance of organization structure in strategic planning emanates primarily from the fact that strategic planning is essentially an organization-wide activity rather than something done merely by the planning department staff. As Cleland and King (1974) so rightly point out:

> . . . strategic planning is a job to be performed by managers - not for them. However critical the role of professional planning staff is to an effective strategic planning process, professional planners are not the doers of planning . . .; rather, they are the facilitators. The doers of strategic planning are managers - both top managers and lower-level line managers - thereby ensuring that the people who will be charged with implementing the plans are those who have generated the goals and developed and approved the plans (p. 26).

TABLE VII

A THEORETICAL SYNTHESIS OF THE CONCEPTS OF ORGANIZATIONAL SIZE, TECHNOLOGY, COMPLEXITY, AND STRUCTURAL DIFFERENTIATION

Independent Variable	Dependent Variable
1. Level of task scope	Level of complexity
Positively related because the greater the number of clients and depth of involvement with them or the greater the variety of products and the difficulty of producing them, the greater the number of technologies and thus different occupational specialties because of the limits of cognition.	
2. Rate of task scope change	Rate of complexity change
Positively related because the addition of new clients or products requires new technologies, which in turn require new occupational specialties.	
3. Level of size	Level of complexity
Positively related only because large organizations achieve economies of scale that result in advantages in hiring occupational specialties in administrative areas.	
4. Rate of size change	Rate of complexity change
No relationship because the hiring of new personnel does not necessarily mean the hiring of new occupational specialties.	
5. Level of task scope	Level of veritical differentiation
Small positive relationship because technological complexity decreases spans and necessitates more levels.	
6. Rate of task scope change	Rate of vertical differentiation change
No relationship because new technologies are usually added horizontally, not vertically.	
7. Level of size	Level of vertical differentiation
Positively related because large numbers require many supervisors; there is a limit to the span of control.	
8. Rate of size change	Rate of vertical differentiation change
Small positive relationship because the hiring of new people, unless there are a large number of them, does not stress spans sufficiently to necessitate addition of new levels.	
9. Level of task scope	Level of horizontal differentiation
Positively related because different clients or products and/or technologies are usually housed in different departments for social and ecological reasons.	
10. Rate of task scope change	Rate of horizontal differentiation change
Positively related because new clients or products and/or technologies are usually housed in new departments.	
11. Level of size	Level of horizontal differentiation
Small positive relationship because of economies of scale that permit the hiring of ancillary specialists that are located in new departments.	
12. Rate of size change	Rate of horizontal differentiation change
No relationship because the addition of new people has no necessary relationship with the addition of departments.	

Source: Dewar, Robert and Jerald Hage. "Size, Technology and Structural Differentiation: Toward a Theoretical Synthesis." Administrative Science Quarterly, Vol. 23 (1978), p. 115.

In order to ensure successful implementation of strategies, Koontz (1976, p. 47) highlights the need for making organization structure fit planning needs: "The organization structure should be designed to support the accomplishment of goals and the making of decisions to implement strategies."

Based on Chandler's (1962) pioneering study of strategy and structure, many researchers notably from Harvard Business School have attempted to examine the interrelationship between diversification strategy (similar to corporate diversity in this study) and organizational structure. Chandler showed how different strategies posed different degree of administrative complexity and therefore tended to require different types of organizational structure. Rumelt (1974, p. 149) in his study, found "that data gave strong support to Chandler's proposition that 'structure follows strategy' but forced the addition of 'structure also follows fashion.'" According to Galbraith and Nathanson (1978),

> . . . three main principles can be identified in Chandler's work: (1) Organization structure follows the growth strategy pursued by the firm; (2) American firms have followed a pattern of stagewise development from unifunctional structure, to the functional organization, to the multi-divisional structure; (3) The change from one stage to another occurred only after provocation, because the strategy formulator and organizational innovator were different types of people (p. 16).

When a strategy-structure fit is disturbed in any organization, its performance tends to decline. However, Galbraith and Nathanson introduced competition as a mediating variable in the relationship between strategy and structure and thus modified Chandler's proposition. They stated that "only under competitive conditions does a mismatch between strategy and structure lead to ineffective performance" (p. 139).

Fouraker and Stopford (1968) found that the organizations pursuing

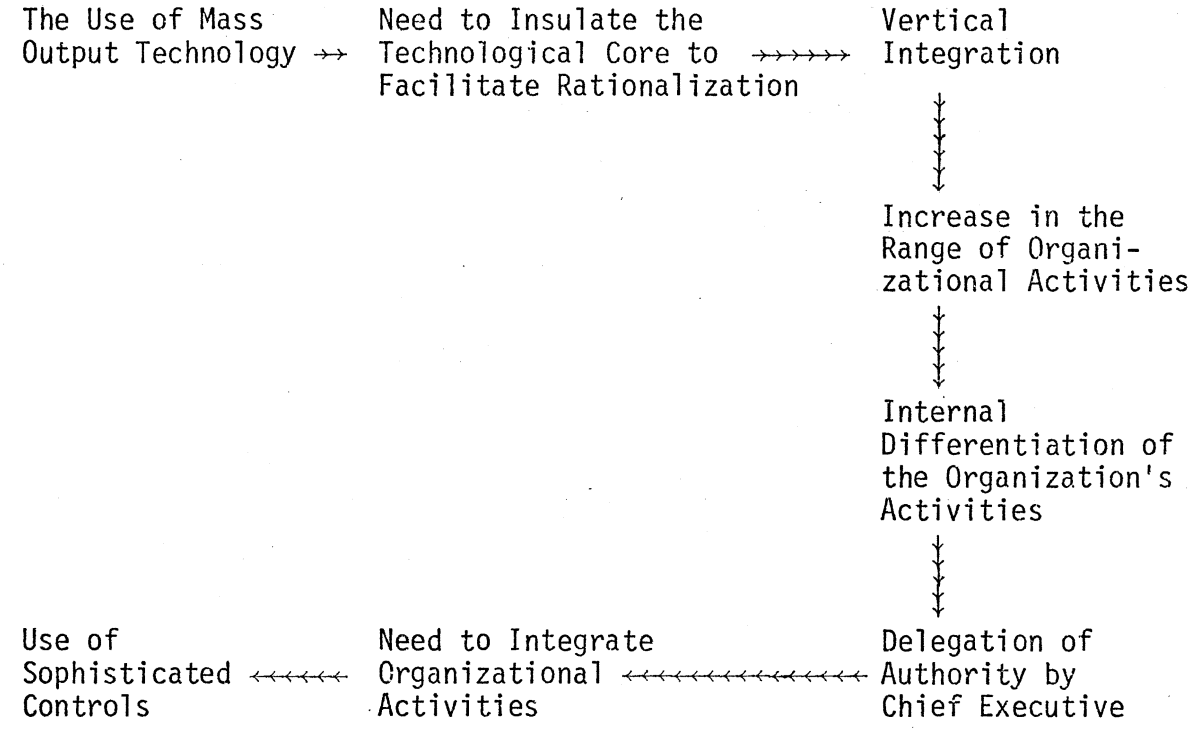
multinational growth strategy tend to have highly diversified domestic business with a proven R&D leadership; decentralized, divisionalized structure; and the ability to produce international general managers capable of controlling and guiding a highly diversified organization.

Khandwalla (1974) developed a model of organizational adaptation to mass output technology (see Figure 8) which was supported by data for 79 manufacturing firms. According to Khandwalla, the causal arrow in the model should be viewed

> . . . as going from technology to vertical integration to organizational differentiation and decentralization of authority to the use of sophisticated controls as a powerful integrative and coordinating device . . . The model incorporates three basic hypotheses for manufacturing organizations: (1) the more mass-output oriented the technology used by an organization, the more vertically integrated it is likely to be, (2) the more vertically integrated the organization is, the more decentralized is its top-level decision making likely to be, and (3) the more decentralized the top-level decision making, the more the organization is likely to use sophisticated controls to coordinate the activities of the organization (p. 79).

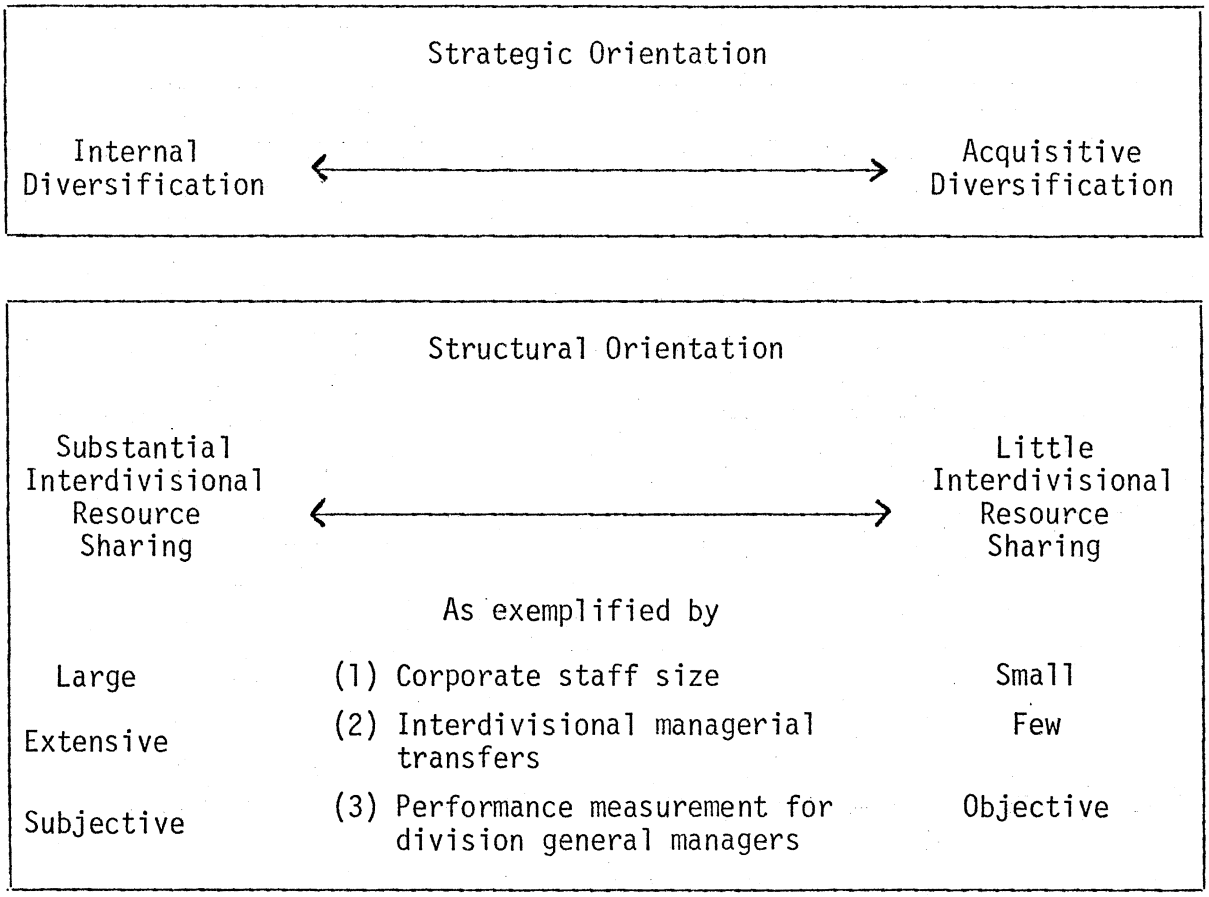
Therefore, Khandwalla's (1974) study established a special form of technology-strategy-structure relationships; where the use of mass-output technology leads to the pursuit of vertical integration (a growth strategy), which in turn requires certain changes in the organizational structure and decision-making. Such relationships were found to be more pronounced for high-profit firms.

In his study of corporate technological staff size in 21 large diversified firms, Pitts (1977) found systematic structural differences between firms pursuing two different diversification strategies - internal diversification and acquisitive diversification (in terms of this study, internal growth strategy and external acquisitive growth strategy, respectively). These differences are depicted schematically in Figure 9.



Source: Khandwalla, Pradip N. "Mass Output Orientation of Operations Technology and Organizational Structure," Administrative Science Quarterly, Vol. 19 (1974), p. 79.

Figure 8. A Model of Organizational Adaptation to Mass Output Technology



Source: Pitts, Robert A. "Strategies and Structures for Diversification." Academy of Management Journal, Vol. 20 (1977), p. 199.

Figure 9. Structural Differences in Firms Pursuing Different Diversification Strategies

Miller and Springate (1978), in a study of functionally and divisionally organized firms in the retailing industry found that in product-divisional organizational structures, comparable decisions tend to be made at lower levels of the organization than in functional organizational structures. As regards performance measurement and control systems, product-divisional organizations were found to rely more on predetermined and clearly specified norms of performance. Miller and Springate (1978) conclude that

> In essence, the general pattern established has been that product divisionals operate with a markedly different set of management, process and decision making especially as regards the 'autonomy' of certain management roles, particularly at lower levels in the organization (p. 125).

Out of Chandler's (1962) research, a group of theorists called "stages of growth and development theorists" have developed different stages of growth models. These models go beyond a mere examination of strategy-structure relationships and develop a concept of corporate life cycle with distinct stages of corporate development.

On the basis of the Scott model (1973), Tuason (1973) has identified three stages of corporate life cycle, each stage having different company characteristics (see Table VIII).

Glueck (1976) has summarized Cannon's (1968) theory of five stages of development in the form of a table (see Table IX). Glueck observes:

> Cannon does not contend that companies move through these stages in sequence, or that they move through all the stages. It is not clear how and why firms decentralize or why they go through these stages. What Cannon does say is that if the firm is in Stage II, the organizational characteristic of specialization by function is present (p. 237).

Thain (1969) has identified three main stages of corporate development (see Table X). Stage I companies are generally simple and

TABLE VIII

CORPORATE LIFE CYCLE: THREE STAGES AND COMPANY CHARACTERISTICS

Company Characteristics	Stages in Corporate Life Cycle: Stage I Company (or Small Company)	Stage II Company (or Integrated Company)	Stage III Company (or Diversified Company)
1. Product line	Single product or single product line	Single product line	Multiple product lines
2. Distribution pipeline	One channel or set of channels	One set of channels	Multiple channels
3. Organization structure	Little formal structure; one-man show	Specialization based on functional areas	Specialization based on market-product relationships
4. Intra-company product/service transactions	No pattern of intra-company transactions	Integrated intra-company transactions	Non-integrated, pattern of transactions
5. R&D organization process	Not institutionalized; guided by owner-manager	Institutionalized search of product or process improvements	Institutionalized search for new products as well as for improvements
6. Performance measurements	By personal contact and subjective criteria	Increasingly impersonal, using technical/cost criteria	Increasingly impersonal, using market criteria (ROI, market share)
7. Rewards	Unsystematic and often paternalistic	Systematic with emphasis on stability and service	Systematic with variability related to performance
8. Control system	Personal control of strategic decisions	Personal control of strategic decisions	Indirect control based on analysis of "results"
9. Operating decisions	Personal control of operating decisions	Increasing delegation of operating decisions thru policy	Delegation of market-product decisions within existing businesses
10. Strategic choices	Needs of owner versus needs of company	Degree of integration, market share objective; breadth of productline	Entry and exit from industries; allocation of resources by industry; rate of growth

Source: Tuason, Roman V. Jr. "Corporate Life Cycle and the Evaluation of Corporate Strategy." Academy of Management Proceedings, 1973, p. 37. Adapted from Scott, B. R. "The Industrial State: Old Myths and New Realities." Harvard Business Review, Vol. 51 (March-April 1973), pp. 133-148).

TABLE X

CANNON'S STAGES OF DEVELOPMENT

Characteristic	I Entrepreneurial	II Functional Development	III Decentralization	IV Staff Proliferation	V Recentralization
Strategic decisions	Made mostly by top man	Made more and more by other managers	May have "loss" of control"	Corporate staff assists in decisions	Corporate management makes the decisions
Organization structure	Informal operations	Specialization based on functions	To cope with problems of functionalization By industry or product division	Corporate staff assists the chief executive	Similar to stage II
Communication and climate	From leader down; informal communication	Internal Communication is important is difficult		Conservatism may result in slower communications	
Control system	Minimal need for coordination and control	Concerned with everyday situations	Problems with Control	May be problems between line and staff	Tightening of control

Source: Glueck, William F. Business Policy: Strategy Formation and Management Action. New York: McGraw-Hill, 1976, p. 237.

TABLE X

KEY FACTORS IN TOP MANAGEMENT PROCESS IN STAGE I, II AND III COMPANIES

Key factors in management process	Stage I	Stage II	Stage III
1 Size up: major problems	Survival and growth, dealing with short-term operating problems	Growth, rationalization, and expansion of resources, providing for adequate attention to product problems	Trusteeship in management and investment and control of large, increasing, and diversified resources. Also, important to diagnose and take action on problems at division level
2 Objectives	Personal and subjective	Profits and meeting functionally oriented budgets and performance targets	ROI, profits, earnings per share
3 Strategy	Implicit and personal; exploitation of immediate opportunities seen by owner-manager	Functionally oriented moves restricted to "one product" scope; exploitation of one basic product or service field	Growth and product diversification; exploitation of general business opportunities
4 Organization: major characteristic of structure	One unit "one man show"	One unit functionally specialized group	Multiunit general staff office and decentralized operating divisions
5 a. Measurement and control	Personal, subjective, control based on simple accounting system and daily communication and observation	Control grows beyond one man, assessment of functional operations necessary, structured control systems evolve	Complex formal system geared to comparative assessment of performance measures, indicating problems and opportunities and assessing management ability of division managers
5 b. Key performance indicators	Personal criteria, relationships with owner, operating efficiency, ability to solve operating problems	Functional and internal criteria such as sales, performance compared to budget, size of empire, status in group, personal relationships, etc.	More impersonal application of comparisons such as profits, ROI, P/E ratio, sales, market share, productivity, product leadership, personnel development, employee attitudes, public responsibility
6 Reward-punishment system	Informal, personal, subjective, used to maintain control and divide small pool of resources to provide personal incentives for key performers	More structured, usually based to a greater extent on agreed policies as opposed to personal opinion and relationships	Allotment by "due process" of a wide variety of different rewards and punishments on a formal and systematic basis. Company-wide policies usually apply to many different classes of managers and workers with few major exceptions for individual cases

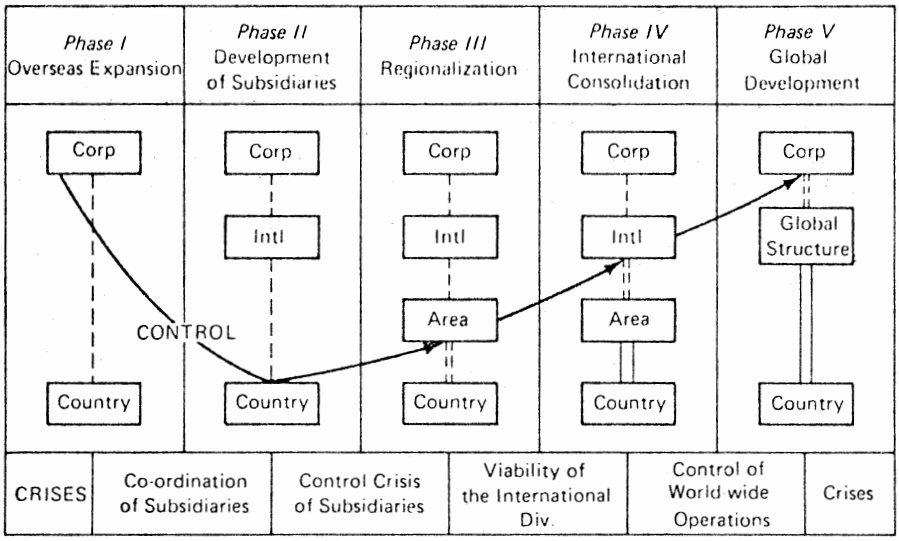
Source: Thain, Donald H. "Stages of Corporate Development" in Glueck, William F. Business Policy: Strategy Formation and Management Action, New York: McGraw-Hill, 1976, p. 248.

small, whereas Stage III companies are large and complex. Thain concedes that not all companies can be classified in any one of the stages, since many companies would be in a phase of transition from Stage I to II or from Stage II to III.

Smith and Charmoz (1975) provide a good example of a growth and development model for a multinational corporation. Figure 10 illustrates their five-phase model of evolution of control, coordination and organizational crises in the development of MNC (Galbraith and Nathanson, 1978, pp. 107-110).

Galbraith and Nathanson (1978) offer their own considerably refined model of corporate growth and development (see Figure 11). It essentially summarizes the main concepts of the earlier models and builds on the available empirical evidence. The stages of growth in this model are neither discrete nor sequential thereby permitting alternate paths through the developmental sequence. Besides, the model also empirically illustrates the dominant (not universal) growth path taken by the U.S. firms.

Based on the empirical research of, and theoretical models developed by, organization theorists as also business policy researchers, Litschert and Bonham (1978) develop a conceptual model of strategy formation (see Figure 12), where "organization slack"[4] is a crucial moderator variable influencing the necessary fit between structure and contextual variables (technology and environment) and ultimately the causal direction of the strategy-structure relationship. Thus, the level of organizational slack is a major determinant of the contingent nature of strategy. The authors contend that



Coordination Patterns

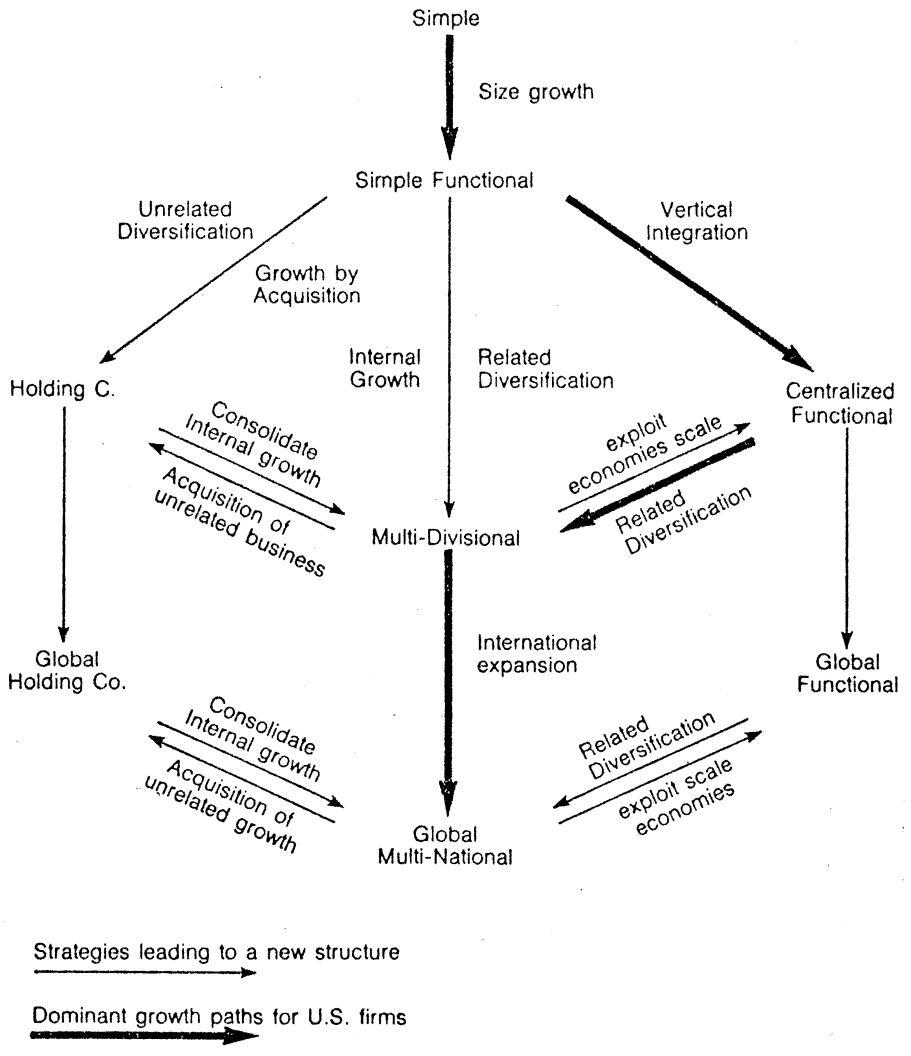
— — — Mutual Adjustment (Coordination by checking only as problems arise)

= = = = Planning (Coordination through tops down planning)

═══ Policy and Procedure (Coordination through establishment of policies and procedures)

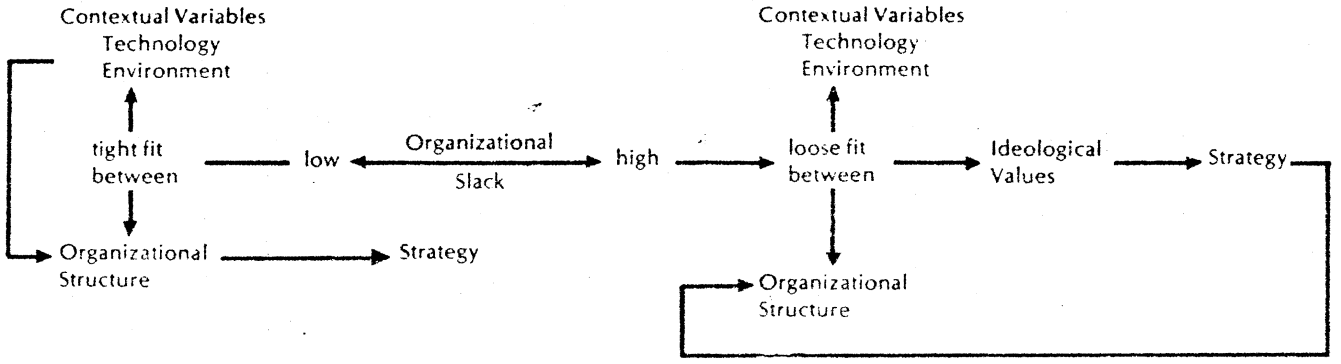
Source: Smith, William and R. Charmoz. "Coordinate Line Management." Working Paper, Searle International, Chicago, Feb. 1975. Reproduced from Galbraith, Jay R. and Daniel A. Nathanson. Strategy Implementation: The Role of Structure and Process. St. Paul, Minn.: West Publishing Co., 1978, p. 108.

Figure 10. Evolution of Control, Coordination and Organizational Crises in the Development of MNC



Source: Galbraith, Jay R. and Daniel A. Nathanson. Strategy Implementation: The Role of Structure and Process. St. Paul, Minn.: West Publishing Co., 1978, p. 115.

Figure 11. A Summary of Stages Model



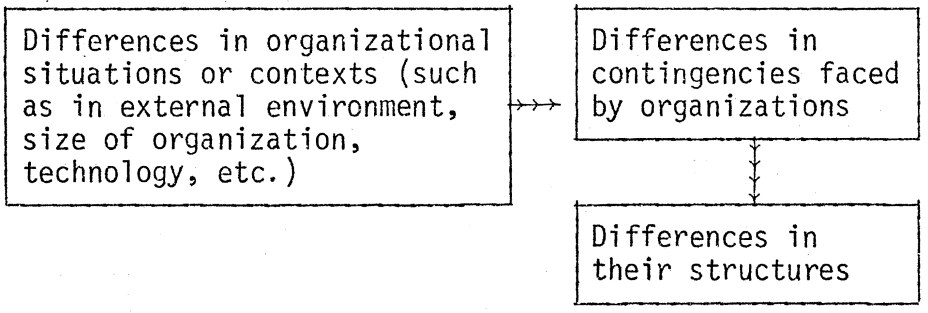
Source: Litschert, Robert J. and T. W. Bonham. "A Conceptual Model of Strategy Formation." Academy of Management Review, Vol. 3 (1978), p. 216

Figure 12. The Role of Organizational Slack and the Contingent Nature of Strategy and Structure

> . . . slack affects the direction of the strategy-structure relationship by influencing the necessary fit between organization structure and the interactive effects of technologies and environments. When slack is low, there are no excess resources to pay the price of a structural design different from that dictated by the interactive effects of these contextual variables. Necessary fit is tight, and strategy is determined by structure, at least in part. When slack is relatively high, excess resources are available to pay the price of a structural design which may stray from the contingent requirements of contextual variables. In this case, necessary fit may be loose because economic sacrifice is minimized, and strategy is likely to be more contingent on the ideological values of the dominant coalition (p. 217).

The contingency theory of organizational structure states that there is no one best way to organize, nor are all ways of organizing equally effective. Organization theorists, notably Burns and Stalker, and Lawrence and Lorsch, consider the rate of change in the environment as a determinant of the organizational form. This point of view is consistent with Chandler's strategy-structure hypothesis, since organizations, rather than responding to their given external environments, "enact" (Weick, 1969, 1977) or shape their own environments through a series of strategic decisions over a period of time. A high degree of corporate diversity (itself the result of past strategies and performance) means that the organization is simultaneously operating in many different product-market domains. As Khandwalla (1977, p. 337) points out: "Typically but not exclusively, diversified organizations tend to have highly variegated environments." Thus the rate as also the predictability of the environmental changes are very often determined by the strategies pursued by the organization. As organizations grow in size and become more diverse through the adoption of certain strategies, more decentralized subunits are formed for effective strategy-implementation. The extent of decentralization

(which is an important characteristic of organizational structure) depends on the need for environmental adaptability, and therefore subunit autonomy, of differentiated subunits as also the need for integration of subunits (for attainment of overall corporate goals) for effectively managing greater diversity. The contingency paradigm, as presented by Khandwalla (1977, p. 236), is shown below:



The relationships between corporate strategy and structural and administrative decisions (advocated by Chandler, 1962 and others); and the relationships between a firm's structural and administrative decisions and its environmental complexity and uncertainty (advocated by organizational theorists, like Burns and Stalker, 1961, Lawrence and Lorsch, 1969, Woodward, 1965 and others) are gradually evolving into a contingency theory of the firm that looks like the one charted by Ward (1976, p. 219) in Table XI.

As Richards (1978) points out, the organizational structure is important in the formulation and implementation of strategy,

> . . . because the locus of planning, goal setting and decision-making is dependent upon the type of structure in which the planning is done . . . The hierachical nature of goals and subgoals stems from organizational hierarchy. Much of the planning that is performed at the product division level in the larger diversified organizations is performed at the corporate level in single product functionally organized organizations (Galbraith and Nathanson, 1978). Additionally, there is a correspondence between the hierarachy of organization structure and the hierarchy of strategies (p. 25).

TABLE XI

A CONTINGENCY THEORY OF THE FIRM

Organizational Administration =	f(Strategic Choice) =	f(Environment and Corporate Resources)
structure	products markets	uncertainty
organizational decision making process and climate	competative advantage	human needs
resource allocation	goals and objectives	life cycle stage of industry's products
reward systems	policies and actions	production technology
		market dominance

Source: Ward, John L. "The Opportunity to Measure Strategic Variables: An Attempt to Quantify Product-Market Diversity." Journal of Economics and Business, Vol 28 (Spring-Summer 1976), p. 219.

Therefore, in corporate strategy research the interactions between size, diversity and structure assume considerable importance.

Conclusion

The purpose of this chapter has been to survey the relevant literature from business policy and organization theory to provide a proper theoretical base for the study. The theoretical and empirical literature, pertaining to the key concepts relevant to the development of this study's conceptual framework, has been broadly reviewed.

The definitions and operational measures of specific concepts directly relevant to this study's conceptual framework are explained in Chapter III. Chapter IV describes the study's conceptual framework and poses and discusses the research questions investigated by the study.

FOOTNOTES

[1]The 1967 data are taken from a survey of 471 of the largest companies in the United States conducted by Heidrick & Struggles. The 1971 data are taken from an analysis of data published by Forbes (May 1972) covering the 724 largest companies in the United States. The results of both surveys are summarized in Management Practice (Summer 1972).

[2]Research on organization structure carried on by D. S. Pugh and his colleagues at the University of Aston in England.

[3]Ibid.

[4]Organizational slack is a hypothetical construct developed by the well-known troika of organization theorists, Cyert, March and Simon. March and Simon (1958, p. 126) define organizational slack as the "difference between the resources available to the organization and the total requirements of the members of the organizational coalition."

CHAPTER III

DEFINITIONS, CONCEPTS AND MEASURES

Introduction

There are no generally accepted definitions or measures of most of the concepts constituting this study's conceptual framework. The lack of clear-cut definitions and operational measures of research variables has been a major contributing factor in the slow development of the substantive area of business policy. The data for this study was to be collected through mail questionnaires designed to be filled out by senior corporate executives. It was therefore essential that the concepts and measurement techniques be formulated in a manner that would be managerially meaningful, and which would accurately (and in the least possible time) capture the essence of top management's assertions and perceptions about various aspects of their firm's operations and environments. This chapter explains the definitions and measures of eight key concepts underlying this study's conceptual framework outlined in Figure 1.

Grand Corporate Strategy

The grand corporate strategy for the purpose of this study is defined as the major plan of action for achieving the sales and earnings goals for the company as a whole (rather than a product, division or

market segment). In other words, the grand corporate strategy is the overall, primary, predominant, the single most important and vital or master strategy of the firm. As Newman (1971, p. 70) points out, the "master strategy" refers to the entire pattern of company's basic mission, purposes, objectives, policies and specific resource deployment (Steiner and Miner, 1977, p. 20--emphasis provided). Paine and Naumes (1974) define an overall (or corporate) strategy

> . . . as a plan which encompasses not only the mission, policies, objectives and more specific goals of the organization, but also a plan of action for achieving these objectives and goals . . . An overall strategy, then, is the sum total or pattern of . . . past and present actions or decisions (p. 7).

Other well-known definitions of corporate strategies implicitly relate to grand corporate strategies discussed earlier because of their overall corporate orientation. Consider for instance, definitions by Chandler and Glueck. Chandler (1962, p. 16) defined strategy as "the determination of basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals." Glueck (1976, p. 3) defines a strategy as "a unified comprehensive and integrated plan designed to assure that the basic objectives of the enterprise are achieved." Thus, the definition of grand corporate strategy used in this study is consistent with the definitions used by the well-known authors in the field of business policy.

It should also be clear that the definition of grand corporate strategy is based on scope. For this reason such a strategy is formulated for, and encompasses the activities of, the company as a whole rather than a business, or a division, or a product or a market or a functional area. Thus a conglomerate will have different business strategies, but will have only one grand corporate strategy. Similarly,

a multi-divisional company will have different divisional strategies but will still have only one grand corporate strategy for achieving the sales and earnings goals of the company as a whole. In fact, the grand corporate strategy provides a groundwork from which different sub-strategies are derived. The survey respondents (chief executive officers) were asked to identify their primary or single most important strategy as their grand corporate strategy from a normative classification of grand corporate strategies derived from Glueck (1976) and delineated in Appendix C (Chief Executive Officer's Questionnaire). The strategies are classified under four broad heads:

(1) Stability Strategies

(2) Internal Growth Strategies

(3) External Acquisitive Growth Strategies

(4) Retrenchment Strategies

This normative list of strategies classifies strategies as to purpose and function. Since the strategies follow corporate objectives or more precisely, since strategies are plans of action to achieve certain specific corporate objectives, they are naturally functional (meant to do certain things) and purpose-oriented. Based on the respondents' identification, the subject firms were therefore classified into four categories of grand corporate strategies.

Relative Strategic Significance of Different Organizational Functions

This study explores the nature of relationships between the grand corporate strategies pursued by industrial firms and their top managers' perceptions of the relative importance (to effective strategy

implementation) of different organizational functions. For this purpose the following seven organizational functions were identified:

1. General Administration
2. Production/Operations
3. Engineering and R&D
4. Marketing
5. Finance
6. Personnel
7. Public and Government Relations

However, the senior executives were not asked to merely rank these functions in order of importance or to evaluate each function in terms of its strategic significance on a Likert-type rating scale. A normative list of functionally grouped key result areas or strategic factors was developed and the senior executives were asked to rate each key result area separately in terms of its strategic significance. Initially, a very detailed checklist of ninety-nine key result areas relevant to industrial firms was prepared. This checklist is presented in Appendix A. However, it was readily apparent that to ensure adequate response from the participating firms, the list should be kept to a manageable length. Ultimately, the number of key result areas was reduced by almost fifty percent and a revised normative list of functionally grouped key result areas, as shown in Appendix C (Senior Executive's Questionaire), was used in the study.

Key result areas, when classified in this manner, reflect the functional goals, strategies, policies, programs, roles and structure. The key result areas have a significant impact on corporate performance and are therefore critical to the firm's success or failure. The key result areas are key organizational variables; they may also be called "strategic factors," "critical factors," "key success factors,"

"performance variables," "pulse points," "limiting factors," (Anthony, 1976, p. 139), and CSFs or "critical success factors" (Rockart, 1979).

According to Steiner (1969a):

> Strategic factor refers to an action, element or condition which for a business may be of critical importance in its success or failure. It can refer both to a force outside the company as well as one within the enterprise. Success, as the word is used in this survey refers to the desired achievement of major objectives and goals established for your company (p. 2).

A company's performance in its different key result areas should determine the effective implementation of its grand corporate strategy. However, the relative strategic significance of different key result areas would be different for companies having different grand corporate strategies, therefore top managers of different firms having different grand corporate strategies would perceive the relative strategic significance of key result areas in the various organizational functions differently.

Since each company has a distinct identity, each company must determine its own key result areas in different organizational functions. However, a list of these key result areas common to all industrial companies (the subject of this study), can be prepared on the basis of past studies, research and managerial experience. Key result areas listed in Appendix A and in Appendix C are derived primarily from Steiner's (1969a) empirical study of strategic factors in business success, as also from the works of Glueck (1976), Anthony and Dearden (1976), Paine and Naumes (1974), Stevenson (1976), Murdic et al. (1976), Buchele (1962), Sproul (1960), American Institute of Management (Management Audit Questionnaires, Series 11, 1961), and Rockart (1979).

The evaluation of each key result area in terms of its strategic significance (to effective implementation of grand corporate strategy) is based upon a 7-point rating scale as shown below:

1 - completely strategically insignificant

2 - of very little strategic significance

3 - of somewhat less than average strategic significance

4 - of average strategic significance

5 - of somewhat more than average strategic significance

6 - of very great strategic significance

7 - of the greatest strategic significance

The rating scale in this study is a slightly modified version of Steiner's (1969a) measure. Steiner used a 6-point scale of values from zero to five, for the purpose of evaluating (1) the current performance, and (2) the future importance of each strategic factor.

However, the analysis of data on the basis of strategic significance score of each key result area would make the analysis too unwieldy. Besides, the focus of this study is on the strategic significance mix of different organizational functions. Therefore for each subject firm, the strategic significance score is computed for each organizational function by adding up the scores of respective key result areas and dividing the sum by the number of key result areas in that functional category. This approach provides more reliable and logically consistent results than mere rankings of the seven organizational functions in order of importance for each firm.

Firm Size

Sales volume, total assets and number of employees, have

traditionally been considered as effective indicators of size. The authoritative annual Fortune directories rank the top 1000 U.S. industrial corporations on the basis of their annual sales volume; for this purpose the sales are defined as annual sales revenue inclusive of service and rental revenues but exclusive of dividends, interests and other non-operating revenues and excise taxes. Based on this most widely accepted definition of "sales," the subject firms (the 1000 largest U.S. industrial incorporations as listed in the 1978 Fortune Directories) are classified by the survey respondents into the following three categories as per their sales:

Firm Size	Annual Sales ($ millon)
Small	100-200
Medium	201-599
Large	600 and over

This classification scheme divides the 1978 Fortune 1000 firms into three more or less equal groups. The breaking points of $201 million and $600 million represent the sales of 688th largest firm (69th percentile) and 342nd largest firm (34th percentile), respectively.

Categories of Corporate Diversity

The extent of diversity of a firm's current operations is a function of the success of the degree and type of product-market diversification strategies pursued by the firm in the past. Thus, if a company has pursued the strategy of concentrating on a single business, such a company would be a single business firm. On the other hand, a company with a history of aggressive diversification into

new products and markets unrelated to its primary end product business would be an unrelated business firm or a conglomerate. Therefore, the concept of corporate diversity is a reflection of a firm's concept of its own strategic posture.

Wrigley (1970) used a random sample of 100 firms from the 1967 Fortune 500 firms and classified these firms into the following four categories of diversity:

(1) Single Product - no diversification, primary commitment to a single business.

(2) Dominant Product - primary commitment to a single business and diversification to a small degree.

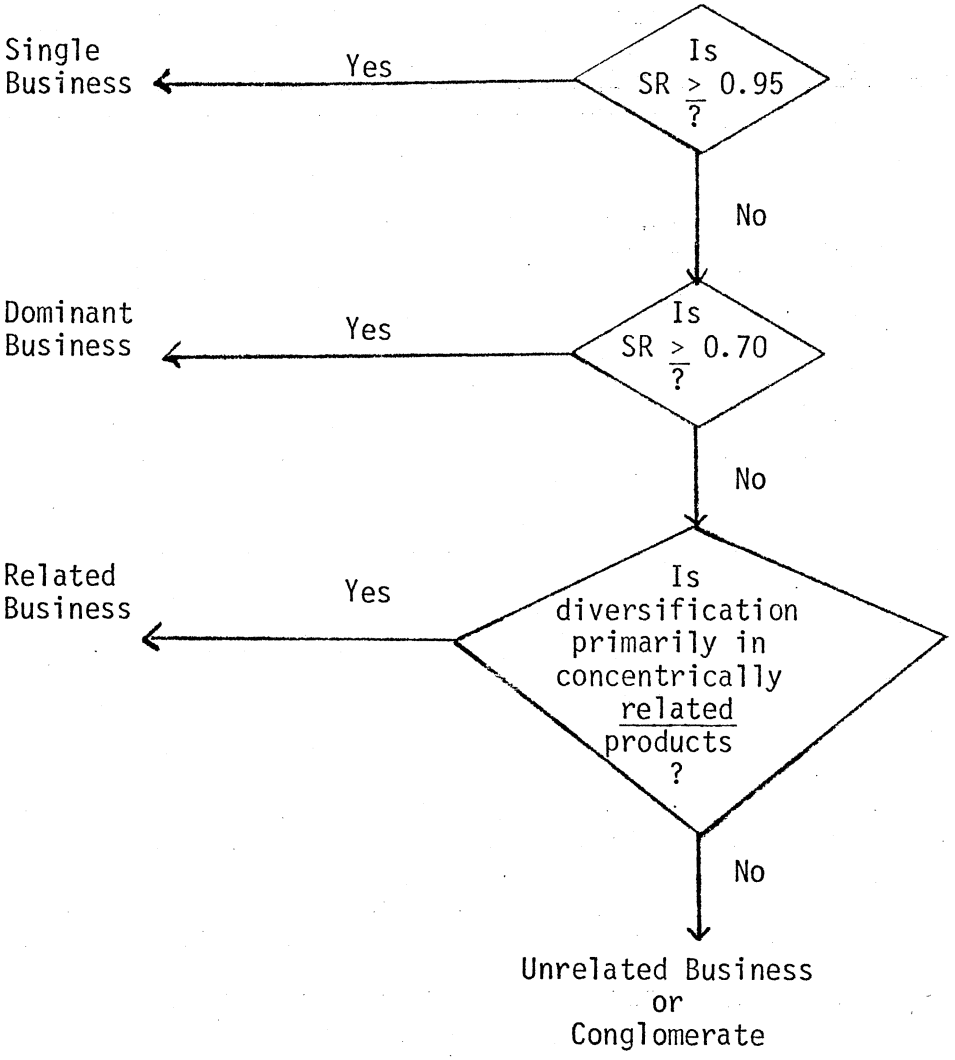
(3) Related Product - diversification into new areas concentrically related (by market or technology) to the primary end product business.

(4) Unrelated Product - diversification into new areas without regard to such relationships.

Rumelt (1974) modified and expanded Wrigley's classification system and introduced the concept of "specialization ratio" as the primary measure of corporate diversity. He defined specialization ratio.

> . . . as the proportion of a firm's revenues that is attributable to its largest discrete product-market activity. A 'discrete business' (or product-market activity) is one that is strategically independent of the firm's other businesses in that basic changes in its nature and scope can be made without meeting constraints imposed by other of the firm's businesses and without materially affecting the operation and strategic direction of other of the firm's businesses (p. 29).

The categories of corporate diversity developed for this study are derived from Wrigley (1970) and Rumelt (1974). Figure 13 provides a



Source: Derived from Rumelt, Richard P. Strategy, Structure, and Economic Performance. Boston: Division of Research, Harvard Business School, 1974, p. 30

Figure 13. The Process of Assigning Corporate Diversity Categories on the Basis of Specialization Ratio (SR) and the Nature of Diversification

flow diagram that describes the process of categorizing a firm. The survey respondents (senior executives) were therefore asked to indicate the extent of their corporate diversity from a classification of diversity shown in Appendix C (Senior Executives's Questionnaire).

Categories of Industry

The Fortune directories classify the companies (1000 largest United States industrial corporations) into 28 industry groups based on the industry code numbers established by the United States Office of Management and Budget and issued by the Federal Statistical Policy and Standards Office. However, the firms in this study were classified into four broad categories on the basis of their principal industry (representing the largest percentage of company sales) as shown below:

1. Consumer nondurable goods industries
2. Consumer durable goods industries
3. Capital goods industries
4. Producer goods (raw materials, components and supplies) industries

The above classification scheme is derived from Khandwalla (1977) and Schoeffler et al. (PIMS Study, 1974). The survey respondents were therefore asked to identify their industry from among the above four categories.

Categories of Production System

The following classification system, developed by Woodward (1965), is used in the study:

1. Unit and small batch production

2. Large batch and mass production

3. Continuous process production

As mentioned earlier in Chapter II the reason for choosing Woodward's production system classification scheme is that it is the least abstract and can be easily explained. Therefore, it was hoped the practicing executives would be able to identify their predominant production system without the need for lengthy explanation of terms used.

Categories of Organizational Structure

In Chapter II the relevant literature pertaining to the strategy-structure relationship has already been reviewed. Some corporate growth and development paradigms developed by the Harvard researchers were also briefly described earlier. Analyses of the history of American and West European industrial enterprises have shown a gradual but unmistakable evolution of organizations from functional to multi-divisional forms. With the increase in the volume and diversity of product-market activities successful firms have tended to make suitable changes in the design of their organizational structure.

A recent effort at building a conceptual model of different types of organization is exemplified by Galbraith and Nathanson (1978, p. 118). Their model of five organizational types relates the organizational form to strategy and structural characteristics as outlined in Table XII. Besides structure and strategy the model also describes some other characteristics (e.g. R&D, inter-unit and market relations, performance measurement, leader style and control), of each organizational form. As Galbraith and Nathanson (1978) point out:

TABLE XII

STRATEGY AND STRUCTURAL CHARACTERISTICS
OF FIVE ORGANIZATIONAL TYPES

Type of Organization	Strategy	Organization
1. Simple	Single Product	Simple Functional
2. Functional	Single Product and Vertical Integration	Central Functional
3. Holding	Growth by Acquisition Unrelated Diversity	Decentralized Profit Centers Around Divisions Small Headquarters
4. Multi-Divisional	Related Diversity of Product Lines Internal Growth Some Acquisition	Decentralized Product or Area Division Profit Centers
5. Global	Multiple Products in Multiple Countries	Decentralized Profit Centers Around Worldwide Product or Area Divisions

Source: Derived from Galbraith, Jay R. and Daniel A. Nathanson. Strategy Implementation: The Role of Structure and Process. St. Paul, Minn.: West Publishing Co., 1978, p. 118.

> The firm changes all these characteristics when moving from one form to another. Collectively, the characteristics constitute the way of life of the organization. They form an integrated whole which fit together to permit effective implementation of the respective strategies. When the organization changes strategies, these characteristics must be disengaged, realigned, and reconnected. This change constitutes a metamorphosis (p. 120).

Rumelt (1974, pp. 33-40), for his longtitudinal study of the evolution of large U.S. industrial companies developed the following five categories of organizational structure:

1. Functional
2. Functional with one or more product divisions or subsidiaries
3. Product Division
4. Geographic Division
5. Holding Company

Rumelt's classification system was used in this study (see Appendix C - Senior Executive's Questionnaire) to enable survey respondents to identify their firm's organizational structure.

Perceived Environmental Uncertainty

The definition and operational measure of this variable is adopted from Miles and Snow (1978). According to Miles and Snow, "perceived environmental uncertainty refers . . . to the predictability of conditions in the organization's environment" (p. 195). It was measured in this study on the basis of their perceived environmental uncertainty questionnaire (see Appendix C - Senior Executive's Questionnaire), which has a 7-point rating scale questions

> . . . that corresponded to six major sectors of the industrial organization's environment: (1) relations with raw material suppliers, (2) competitors' product price, quality and design changes, (3) customer demand, (4) relations with financial

> suppliers, (5) relations with governmental regulatory agencies, and (6) relations with labor unions. These environmental dimensions were suggested by previous theory and research by Dill (1958), Katz and Kahn (1966), Lawrence and Lorsch (1967) and Thompson (1967) (pp. 195-196).

For each subject firm, the PEU (perceived environmental uncertainty) score was computed by adding up the scores of all the twenty-five sectors of the external environment and dividing the sum by 25. The subject firms were then divided into two classes: (1) firms with high perceived environmental uncertainty; and (2) firms with low perceived environmental uncertainty by dichotomizing the PEU scores at the mean value of 4. Thus a firm with PEU score of less than or equal to 4 would have low PEU, whereas a firm with PEU score of greater than 4 would be considered as having high PEU.

Conclusion

The purpose of this chapter has been to explain the definitions and measures of eight key concepts underlying this study's conceptual framework. The schemes for categorizing grand corporate strategy, firm size, corporate diversity, industry, production system, and organizational structure; and the schemes for measuring the relative strategic significance of different organizational functions, and perceived environmental uncertainty have been explained. Chapter IV describes the study's conceptual framework and poses and discusses the research questions investigated by the study.

CHAPTER IV

CONCEPTUAL FRAMEWORK

Introduction

The purpose of this chapter is to describe the conceptual framework which the study will examine. This chapter will include an overview and a separate discussion for each research question investigated by the study. While explaining the nature and the objectives of the study in Chapter I, the study's conceptual framework in a summary form was presented in Figure 1 (p. 6) to provide a bird's eye view of the whole study. Since the definitions and measures of concepts used in the study have already been explained in the previous chapter, the detailed conceptual framework showing the interrelationships between variables involved in the study is depicted in Figure 14.

Overview

The basic assumption of this study is that in an industrial firm seven major organizational functions, namely: (1) General Administration, (2) Production/Operations, (3) Engineering and R&D, (4) Marketing, (5) Finance, (6) Personnel and (7) Public and Government Relations can have significant influence on the effective inplementation of the firm's grand corporate strategy. However, the relative strategic significance of different organizational functions or the strategic mix of organizational functions would be different for firms pursuing different grand

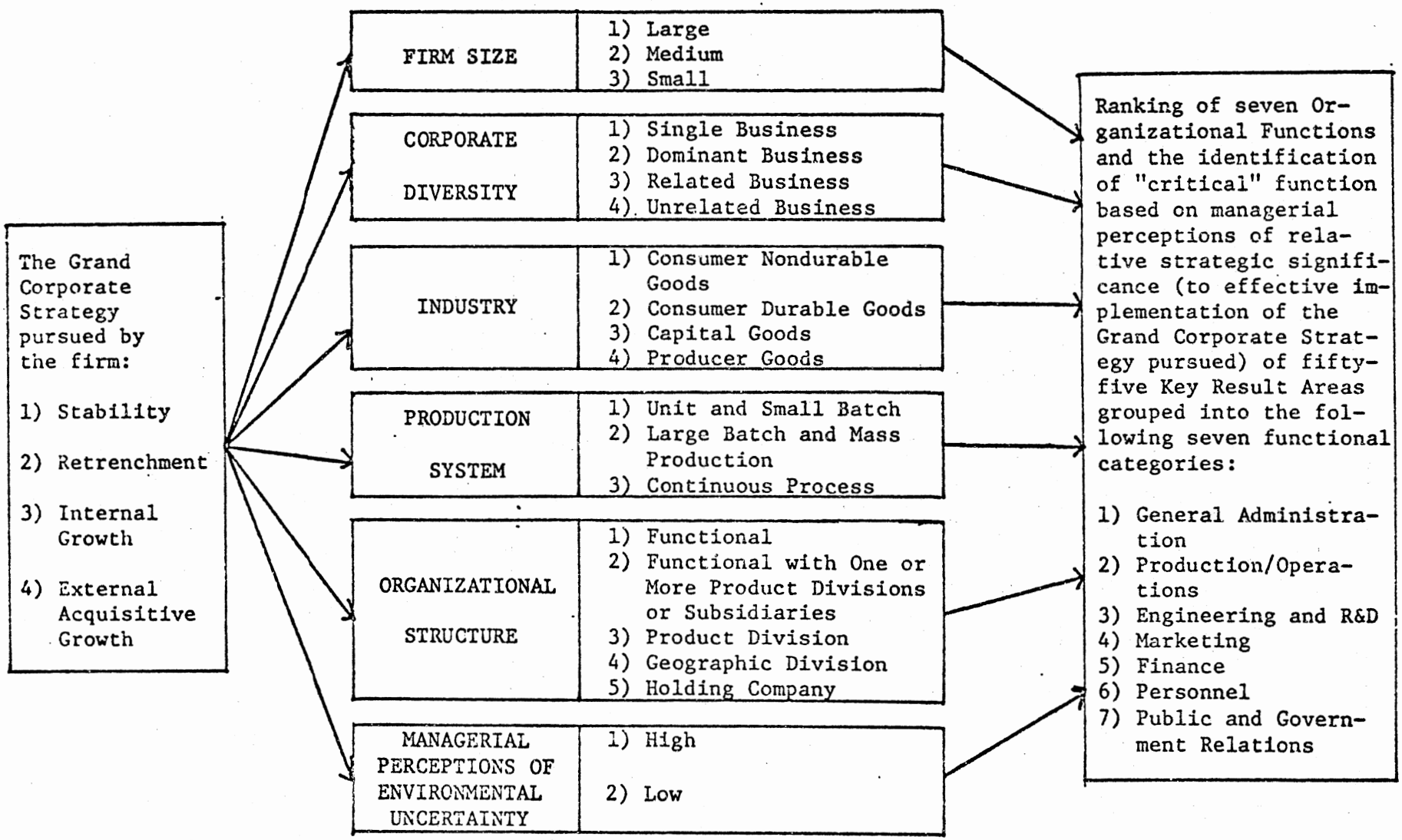


Figure 14. The Conceptual Framework Showing the Interrelationships Between Variables Involved in the Study

corporate strategies. And since no two firms are exactly alike, even for firms purusing identical grand corporate strategy we would expect that the strategic mixes of organizational functions would be different for firms: (a) of different size, (b) with different degree of corporate diversity, (c) in different industries, (d) with different production systems, (e) with different organizational structures, and (f) with different managerial perceptions of environmental uncertainty. The study probes the relative strategic significance of each of the seven functional tasks to the effective implementation of the grand corporate strategy pursued by the firm. This would help us to understand the nature in which the influence of all seven organizational functions in a firm combine. The particular combination of the influences of all the seven functions is what we call the strategic mix of organizational functions. The functional tasks' influence-mix approach to the study of corporate strategy is the central approach of this study.

To the extent that a valid theory has the attributes of explicability, generalizability, replicability and predictability, this study's conceptual framework is not a theory. This study is exploratory, in that the attempt is to develop a better understanding of the concept of corporate strategy. First, the intent is to establish the relationships between grand corporate strategies and the strategic mixes of organizational functions. Secondly, the study will attempt to identify the nature of influence of size, corporate diversity, industry type, production system, organizational structure, and perceived environmental uncertainty, on the interrelationships between the grand corporate strategies pursued and the relative importance of different functional tasks. Thus, the aim of this study is to provide understanding rather

than to provide generalizations or predict causality between different variables involved in the study.

The conceptual framework of the study will now be discussed. The specific areas of study will be discussed later and the research questions presented.

In the process of corporate strategy formulation and implementation, there emerges a means-end chain of relationships and a hierarchy of different phases as shown below (Paine and Naumes, 1974):

1. Basic corporate mission
2. Corporate objectives
3. Corporate goals
4. Corporate strategies and policies
5. Corporate organizational structure
6. Functional objectives, goals, strategies, policies, programs, roles, tasks and structures.

The first three phases provide the ends that the organization seeks to achieve; the last three phases provide the means for achieving these ends. Corporate strategies and policies provide a blueprint, or plans of actions for achieving organizational goals, which are made specific and time-bound. Corporate strategies and policies influence the organizational structure that provides a medium within which the corporate strategies are deployed. The last phase provides for the processes and structures involved in the detailed implementation of corporate strategies pursued by the organization.

Some twenty years ago, Hill (1959) outlined four phases of preparing a long-range profit plan (see Table XIII), in the last phase, he laid down the planning requirements of each of the five principal

TABLE XIII

FOUR STAGES IN LONG-RANGE PROFIT PLANNING

Phase I - Corporate Profit Objectives

- Analysis of record of operations
- Establishment of standards for future profits
- Projection of present operations
- Measurement of extent of need for new products
- Preparation of 5 and 10-year corporate objectives of sales, profits, capital requirements for present and new products

Phase II - Proprietary Directions for Corporate Growth

- Audit of corporate skills, resources and limitations
- Position of company in its total industry structure
- Changing end-use markets, technologies and competitive integration, affecting industry structure and company position
- Alternative directions for company evolution and growth
- Selection of most proprietary directions to maintain and optimize profits

Phase III - Planning New Products

- Selection of product fields to fulfill corporate objectives of Phase I within selected directions of Phase II
- Determination of approach to new fields - by acquisition, internal research, joint ventures, etc.
- Programming of specific product lines.
- Scheduling of realization of new products in relation to financial and management feasibility

Phase IV - Programming Requirements of Business Functions

- Marketing - Focusing market development plans and programming (products, merchandising, pricing, field sales, etc.) on consumer requirements
- Organization - Scheduling, recruitment and development of manpower requirements (management, other personnel) to staff long-range program
- R&D - Relating research and development to divisional and corporate present product maintenance and new product realization.
- Manufacturing - Scheduling further development of present and new plants and low-cost equipment programs
- Financial - Budgeting of capital requirements and development of financial resources
- Planning of Other Requirements

Source: Hill, William E. "Planning for Profits: A Four-Stage Method." California Management Review, Vol. 1 (Spring 1959), p. 32.

business functions, namely, marketing, organization, R&D, manufacturing and finance.

Murdick (1964) advocated corporate planning based on a planning matrix consisting of three orthogonal vectors (or planning approaches) - product planning, elements-of-cost planning and functional planning - with the "corporate mold" providing the basic shape or limitations of the planning matrix. Thus, for every product, planning was done by functions and cost elements with the corporate level planning laying down the principles and policies which provide rational and ethical guidelines for action for attaining company objectives and goals. For functional planning the following tasks were identified: Marketing, Engineering and Research, Production, Employee Relations, and Finance.

According to Vancil and Lorange (1975) the process of formulation of corporate strategy, business strategy, and functional strategy takes place at the three organizational levels: headquarters, division, and department, respectively.

> The planning processes leading to the formulation of these strategies can be labeled in parallel fashion as corporate planning, business planning, and functional planning . . . In functional planning, the departments develop a set of feasible action programs to implement division strategy, while the division selects - in the light of its objectives - the subset of programs to be executed and coordinates the action programs of the functional departments. Strategy formulation involves selecting objectives and goals for each functional area (marketing, production, finance, research, and so on) and determining the nature and sequence of actions to be taken by each area to achieve its objectives and goals. Programs are the building blocks of strategic functional plans (p. 82).

Hofer (1973) also describes the "strategy set" as consisting of firm's objectives, strategy and functional policies.

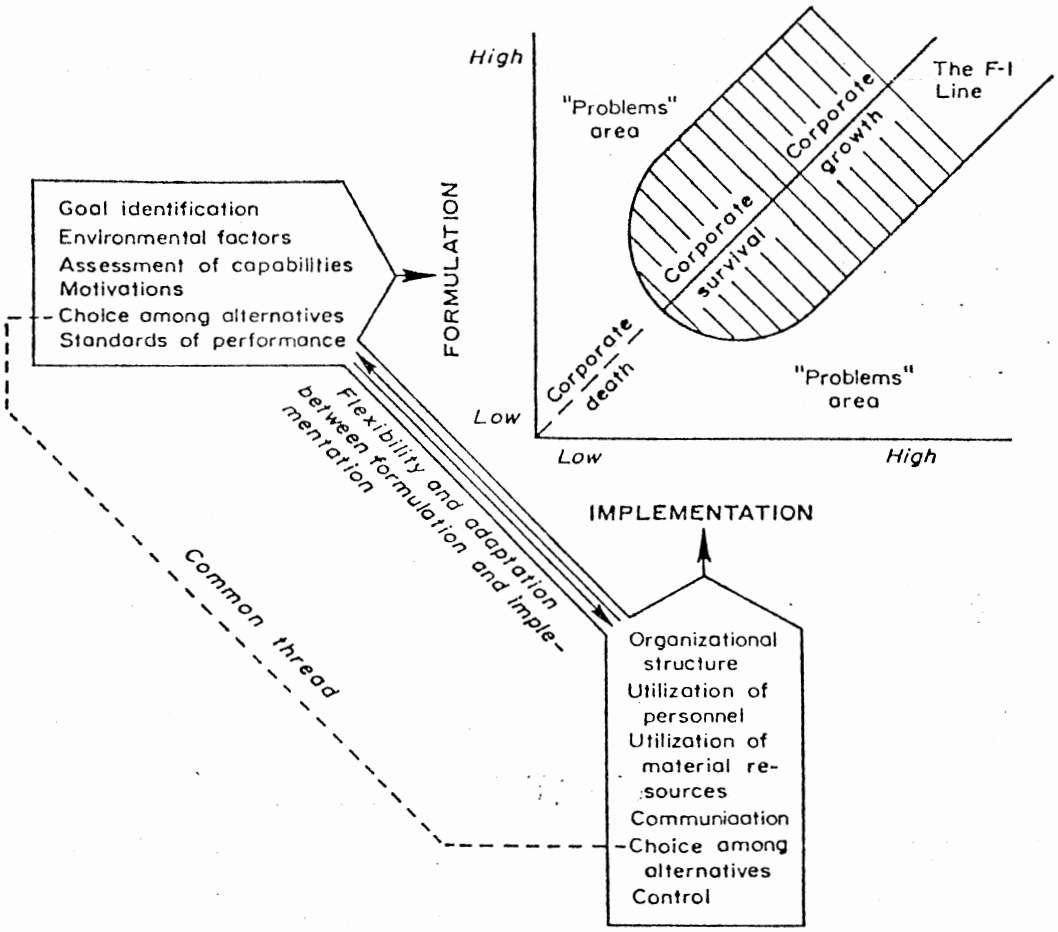
The strategic planning phase does not end with the formulation of strategy. It has been said that for achieving any objective one has to

do two things: (1) make a plan and (2) make that plan work. President Carter, now in the third year of his office, has learned at great cost that making his plans work is much more difficult and at least as crucial (if not more) as developing the plans. A plan or a strategy, until it is properly implemented, remains nothing but pious intentions, laudable aspirations or virtuous ends. Therefore, a strategy or a plan of action, in and of itself, is not capable of self-implementation. Thus, strategy-implementation is as important as strategy formulation. In fact, most of the issues pertaining to implementation are interrelated with formulation. As Learned et al. (1969) observe,

> . . . in real life the process of formulation and implementation are intertwined. Feedback from operations gives notice of changing environmental factors to which strategy should be adjusted. The formulation of strategy is not finished when implementation begins (p. 571).

Mason, Harris and McLaughlin (1971) have developed a framework based on the dual axes of strategy formulation and implementation. The conceptual scheme illustrated in Figure 15, indicates the funnel concept and shows the many different elements which enter into the formulation and implementation of corporate strategy. It also indicates that a firm could be subjectively placed on the Formulation-Implementation (or the F-I) line at the point of convergence of the subjective ratings (high or low) of its strategy-formulation and strategy-implementation processes. If a firm is positioned farther out on the line (high ratings for both formulation and implementation), it is more likely to be a growing and successful firm. Conversely, a more close-in positioning of a firm (low ratings for both formulation and implementation) spells out impending failure.

According to Steiner and Miner (1977, p. 608),



Source: Mason, R. H., J. Harris and J. McLaughlin. "Corporate Strategy: A Point of View." California Management Review, Vol. 13 (Spring 1971), p. 11.

Figure 15. The Formulation - Implementation Line

"implementation encompasses all functions of management, of both strategic and operational management." They identified four important characteristics of policy/strategy implementation:

> First, it is clear that the focus is on design and integration of major mechanisms, philosophies, structures and personal interrelationships. Second, many different disciplines are involved in the design, operation and use of integrating systems. Third, conflicts inevitably arise and must be solved . . . Fourth, the discharge of responsibilities listed requires the exercise of all functions of management (emphases provided) (p. 609).

Thus, the designing of the organization structure merely sets a stage for organizational implementation of strategy in a very broad sense. The development of functional goals, strategies and policies is necessary to make sure that the corporate strategy is implemented at all levels in the organization. The extent of formalization of functional policies is bound to vary with the size, diversity and complexity of the firm. As Glueck (1976) points out:

> . . . companies have policies about every major aspect of the firm (operations, finance, marketing, etc.) as well as general management. . . The minimal policies which must be developed are the key functional decisions necessary in the following areas: (1) operations, (2) finance and accounting, (3) personnel, (4) marketing and logistics, and (5) research and development (p. 234).

According to Hake (1974), the preparation of an overall corporate plan requires that a firm be divided into the following separate planning areas and that a plan be prepared for each such area: (1) marketing, (2) finance, (3) product development, (4) production, (5) organization, and (6) manpower.

Functional specialization in business organization dates back to the time when people perceived distinct advantages in operationalizing the concepts of specialization and division of labor in all areas of

human activity. It also provides for an effective device to obviate the problems inherent to our "bounded rationality" (March and Simon, 1958). Moreover, since every functional task enacts its own relevant sub-environment (Weick, 1969, 1977), the problem of effective management of the organization-environment interaction for the organization as a whole is broken down into certain specific manageable components, and each of which is dealt with in a more specialized and competent manner.

It is also important to bear in mind that divisionalization (on product or geographic lines) of an organization structure does not do away with the functional management concept. On the contrary, it adds another layer of functional managers to each division. Similarly, the matrix from involving project or product management creates another function (of liaison or coordination) within the general management category.

The functional management concept is therefore very much an organizational reality and furnishes a useful approach to the study of many organizational problems.

The strategic significance of each of the seven organizational functions in this study is not directly determined through managerial perceptions. It is, on the other hand, derived from the managerial perceptions of strategic significance of key result areas in each of the functional tasks. These key result areas reflect nothing but the functional goals, strategies and policies necessary for effective implementation of corporate strategy.

It is conceptualized in this study that for each of the four grand corporate strategies, the strategic significance of key result areas in different functional tasks is different. However, it is recognized

that these relationships are influenced by a vast variety of organizational and environmental variables. The "total" theory to explain and predict such relationships in terms of the influence of all possible mediating variables, cannot be developed on the basis of our existing knowledge. All mediating variables are not of equal importance nor are they all relevant to the study's specific research objectives. Therefore, the influence of only six mediating variables (size, corporate diversity, industry, production system, organizational structure and perceived environmental uncertainty) on interrelationships between the effective implementation of grand corporate strategy and the relative strategic significance of key result areas in different functional tasks, has been made the subject of this study. Besides, the influence of these mediating or contextual variables have been shown by the literature as being highly significant in a study of this nature. The underlying assumptions of the theory of this study are derived from the conceptual discussion covered earlier in this sub-section along with the literature reviewed earlier in Chapter II.

Grand Corporate Strategy and Relative Strategic Significance of Different Organizational Functions

Glueck (1976, p. 265) concludes from Steiner's (1969a) study of strategic factors for current and future business success that "the crucial aspects of strategy that need to be evaluated are (1) Management quality and development, (2) Environmental appraisal, especially market tidings, and (3) Financial return." Therefore, Steiner found general management, marketing and finance as strategically significant organizational functions. Godiwalla (1977) on the other hand,

identified marketing, finance and production as three functional managements having the greatest influence upon the overall corporate strategy; however, he excluded administration or general management from his definition of functional managements.

The firm's grand corporate strategy (both past and current) determines the nature of the firm's relevant environment and the resulting organizational states, it also suggests the range of viable options for the firm's organization and management. Allen (1972) found that the environmental requirements, organizational choices, and the resulting organizational states were significantly different for high performing conglomerates and vertically integrated companies. In his research study of corporate acquisitions, Kitching (1967) found that finance had the highest payoff in all types of mergers except one - horizontal mergers - where marketing had the highest payoff followed very closely by finance. Besides, in finance it was easiest to release synergy in all types of mergers except concentric technology mergers. Heau (1976) identified production and finance as the critical functions for firms pursuing vertical integration and conglomerate diversification, respectively, Miles and Snow's (1978) typology of organizations indicate that each organization type has its own strategy for responding to the environment, and has a particular combination of technology, structure, and management process consistent with its strategy.

These research studies fail to address to the basic research question of this study, namely: Is the relative importance of different functional tasks different for firms pursuing different grand corporate strategies? However, the available literature does seem to indicate that the senior executives of industrial firms pursuing

different grand corporate strategies would have different perceptions about the relative importance of different functions in their firms. The Research Question 1 outlined below seeks to develop a normative framework, grounded in sophisticated description, of effective prioritization of strategic organizational functions for different grand corporate strategies.

Research Question 1

Is the relative stragetic significance of the seven different organizational functions different for firms pursuing different grand corporate strategies?

Strategy, Size and Strategic Mixes of Organizational Functions

Steiner (1969a), did not analyze the strategic factors for business success differently for firms of varying size. Godiwalla (1977) found finance to be the "strategic functional management" for large size firms (sales exceeding $250 million) and marketing to be the "significantly strategic functional management" for both small and medium size firms. Again, he excluded general management from the definition of functional managements.

According to the organization theory literature, size of the organization has a significant influence on the various strategic and structural variables. Size in most cases may be a function of age, organization's past strategies and performance, and the stage of the organizational life cycle. Size is also interrelated with the structure of the firm's industry as also the firm's technology and capital

intensity. Size also affects the environmental complexity and the organization's structural design and the management processes to deal with the complexity and uncertainty, since for most large industrial firms environmental contingencies may interact with scale contingencies. The pertinent organization theory literature reviewed in Chapter II emphasizes the importance of size as a crucial contextual variable in any corporate strategy research. Research evidence seems to indicate that even for firms pursuing identical grand corporate strategy there would be differences in the managerial perceptions of the strategic mixes of organizational functions in firms of different size. Therefore, Research Question 2 seeks to establish the relationship between the type of grand corporate strategy pursued and the identity of functional areas perceived to be strategically significant for effective strategy-implementation in firms of different size.

Research Question 2

For firms pursuing a particular grand corporate strategy, is the relative strategic significane of the seven different organizational functions different for firms of different size?

Strategy, Corporate Diversity and Strategic Mixes of Organizational Functions

Rumelt (1974) in his study examined the relationship between diversification strategy and organization structure and the association between these two key variables and economic performance in large American industrial corporations. Other researchers inspired (like Rumelt) by Chandler's strategy-structure thesis, have also studied the

impact of corporate diversity on organizational structure and performace.

A high degree of corporate diversity (itself the result of past strategies and performance) means that the organization is simultaneously operating in many different product-market domains. As Khandwalla (1977, p. 337) points out: "Typically but not exclusively, diversified organizations tend to have highly variegated environments." The degree of corporate diversity is also related to the organization's internal structure, decision-making processes, environmental complexity and uncertainty, and the nature of boundary-spanning activities.

Kitching (1967) in his study of firms (45% of which were conglomerates - unrelated business firms) following external acquisitive growth strategies found that effective management of finance function is very crucial to the success of mergers.

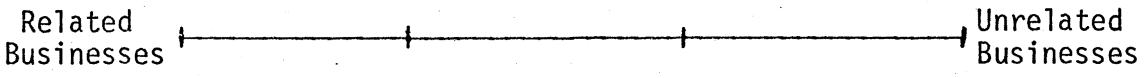
Allen (1972) found that the high performing conglomerates (unrelated business firms) and vertically integrated firms (probably dominant business firms) were faced with different organizational choices and the resulting organizational states.

Fouraker and Stopford (1968) found that the organizations pursuing multinational growth strategy tend to have a highly diversified domestic business with a proven R&D leadership.

Heau (1976) observes:

> . . . corporate structure in terms of corporate staff, information flow and corporate culture is presumably related to strategy defined in terms of product relatedness. The more related the businesses (vertical integration being the extreme case) the larger the corporate staff, the more operation-oriented the information flow and the more industry-minded top management. The more unrelated the businesses (conglomerates being here the other extreme), the smaller the corporate staff, the more financially-oriented the information flow and the corporate structure (Ch. IV, p. 10).

For each class of firms, the corporate culture or the orientation of top management was identified as follows:



Vertically Integrated	Technology Diversifies	Market Diversifiers	Conglomerates
Industry (capacity)	Technology	Marketing (market segmentation, market share)	Financial (product/market portfolio)

With the increasing trend toward milti-plant operations, especially in large multi-industry and multi-national firms, the benefits of financial synergy seem to outweigh the economies of scale in production, marketing and management. According to Pohl (1973), there is a noticeable trend toward an increase in direct involvement of the chief financial officers in the strategic issues handled by the top management.

In Miles and Snow's (1978) typology of organizations, each type has its own strategy. Thus, for example, "Defenders" organizations are risk-avert outside their narrow product-market domains, whereas "Analyzers" organizations pursue growth strategies in concentrically related areas. One would therefore find differences in the structural characteristics, corporate diversity and management processes in these two types of organizations.

However, no research seems to have focused on identifying the strategic mixes of organizational functions for effective implementation of grand corporate strategies in firms with different degrees of corporate diversity. Therefore, our area of inquiry would be: For firms pursuing a particular grand corporate strategy, are the strategic mixes of organizational functions different for firms with the varying degrees

of corporate diversity? For instance, if we consider two firms pursuing internal growth strategy, one of which is a "single business" firm whereas the other is a "related business" firm; can we expect their top managers to prioritize their strategic organizational functions in the same or different manner? Research Question 3 is stated below.

Research Question 3

For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms with different degrees of corporate diversity?

Strategy, Industry and Strategic Mixes of Organizational Functions

Miles and Snow (1978, p. 196) in their study of electronics and food processing industry developed the concept of "strategic function" as that "functional area within the organization considered by members of the dominant coalition to be of strategic importance to successful competition in their industry." The chief executives' ranking of top three strategic functions (by industry) and their equivalent counterparts in terms of this study's classification of functional areas are shown below:

Food Processing	Electronics
Sales and marketing (marketing)	Sales and marketing (marketing)
Production	Research and development (engineering and R&D)
Long-range planning (general admin.)	Product engineering (engineering and R&D)

Lawrence and Lorsch (1967b) found "that marketing had more influence than production in both container-manufacturing and food-processing firms, apparently because of its involvement in innovations and with customers" (Hickson et al., 1971, p. 219).

The influence of industry type as a contextual variable may in fact be a composite influence of interaction between size, technological, environmental, and structural contingencies. But industries differ primarily in their environmental complexity and uncertainty. And therefore, the works of organization theorists like Thompson, Burns and Stalker, Emery and Trist, Lawrence and Lorsch, and Duncan, cited earlier in Chapter II provide a strong (albeit indirect) support for the inclusion of industry type as a mediating variable in any corporate strategy research.

In the absence of any multiple industry studies, it is not possible to test a specific hypothesis; therefore, Research Question 4 presents an area of inquiry: Is the functional tasks' strategic significance mix for a particular grand corporate strategy different for different industries?

Research Question 4

For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms in different industries?

Strategy, Production System and Strategic Mixes of Organizational Functions

Technology and its relationship to other key organizational and

environmental variables have been the subject of numerous empirical studies in organization theory. Woodward (1965), in one of the earliest studies of this kind, examined the relationship between technology (production system) and organizational structure. In that study, Woodward also tried to identify the "critical function" from among three functions--development, production and marketing--for each type of production system. She classified the production systems into three broad categories and identified the critical function (or strategically significant functional area) for each type of production system:

Types of Production System	Critical Function
1. Unit and small batch	Development (Engineering and R&D)
2. Large batch and mass manufacturing	Production
3. Process	Marketing

According to Woodward (1965, p. 128) for each type of production system "there seemed to be one function that was central and critical in that it had the greatest effect on success and survival." As far as the applicability of Woodward's findings to this study is concerned, two points need to be noted: (1) Woodward included only three functions and (2) she did not distinguish between the firms pursuing different grand corporate strategies, which although irrelevant to her study, is the main point of this study.

Godiwalla (1977) in his study of functional managements' (excluding general management) influence on overall corporate strategy found that for firms having "unit and small batch" production system, marketing was the significantly strategic functional management; this was also the case for firms whose predominant production system was

large batch and mass manufacturing. But for firms having process type of production, marketing was found to be the significantly strategic functional management.

Kitching (1967) found technology to be the function in which it was easiest to release synergy in concentric technology mergers.

Heau (1976) identified engineering and R&D as the critical function for firms pursuing growth strategy of concentric technology diversification.

Perrow (1970) classified organizations into four technology types and contended that problems faced by each organization type are different and therefore the technological and structural requirements of each are also different.

Thompson (1967) developed a series of propositions about organizations with technology as a major determinant of structure. He classified technology into three types - mediating, intensive and long-linked, and suggested that the efforts needed to coordinate and control the organization's "technical core" are different for each and therefore the technology employed significantly impacts the structural dimensions and processes.

Khandwalla(1974) established a special form of technology-strategy-structure relationships, where the use of mass-output technology leads to the pursuit of vertical integration (a growth strategy) which in turn requires certain changes in the organizational structure and decision-making.

The organization's primary production system influences the strategic, structural and scale aspects of the organization, it also affects the strategic mix of organizational functions through its impact on the

degree of labor intensity., capital intensity (PIMS study, 1974), knowledge (and therefore R&D) intensity, and energy intensity.

The primary production system used in the organization determines the nature of its technological subenvironment as also the pattern of organization's strategic responses to that subenvironment (Lawrence and Lorsch, 1967).

The pertinent organization theory literature, therefore, highlights the importance of production system as a crucial contextual variable in a study of this type. Research evidence seems to indicate that even for firms purusing identical grand corporate strategy there would be differences in the managerial perceptions of the strategic mixes of organizational functions in firms having different production systems. Research Question 5 attempts to examine the relationship between the type of grand corporate strategy pursued and the identity of functional areas perceived to be strategically significant for effective strategy-implementation in firms having different production systems.

Research Question 5

For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms with different production systems?

Strategy, Organizational Structure, and Strategic Mixes of Organizational Functions

The interrelationship between diversification strategy and organizational structure has been a subject of many researchers notably from Harvard Business School. Chandler (1962) showed how different

strategies posed different degree of administrative complexity and therefore tended to require different types of organizational structure, in most cases the organization structure was found to follow the growth strategy pursued by the firm.

Fouraker and Stopford (1968) found that organizations pursuing multinational growth strategy tend to have decentralized, divisionalized structure and the ability to produce international general managers capable of controlling and guiding a highly diversified organization.

Heau (1976) grouped the firms into four different types of strategy categories and contended that a comparison along their corporate organizational structure would show differing tendencies; in particular, the functions existing at the top would be different for all four types.

Pitts (1977) found systematic structural differences between internal diversifiers and acquisitive diversifiers.

Khandwalla's (1974) study established a special form of technology-strategy-structure relationships, where the adoption of mass-output technology leads to the pursuit of vertical integration, which in turn requires certain changes in the organizational structure and decision-making.

Miller and Springate (1978) found that in product-divisional organizational structures comparable decisions tend to be made at lower levels of the organization than in the functional organizational structures.

Litschert and Bonham (1978) considered the level of organizational slack as a major determinant of the contingent nature of strategy. In their conceptual model of strategy formation, organizational slack as

a crucial moderator variable influences the necessary fit between structure and contextual variables and ultimately the causal direction of the strategy-structure relationship.

The "stages of growth and development" theorists (Cannon, Thain, Tuason, Galbraith and Nathanson, and others) have developed conceptual models of corporate life cycle with distinct stages of corporate development. The strategy and structural characteristics of firms in different stages of growth are different.

The crucial significance of organizational structure in corporate planning emanates primarily from the fact that corporate planning, as the name suggests, is essentially an organization-wide activity rather than something done merely by the corporate planning staff. The effective implementation of corporate strategies, therefore, requires that the organization structure must fit the firm's planning needs. As Koontz (1976, p. 47) points out: "The organizational structure should be designed to support the accomplishment of goals and the making of decisions to implement strategies." According to Richards (1978), the organizational structure is important in the formulation and implementation of strategy,

> . . . because the locus of planning, goal setting and decision-making is dependent upon the type of structure in which the planning is done. . . . Additionally, there is a correspondence between the hierarchy of organizational structure and the hierarchy of strategies (p. 25).

The relationships between corporate strategy and structural and administrative decisions (advocated by Chandler, Rumelt and others); and the relationships between a firm's structural and administrative decisions and its environmental complexity and uncertainty (advocated by organization theorists, like Burns and Stalker, Woodward, Lawrence

and Lorsch, and others) are gradually emerging into a contingency theory of the firm (Ward, 1976), where the organizational administration (structure, decision-making process, etc.) is a function of the firm's strategic choice, which in turn is a function of the environment and the corporate resources.

The pertinent literature from both business policy and organization theory, therefore, seem to indicate that the influence of organizational structure as a mediating or contextual variable, would be highly significant in a study of this nature. Thus, we could expect differences in the strategic mixes of organizational functions in firms pursuing identical grand corporate strategy but having different types of organizational structures. Hence, for Research Question 6 our area of inquiry would be: For the firms pursuing a particular grand corporate strategy, is the strategic significance of different organizational functions different for firms with different types of organizational structure? In other words, if we consider two firms pursuing, say, internal growth strategy, one of which is organized on functional lines, and the other has a product-divisional organization structure; can we expect their top managers to prioritize their strategic organizational functions in the same or different manner? Research Question 6 is stated below.

Research Question 6

For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms with different types of organizational structures?

Strategy, Perceived Environmental Uncertainty, and Strategic Mixes of Organizational Functions

Organization-environment interaction has been a favorite theme of organization theorists for quite some time, however only recently the researchers have come to a conclusion that organizations do not respond in a predictable manner to their given external environments: in fact organizations "enact" (Weick, 1969, 1977) or shape their own environments through a series of strategic decisions culminating into an identifiable pattern or configuration. Thus, if we study two corporations over a period of time and identify the strategy-set of each, we can determine the nature of their external environments as also ascertain the ways in which the top managers relate their firms to their respective environments. A firm's product-market domain primarily determines the linkage between the firm and its external environment. The determination of the product-market domain is itself a matter of a series of conscious strategic choices or decisions.

Organization-environment interaction is perhaps one area where the fields of organization theory and strategy/policy show a great deal of similarity. After defining corporate strategy, Aguilar (1967) goes on to add that:

> Strategy should be responsive to both the risks and opportunities confronting the company in its external environment and the strengths and weaknesses--present and potential--within the firm itself (p. 4).

According to Taylor (1973b, p. 37), strategic decisions are "concerned with effecting major changes in the 'linkages' between the enterprise and its environment." A firm's grand corporate strategy therefore

sets the stage for organizational adaptation to its environment.

Lorsch (1973), commenting on the Lawrence and Lorsch (1967) study states that

> . . . each functional unit (e.g. sales, production, and research) must have internal characteristics consistent with the demands of its particular sector of the total environment . . .[and] . . . the total organization must achieve, in spite of the differentiation among its units the pattern of integration required by the total environment (p. 132).

According to Hickson et al. (1971, p. 220): "The more a subunit copes with uncertainty, the greater its power within the organization." The source of power, therefore, lies in the subunit's ability to cope effectively with high uncertainty and in its role of a "shock absorber" for the whole organization.

Salancik, Pfeffer and Kelly (1974, p. 55) contend that the source of influence in organizational decision-making is determined "through a communication process which serves to define the source of uncertainty and to locate individuals capable of coping with the uncertainty."

One might well ask: Is the functional areas' influence mix approach relevant to the study of organization-environment interaction? The relevance of this approach becomes obvious when one considers each functional area as a specialized internal sub-system organized to interact effectively with its relevant (external) sub-environment. Therefore, the nature of a firm's relevant (or enacted) sub-environments determines the relative strategic importance of different functional tasks. And the recognizable pattern of organization's responses to environmental issues, according to Miles, Snow and Pfeffer (1974), Child (1972a), and Richards (1973), is determined not so much by the objective characteristics of organization-environment interactions as

by the managerial perceptions of the strategic significance of key result areas in different organizational functions.

Miles and Snow (1978) examined the relationship between the managerial perceptions of environmental uncertainty and the relative strategic importance of different organizational functions and found some support for the contention

> . . . that when the organization faces high environmental uncertainty, it places greater emphasis on externally oriented functions such as market research and product development . . . Conversely when an organization faces low uncertainty, internally oriented function (such as production) assumes strategic importance (p. 213).

Therefore, both high and low perceived environmental uncertainty tend to produce identifiable but different strategic mixes of organizational functions. When the perceived uncertainty in a sub-environment is high, the functional area responsible for managing the interface with that sub-environment has to concentrate on effective avoidance/reduction of critical uncertainties to ensure the firm's survival and growth. Therefore, in the firm's internal power structure and the resource-allocation process that functional area is likely to acquire a commanding position.

However, in this study, perceived environmental uncertainty is not the independent variable. The research evidence cited earlier does not tell us whether for the firms pursuing a particular grand corporate strategy, the ranking of organizational functions in terms of their strategic significance would be different for firms with high and low perceived environmental uncertainty. Research Question 7 is stated below.

Research Question 7

For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms with different degrees of perceived environmental uncertainty?

Conclusion

The state of our existing knowledge in the field of business policy and corporate strategy, precludes us from setting forth with any reasonable degree of certainty "a contingency theory or even a set of limited domain theories" (Steiner and Miner, 1977, p. 781). Conceptually, theoretically, as well as empirically, business policy is a newly emerging discipline, which highlights the need for more exploratory research in the early stages of its development as the field gradually moves toward conceptual and theoretical maturity. As Galbraith (1967) in his controversial book "The New Industrial State" points out:

> Few subjects of earnest inquiry have been more unproductive than a study of the modern large corporation. The reasons are clear. A vivid image of what should exist acts as a surrogate for reality. Pursuit of the image then prevents pursuit of the reality (p. 72).

As Steiner and Miner (1977) point out, the research in any field generally goes through three distinct phases.

> As research in a field develops it tends to appear first in the form of surveys dealing with practice, attitudes, and intentions; then in the form of correlational or correlational-type analyses relating key variables to each other; and finally in the form of experimental studies that establish causal relationships. The field of policy-strategy is now moving into the second of these phases, although certain of its subareas are still in the initial survey phase (p. 781).

Therefore, we have a long way to go before we can say with confidence to a top manager: If your firm has adopted grand corporate strategy X, if it is large, is a dominant business undertaking, is in consumer non-durable goods industry, has continuous process production system, is organized on product division lines and if the top management's perception of environmental uncertainty is high; then implementation of your grand corporate strategy X will be more effective and successful if you closely monitor and evaluate performance in the key result areas in strategically significant or critical functions Y_1 and Y_2. For we have yet to develop a theory embodying an empirically tested set of normative contingency hypotheses in the area of effective implementation of different grand corporate strategies.

This study, which is a logical extension, amplification and refinement of similar studies by Steiner (1969a), Godiwalla (1977), and Miles and Snow (1978), raises (and seeks answers through empirical analysis) a set of seven specific research questions. This exploratory study attempts to develop a better understanding of strategic mixes of organizational functions for different grand corporate strategies and thereby hopes to contribute to the development of substantive area of policy/strategy.

To conclude, the theoretical background of this study's conceptual framework, derived from the relevant parts of Chapter II on literature review, has been discussed in this chapter and research questions in the seven specific areas of study have been presented. The research methodology, related to the data collection and the data analyses for investigating the research questions, is presented in the next chapter.

CHAPTER V

RESEARCH METHODOLOGY

Research Design

Research in the field of corporate strategy is conceptually and methodologically more difficult than in other more developed fields. The knowledge about corporate strategy is available in many different form and styles. As Bowman (1974) observes:

> Synthesis or design, especially in the policy of an organization, however, requires the consideration of most/many of the aspects of the situation . . . Many facts about the world and about a firm are important for making decisions about corporate strategy. It is rather difficult to attempt many generalizations . . . in a field as imperfect as corporate strategy. Much of what now exists as an academic field of corporate strategy (and business policy) should probably be thought of as 'contingency theory.' The ideas, recommendations, or generalizations are rather dependent (contingent) for their truth and their relevance on the specific situational factors (p. 36).

According to Bowman, there are many different approaches to the understanding and knowledge of corporate strategy (see Figure 16). In view of the embryonic nature of the field, his recommendation is to adopt them all.

For this business policy thesis, the nature of policy/strategy area and the current state of its development imposes certain inherent limitations on the choice of appropriate research design. The theory-building in this area favors inductive, creative, intensive field research.

	Less Formal	More Formal
Practice	Cases	History
Methodology	Analytical Approach	Management Science
Theory	Behavioral	Economics

Source: Bowman, Edward H. "Epistemology, Corporate Strategy, and Academe." Sloan Management Review, Vol. 15 (Winter 1974), p. 36.

Figure 16. Organized Taxonomy of Approaches to the Understanding, and Knowledge of Corporate Strategy

Kerlinger (1973, p. 405) defines field studies as "ex post facto scientific inquiries aimed at discovering the relationships and interactions among sociological, psychological, and educational variables in real social structures." Since this research study does not involve the manipulation of independent variables, the experimental research (involving laboratory or field experiments) would not be appropriate. Ex post facto research by definition is "systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable" (Kerlinger, p. 379). The data for this field study were obtained through the use of survey-type instruments (mail questionnaires).

This study is exploratory in nature and is intended to reveal more fully the relationships between the variables involved. The exploratory type of study "seeks what is rather than predicts relations to be found;" such a study has "three purposes: to discover significant variables in the field situation, to discover relations among variables and to lay the groundwork for later, more systematic and rigorous testing of hypotheses" (Kerlinger, 1973, p. 406).

Sample Organizations

The sample organizations for this study consisted of 1000 largest United States industrial corporations as listed in the 1978 Fortune Directories. The list therefore included only manufacturing industries and did not include banking, financial, utilities, transportation, wholesale and retail trade, and other service industries.

Data Collection Procedures

Most business policy research studies rely on field surveys for collection of relevant data. Field surveys are normally classified on the basis of the following methods used for obtaining information:

1. Personal Interview
2. Telephone Interview
3. Mail Questionnaire
4. Controlled Observations

The information obtained may or may not be supplemented by the examination and collection of available (secondary) data germane to the study.

A field survey utilizing personal interview was ruled out because of inordinately high costs and the length of time required. Also, the inaccessibility of data sources because of the reluctance on the part of senior executives to grant interviews was an important consideration. A telephone survey was also not practical since the nature of the study calls for data which cannot be collected by telephone. The wide geographic dispersion of respondents (the top 1000 United States industrial corporations), nature of the data, and budget and time limitations all dictated a mail survey, which has an additional advantage of giving the respondents a feeling of anonymity and security to respond to questions of highly confidential nature.

The data for the study were collected through mail questionnaires designed to be filled out by senior executives having adequate familiarity with the firm's overall operations and its business environment. The first draft of the questionnaire was tested for question content, question wording and response structure among a group of researchers

familiar with the problems of field surveys in the area of business policy. After this in-house testing, the questionnaire was revised. This revised questionnaire was retested by administering it to a small pilot sample to ascertain the rate and the quality of response.

In the pilot study (by mail questionnaire), an attempt was made to determine the respondents' feelings and reactions to the questioning process and the specific questions in the instrument so that the instrument could then be revised. The intent was to ensure that the respondents understand the meaning and intent of the questions and that the questions themselves are capable of obtaining the information and perceptions sought by the researcher.

The pilot study was necessary to determine the potential for an adequate response rate and to determine the reliability and validity of the survey instrument. As Nachmias and Nachmias (1976, pp. 107-108) point out, "The main problem with mail questionnaires is that of obtaining an adequate response rate . . . The typical response rate . . . for a mail survey is between 20 and 40 percent." A corporate mail survey of "FORTUNE 500" companies by Gaedeke and Tootelian (1976) resulted in a response rate of 22% of which 20.47% accounted for completed questionnaires. In most mail questionnaire surveys in corporate strategy research, the respondents are usually extremely busy and highly-paid corporate executives, and the information sought is highly confidential in nature. The response rate in such surveys varies from 20 to 30 percent. In view of these constraints, a response rate of about 25 percent is expected in a study of this nature.

While designing the mail survey the findings of the research by Gaedeke and Tootelian (1976) were carefully considered. They found

that "negative response toward mail questionnaire surveys were indicated almost three times as frequently as positive ones" (p. 285). Table XIV reveals what corporate executives like most and least about academic mail surveys. Their findings also indicate the importance of different factors in influencing the response rate (see Table XV); the first four factors listed in the table were found to be especially important. Gaedeke and Tootelian conclude that the findings of their study

> . . . indicate that Fortune "500" List may be an 'endangered species' for academicians. The tendency of academicians has been to exploit this rich base of primary data to the point where few if any, benefits are accruing to the recipients of mail questionnaires. If value is to be derived by the recipient, researchers should drastically reduce the frequency of using the "500" List except for highly pertinent survey research that is clearly of benefit to corporate management (pp. 286-287).

The Pilot Study

As stated earlier, various research methodology considerations highlighted the need for a pilot study. The two important objectives of the pilot study were: (1) to determine whether the study would generate enough interest among the senior executives to motivate their participation in the survey, and (2) to determine the reliability and validity of the survey instrument. In their research on academic mail surveys of "FORTUNE 500" companies Gaedeke and Tootelian (1976) found that: (1) 75 out of 94 (or roughly 80%) executive officers considered sender's reputation or position an important factor in influencing the response rate; and (2) "When the respondents were asked for suggestions for improving academic mail surveys, approximately half of the executive officers favored their screening and approval by colleges, universities, or professional associations" (p. 286). Consequently, institutional

TABLE XIV

THINGS LIKED MOST AND LEAST ABOUT ACADEMIC MAIL SURVEYS

Things Liked Most	Number of Responses[a]	Percent
Provides valuable information	21	45.8
Opportunity to help academic community	8	17.2
Displays interest in business/company	7	15.0
Chance to tell company's story	4	9.0
"Feel" for academic thinking	3	6.5
Thought provoking for own company	3	6.5
Total	46	100%

Things Liked Least	Number of Responses[b]	Percent[c]
Inordinate amount of time to complete/ questionnaire too long	47	46.1
Subject matter not relevant to company	25	24.5
Poor questionnaire	22	21.6
Questions too general	11	10.8
Attitude of researcher	11	10.8
Subject or questionnaire too complex	5	4.9
Total	121	118.7%

[a]Respondents were asked: What two things do you like MOST about academic mail surveys?

[b]Respondents were asked: What two things do you like LEAST about academic mail surveys?

[c]Indicates percent of times mentioned by the 102 respondents.

Source: Gaedeke, Ralph M. and Dennis H. Tootelian. "The Fortune "500" List - An Endangered Species for Academic Research." Journal of Business Research, Vol. 4 (1976), p. 286.

TABLE XV

IMPORTANCE OF FACTORS INFLUENCING THE RESPONSE RATE

Factors	Number of Responses				
	Weighted Average[a]	Very Important	Somewhat Important	Not Important	Total Responses[b]
Amount and type of statistical data called for	1.79	80	19	3	102
Stated purpose of survey	1.65	72	21	2	95
Subject matter of survey	1.63	70	23	3	96
Length of questionnaire	1.57	68	21	7	96
Number of open-ended questions	1.29	48	33	13	94
Assurance of confidentiality	1.12	41	30	20	91
Accompanying letter	1.10	32	36	23	91
Sender's reputation or position	1.05	30	45	19	94
Promise to receive survey results	.78	20	38	36	94

[a]Weighted averages are: 2 for very important, 1 for somewhat important, 0 for not important.

[b]Some factors were not marked by the respondents.

Source: Gaedeke, Ralph M. and Dennis H. Tootelian. "The Fortune "500" List - An Endangered Species for Academic Research." Journal of Business Research, Vol. 4 (1976), p. 287.

sponsorship for this study was obtained from the College of Business Administration, Oklahoma State University.

For the pilot study, 60 industrial firms in the southwest region were picked randomly from the Moody's Industrial and OTC Industrial Manuals. Since the quality of academic education and research at Oklahoma State University is better known in the southwest region of the United States, it was thought that the senior executives from this region would be more inclined to participate in the research efforts sponsored by Oklahoma State University. As the pilot study envisaged completion of two long questionnaires from each company and all participating companies were asked to reveal their identities (participants were not provided with a choice to respond anonymously); the respondents' familiarity with the University was an obviously crucial consideration.

During the third week of July, 1978, a xeroxed "form" letter on the official stationery was sent to the chief executive officers of 60 industrial firms individually typed with the CEO's address, individualized salutation, and handwritten signatures of the researchers. Two copies of a six-page questionnaire called "Corporate Strategy Questionnaire for Senior Executives," accompanied by xeroxed "form" cover letters with handwritten signatures of the researchers, were also enclosed. The names of the chief executive officers were obtained from the Moody's Industrial and OTC Industrial Manuals. In the cover letter, the CEO was asked to have two senior executives of his company, familiar with its overall operations and its overall business environment, complete the enclosed two copies of the questionnaire independently of each other, and return the questionnaires in the enclosed self-addressed stamped envelopes. The first mailing yielded only 9 (15%) returns. After a period of seven weeks, a follow-up letter and questionnaires were sent

to the CEOs of those companies that had not yet responded. The cover letters and the questionnaire used in the pilot study are presented in Appendix B.

The pilot survey resulted in 27 returns (45%), of which four companies declined to participate for various reasons, and in case of two firms only one completed questionnaire was received. Thus in case of 21 companies (35%), separate questionnaires were filled out independently by two senior executives. This response rate and the reliability and validity of variables computed from the pilot study data (to be discussed later in this chapter) were thought to be encouraging enough to pursue with the mail questionnaire survey method for the main, nationwide field study.

The Main Study

The pilot study's outcome necessitated the making of certain changes. The senior executive's identification of his firm's grand corporate strategy was considered very crucial to this study. However, some doubts were raised as to whether the executives would identify their grand strategies in a disinterested manner with complete objectivity, since the terms used to label the grand corporate strategies were essentially value-laden. It was therefore argued that very likely most executives would identify growth strategies as their grand corporate strategies, and almost no executive would admit that his firm pursues a retrenchment strategy. Accordingly, most executives would identify grand corporate strategies that they perceive as desirable or respectable rather than grand corporate strategies actually being pursued by their firms. This might give rise to an incongruity

between their identification of grand corporate strategies and their stated perceptions of relative strategic significance of different functional tasks. Also, this possible incongruity arising from a response bias could raise serious doubts about the validity of the research findings. To avoid a potential response bias, the survey instrument used in the pilot study was divided into two separate questionnaires. The first questionnaire, called the Chief Executive Officer's Questionnaire, consisted of a one-page question about the grand corporate strategy pursued by the firm that was to be answered by the CEO himself. The second questionnaire, called the Senior Executive's Questionnaire was to be filled out by a senior executive familiar with the firm's overall operations and its overall business environment. It was thought this would greatly reduce the risk of incongruity between the respondent's assertions (about their grand corporate strategies) and perceptious (of various aspects of their organizations and environments).

Another change was necessary because of a higher-than-average disagreement between the two senior executives in identifying their organizational structure (see Table XVIII). It was thought that an important reason for such disagreement might be due to the fact that the respondents - all busy executives - did not take the time to read the definitions of each type of organization structure. Therefore to minimize the occurrence of this problem in the main study, key words considered to be the distinguishing features of each type of structure were underscored.

Another minor change was made in the question dealing with industry classification. One of the respondents had made a telephone call to

determine what exactly was meant by the term "capital goods" industry. Therefore, the question was modified to include two examples of products from the capital goods industry.

By the third week of December 1978, a xeroxed "form" letter on the official stationery individually typed with the CEO's address, individualized salutation, and handwritten signatures of the researchers was sent to the chief executive officers of the 1000 largest U. S. industrial corporations as listed in the 1978 Fortune Directories, with a copy each of the Chief Executive Officer's Questionnaire and the Senior Executive's Questionnaire and a self-addressed stamped envelope. The cover letter and the two survey instruments are presented in Appendix C. The names and company addresses of the CEOs were obtained from the Standard & Poor's Register of Corporations and the Dun & Bradstreet Million Dollar Directory.

Of the 1000 companies asked to participate in the study, the response indicated an overall return rate of 29% (see Table XVI). The survey resulted in a sample of 249 usable questionnaires (25%). The sample characteristics (profile of the companies responding) are presented in Table XVII. There were no follow-ups in the main study because it was thought that a response rate of 25% yielding 249 usable questionnaires was sufficient for data analyses purposes.

A total of 29 senior executives declined to participate on account of corporate policy or other reasons, the relevant excerpts from some of their letters are reproduced in Appendix D. Many responding firms enclosed a copy of their annual report, some even sent a copy of their Form 10-K Report to the Securities and Exchange Commission.

TABLE XVI

ANALYSIS OF RETURN RATES

	Return Percent
Two completed questionnaires received (usable)	249/1000 = 24.9
Two completed questionnaires received (unusable)	8 /1000 = 0.8
Only one (either the Chief Executive Officer's Questionnaire or the Senior Executive's Questionnaire) completed questionnaire received (unusable)[a]	4 /1000 = 0.4
Unwilling to participate in the survey (non-returned questionnaires):	
(a) On account of corporate policy of not participating in academic mail surveys	19/1000 = 1.9
(b) Other reasons	10 /1000 = 1.0
Overall return rate[b]	290 /1000 = 29.0

[a]In case of anonymously completed questionnaires, each of these two questionnaires might possibly be from the same company.

[b]It is important to recognize the possibility that some of the firms that did not respond may, in fact, have been following their company policies of not responding to any questionnaires.

TABLE XVII

CHARACTERISTICS OF THE SAMPLE
(N = 249)

Grand Corporate Strategy Pursued:	Percent
Stability	11.65
Internal Growth	41.77
External Acquisitive Growth	38.55
Retrenchment	8.03
Firm Size (annual sales revenue):	
$200 million and less	24.10
$201 million to $599 million	33.73
$600 million and over	42.17
Corporate Diversity:	
Single Business Firms	11.24
Dominant Business Firms	22.09
Related Business Firms	46.59
Unrelated Business Firms	20.08
Predominant Production System:	
Unit and Small Batch Production	16.47
Large Batch and Mass Production	55.42
Continuous Process Production	28.11
Principal Industry:	
Consumer Nondurable Goods Industries	29.32
Consumer Durable Goods Industries	13.65
Capital Goods Industries	24.50
Producer Goods Industries	32.53
Firm Organizational Structure	
Functional	11.24
Functional with One or More Product Divisions or Subsidiaries	22.89
Product Division	44.58
Geographic Division	12.85
Holding Company	8.44

Reliability and Validity of Survey Instruments

One of the reasons for undertaking the pilot study, was to determine the reliability and validity of the survey instrument used. In any field study using survey-type instrument, the reliability and validity measures often determine the methodological soundness of the whole study. The concepts of reliability and validity and their relevance to this study would be briefly discussed in this section before a discussion of the reliability and validity measures obtained from the pilot study.

According to Kerlinger (1973, p. 442): "Concern for reliability comes from the necessity for dependability in measurement." There are several techniques for estimating reliability of measuring instruments (Anastasi, 1968, Ch. 4):

1. Test-Retest: administration of measuring instrument at two different times.
2. Parallel-Form (Delayed): administration of two alternate forms of a measuring instrument at two different times.
3. Parallel-Form (Immediate): administration of two alternate forms of a measuring instrument at the same time.

In all the three measures, the reliability coefficient is obtained by computing the correlation between the two sets of observations obtained. Other methods of ascertaining reliability--Split-Half, Kuder-Richardson, and Scorer reliability coefficients--are not relevant to this study. It should also be noted that the coefficient measures (expressed in numbers) give a false sense of precision, as a matter of fact, none of the reliability estimates are foolproof. Thus, in case of Test-Retest method the error variance may

be caused mainly by temporal fluctuations (time sampling). The reliability coefficient, of a measuring instrument used for measuring a dynamic concept (perceived environmental uncertainty, or relative strategic importance of different organizational functions to effective implementation of grand corporate strategy pursued), obviously has a limited utility. In the Parallel-Form (Delayed) technique the error variance may be caused not only by time sampling (temporal fluctuations) but also by content sampling (the two alternate forms of an instrument may not in fact be parallel).

It is therefore hardly surprising that in almost all published research in the area of corporate strategy, the reliability measures are not revealed by the researchers. This does not, however, mean the irrelevance of the concept of reliability, it merely underscores the fact that meaningful reliability measures are difficult to obtain.

In this study, we are concerned with three forms of validity: Face validity, Content validity and Construct validity; since Pragmatic validity is more ex post facto in nature.

In corporate strategy research, where standardized validated measures are not always available, the researcher has at times to devise his own measure perhaps by modifying some existing measures. Such "measures which are applied directly to the phenomenon or behavior in which the researcher is interested are said to have face validity" (Murdick, 1969, p. 48).

It is contended that the instruments used in the study have content validity since they apparently provide a sufficient coverage of the research problems. "If the questionnaire adequately covers the topics which have been defined as the relevant dimensions, we conclude that the instrument has good content validity" (Emory, 1976, pp. 120-121).

The judgmental nature of the determination of content validity becomes obvious. As Emory (1976) further points out:

> First, the designer may, himself, determine the validity through a careful definition of the topic of concern, the items to be scaled, and the scales to be used. This logical process is somewhat intuitive and is unique to each designer . . . A second way to determine content validity is to use a panel of persons to judge how well the instrument meets the standards (p. 121).

As stated earlier, the survey instruments shown in Appendix C are carefully pretested, revised versions.

Anastasi (1969, p. 114) defines the construct validity of a test as "the extent to which the test may be said to measure a theoretical construct or trait." As Murdick (1969, p. 48) points out: "Construct validity must be concerned with both the measuring instrument and the theory underlying the construct." Thus in this study the measures of corporate diversity, production system, organizational structure and perceived environmental uncertainty are borrowed from those used by Rumelt, Woodward, Rumelt, and Miles and Snow, respectively, in the development of their conceptual frameworks pertaining to these variables. Whereas the measures of grand corporate strategy, industry and the relative strategic importance of different organizational functions are derived from the works of Glueck, Khandwalla and PIMS, and Steiner, respectively.

The concepts of validity and reliability are therefore closely interlinked but the operational requirements of the study call for practicality, thus economy (in terms of time and money) and convenience of data collection, along with the accessibility of data sources assuming considerable practical significance. To sum up in Bowman's (1974) words:

> Epistemology is defined by Webster as, 'the theory or science of the method and grounds of knowledge, especially with reference to its limits and validity.' The view taken here is that knowledge about corporate strategy, imperfect as it may be, is available in highly different forms and style. While science (e.g., behavioral theory and economics) is the most formalized and trustworthy means of generating and testing knowledge, practice as captured in cases and histories yields a more particular and sometimes more relevant or useable form of knowledge. The normative methodologies of the analytical approach and management science offer knowledge-based procedures for grappling with new situations. All of the approaches to understanding and knowledge have their advantages and their limitations. Validity must be in part in the eye of the beholder, i.e., what pragmatic difference does it make to him? (p. 49).

For the purpose of this study, in the case of the pilot sample of 21 firms separate questionnaires were filled out independently by two senior executives. The pilot sample data was analyzed by utilizing a modified version of Parallel-Form (Immediate) method to ascertain "interjudge reliability." Thus instead of two parallel or alternate forms, two identical copies of the survey instrument were completed by two senior executives independently of each other. The extent of agreement (correlation) between these two sets of responses provided a measure of "interjudge reliability."

It may also be noted that almost all the measures of the variables involved in the study are "borrowed" from, or are modified versions of, previously established and used measures. Besides, the data collected in the pilot survey were found to be consistent with the published information. Earlier, we contended that the degree of agreement between the responses of two senior executives of a company would provide a measure of "interjudge reliability." A high degree of agreement between the two senior executives also provides evidence that suggests that the pretested and revised instrument does measure what it is intended to

measure. Therefore, as Khandwalla (1977, p. 658) points out, a high degree of "interjudge reliability" may also provide a measure of validity.

Estimates of reliability and validity of variables, generated from the data collected in the pilot study, are presented in Table XVIII. It is important to note that the variables were measured on a 7 point rating scale. The number of items in each measure influences its reliability. Thus if two measures have the same average correlations, the one having more items will have a higher reliability. This fact becomes obvious when one considers the "customers" component of perceived environmental uncertainty, it is the only variable with a less than acceptable reliability coefficient. This outcome may be partially the result of so few items (two) in the scale.

Research Questions

The research questions developed from the conceptual framework discussed earlier in Chapter IV are presented together herein below:

Research Question 1. Is the relative strategic significance of the seven different organizational functions different for firms purusing different grand corporate strategies?

Research Question 2. For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms of different size?

Research Question 3. For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms with different

TABLE XVIII

RELIABILITY AND VALIDITY OF VARIABLES
(BASED ON THE PILOT STUDY SAMPLE
OF 21 FIRMS)

A. Variables (Nominal Scales) as reported by two senior executives from each firm and the degree of agreement between pairs of responses:

Variable	Agreement	Disagreement	Total
1. Grand Corporate Strategy	19	2	21
2. Size	20	1	21
3. Corporate Diversity	17	4	21
4. Industry	19	2	21
5. Production System	19	2	21
6. Organization Structure	16	5	21
Total	110	16	126

Interjudge Reliability or the degree of agreement between pairs of senior executives from the same company: $\frac{110}{126}$ or 87.3%

Comments: "To the extent that senior executives are experts on their firms, the degree of agreement on the information they provide is perhaps one measure also of the validity of the variables. That is, a high degree of agreement, in the absence of ambiguities in the way questions are phrased, bolsters our confidence that the variables do indeed measure what they are intended to measure."[a] In addition, the data collected from the responding companies regarding the above-mentioned variables were found to be consistent with the published information.

TABLE XVIII (Continued)

B. Variables (Ordinal-Likert Scales) as reported by two executives from each firm on a seven-point rating scale:

	Reliability of Multi-item variables[b]	Average Correlation Between the Responses of Two Executives (N = 21)
(1) Perceived Environmental Uncertainty:		
1. Suppliers (4 items)	0.79	0.49
2. Competitors (4 items)	0.82	0.53
3. Customers (2 items)	0.46	0.30
4. Financial/Capital Market (6 items)	0.84	0.46
5. Government Regulatory Agencies (6 items)	0.88	0.56
6. Actions of Labor Unions (3 items)	0.76	0.51
(2) Relative Strategic Significance of Key Result Areas in Different Organizational Functions:		
1. General Administration (10 items)	0.86	0.38
2. Production/Operations (10 items)	0.94	0.59
3. Engineering and R&D (5 items)	0.83	0.49
4. Marketing (8 items)	0.92	0.58
5. Finance (11 items)	0.92	0.50
6. Personnel (7 items)	0.88	0.50
7. Public & Government Relations (4 items)	0.85	0.59

[a]Pradip N. Khandwalla. The Design of Organizations, New York: Harcourt, Brace Jovanovich, Inc., 1977, p. 658.

[b]See Jum C. Nunnally. Psychometric Theory. New York: McGraw-Hill, 1967: (i) Computational formula (p. 193):

$$r_{kk} = \frac{kr_{ij}}{1 + (k-1)\, r_{ij}}$$

TABLE XVIII (Continued)

where

r_{kk} = reliability or reproducibility of a multi-item measure

k = number of items in the measure

r_{ij} = the average correlation among the items

(ii) According to Nunnally (p. 226), in the early stages of the research, reliabilities of 0.50 to 0.60 are quite adequate.

degrees of corporate diversity?

Research Question 4. For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms in different industries?

Research Question 5. For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms with different production systems?

Research Question 6. For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms with different types of organizational structures?

Research Question 7. For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms with different degrees of perceived environmental uncertainty?

Data Analysis Procedures

After the strategic significance scores for each of the seven organizational functions (computed by adding up the scores of key result areas in a particular function and dividing the sum by the number of key result areas in that particular functional category) were obtained, the firms were grouped on the basis of their grand corporate strategy. Within each group, mean strategic significance scores were computed for each of the seven organizational functions. Similar mean scores (grand means) were also computed for the entire

sample of 249 firms. In each strategy group, as also for the overall sample, the seven organizational functions were ranked by their mean strategic significance scores. Within each group, the differences in mean values were ascertained by paired t-tests in the form of approximate Least Significant Difference (LSD) tests. Additionally, for each group an F ratio was calculated, using the repeated measures design, from an analysis of variance (one-way classification by organizational function) for the strategic significance score (grand mean). This F ratio indicates the magnitude of differences between mean scores of different functions in each strategy group.

The approximate LSD tests and the one-way AOV as a repeated measures design were used separately for each of the four strategy types as also for the overall sample. Additionally, F ratios were also calculated from analysis of variance (one-way classification of 249 firms by grand corporate strategy) for the mean strategic significance scores of each of the seven different organizational functions. These F ratios would indicate whether there do exist significant differences among the mean strategic significance scores of each function attributable to the grand corporate strategies. These analyses provided pertinent data for testing Research Question 1.

Data aggregated by each of the four strategy types were further analyzed by size, corporate diversity, industry, production system, organizational structure, and perceived environmental uncertainty and subjected to the same analysis as described earlier. Thus analysis of subject firms (for the purpose of testing Research Question 2) by firm size yielded a 3x4 factorial design of firm size x grand corporate strategy. Within each of the 12 cells of that factorial design, the

seven organizational functions were ranked by their mean strategic significance scores. Within each cell, the differences in mean values were ascertained by paired t-tests in the form of approximate LSD tests. For row mean scores in each size group, an F ratio was calculated from an AOV (one-way classification by organizational function) in the nature of a repeated measures design. F ratios were also computed from AOV (one-way classification of 249 firms by size) for the mean strategic significance scores of each of the seven functions. And finally, F ratios were computed from unweighted AOV (two way classification of 249 firms by size and grand corporate strategy) for the mean strategic significance scores of each of the seven functions. These analyses provided pertinent data for testing Research Question 2.

Similarly, Research Question 3 was tested by analyzing a 4 x 4 factorial design of Strategy x Corporate Diversity; Research Question 4 by a 4 x 4 factorial design of Strategy x Industry; Research Question 5 by a 4 x 3 factorial design of Strategy x Production System; and Research Question 6 by a 4 x 5 factorial design of Strategy x Organizational Structure. However, for the purpose of testing Research Question 7, the subject firms were divided into two classes (1) firms with high perceived environmental uncertainty and (2) firms with low perceived environmental uncertainty by dichotomizing PEU scores at the mean value 4. Thus, a firm with PEU score of less than or equal to 4 would have low PEU, whereas a firm with PEU score of greater than 4 would be considered as having high PEU. Research Question 7 was then tested by analyzing a 4 x 2 factorial design of Strategy x PEU.

The analysis of data on the lines indicated above has provided an effective way for seeking answers to the seven research questions

raised in this study. The strategic significance mixes of organizational functions were thus determined by using observational ranking and approximate least significant difference (LSD) tests along with the analysis of variance. Kendall and Buckland (1971) define a Least Significant Difference test as

> . . . a test for comparing mean values arising in analysis of variance. It is an extension of the standard t-test for the difference between two specified mean values. Because the tests between pairs are not independent the error rate is difficult to assess exactly (p. 83).

The theoretical limits and the critical values of the LSD test[1] are the same as those of a t-test.

In view of the objectives of this study and the nature of the data involved, the LSD test seems best suited for data analysis. A valid LSD test can be constructed notwithstanding unequal sample size in different cells of a factorial design. Other alternative tests (namely, Duncan's new multiple-range test, Tukey's W-procedure or Honestly Significant Difference (HSD) procedure and Student-Newman-Keuls' test) only provide an approximate test statistic for unequal sample size. The LSD test on the other hand, provides an exact statistic for unequal sample size. A question might arise as to the appropriateness of this parametric test since most of the data for this study would be collected using the Likert scale involving non-normal distributions. However the LSD test is still valid since as per the Central Limit Theorem, so long as the distribution of observations satisfies certain assumptions (like σ is finite) then the distribution of $\bar{X}$ would be approximately normal for large sample sizes. A mere ranking of functions would ignore the magnitude of differences between mean scores of different functions. Using LSD tests, we would be in a better position to identify the strategic significance mixes of different functional tasks for firms

pursuing different grand corporate strategies.

Since the LSD test can be and often is misused, statisticians caution against the indiscriminate use of the LSD test. In this study, in view of the nature of the data involved, a watered-down version of the LSD test will be used. The test used would not be a true or legitimate LSD test, it would only be an "approximate" LSD test since a set of means would be compared using the same technique but with a few assumptions. For one thing, in any data analysis repeated measures tend to cause some dependence, however, the usual LSD test assumes independence. Therefore, our assumption of independence would provide an "approximate" LSD test statistic. This approximation would make our LSD test more conservative in the sense that we would not be overstating the significance; that is if the test shows no significance there might be some significance but the test would not show significance when in fact there is none. In view of the constraints imposed by the nature of data involved in the study, the investigator believes that the use of approximate LSD tests and the analysis of variance will provide the best available techniques for data analyses in this study.

Problems and Limitations

This study focuses primarily on top managers' perceptions of the relative importance of key result areas in different organizational functions to effective implementation of different grand corporate strategies. It seeks to identify critical or strategically significant function(s) for effective implementation of each type of grand corporate strategy. Therefore, the scope of this study is specific and limited. It does not purport to investigate the entire gamut of

problems involved in the field of corporate strategy. It concentrates only on the problems of corporate strategy-implementation; and although it utilizes the functional tasks' influence-mix approach to corporate strategy, only the influence of organizational functions on corporate strategy implementation is examined. Their influence on the formulation and evaluation of corporate strategy does not come within the purview of this study.

The field of business policy focuses on the total organization and deals with the problems and functions of the top management. It is therefore apparent that any business policy phenomenon involves a vast array of variables, most of which are difficult to isolate, define and measure. Steiner and Miner (1977, pp. 607 and 608) point out, "The scope of managerial activities associated with implementation is virtually coextensive with the entire process of management." In large corporations, according to Mintzberg (1977, p. 93), "research shows that most work processes of senior managers are unstructured and that they require a profound integration of various aspects of the organization and its environment." The variables involved in the field of business policy are therefore not easily amenable to clear-cut cause-and-effect relationships. Even when the independent and dependent variables are clearly isolated and defined, they are influenced by a vast array of mediating or intervening variables that cannot be ignored without making the study too simplistic or unrealistic, nor can they all be considered without making the study too unwieldy and therefore infeasible. This study, therefore, examines the influence of six key mediating variables: size, corporate diversity, industry, production system, organizational structure and perceived environmental uncertainty; it does not analyze

the influence of all other possible mediating variables.

Another limitation of this cross-sectional study is that it addresses itself to the corporate strategies of large (the top 1000) American industrial corporations only and therefore the conclusions derived from this study are not necessarily applicable to corporate strategies of firms in non-industrial sector such as transportation, utilities, banking, and insurance. The findings may not also necessarily apply to smaller industrial firms (less than $100 million in annual sales).

However, the major limitation of this study is that it involves a static analysis of corporate strategy, which is an inherently dynamic concept. The study therefore is not longitudinal in scope and nature. A longitudinal study is beyond the scope of this thesis, however it is extremely important to bear in mind that even for the same firm, even without a change in the grand corporate strategy, the same top manager may perceive the functional tasks' strategic significance mix differently at two different points of time.

And finally, the study's findings are based on senior executive's perceptions and opinions rather than on the actual observations of real world actions and results. Therefore, this study is marked by a total reliance on top-level executives for data-gathering. There are various reasons why this reliance on top-level executives is essential and inevitable. Top management by its very nature is still very much an art and this makes top-management planning a highly individualized process.

The "theory" of business policy is yet to evolve, although some contingency paradigms have been developed in recent times. In business

policy, like in any other emerging discipline, sophisticated observation and description must precede normative prescription. There is a need in the business policy literature for more rigorous, empirical studies of corporations and top executives, so that their collective wisdom can be effectively crystalized (by identifying patterns) into a systematized common body of knowledge, that is useful for both theory and practice.

Another reason for reliance on top-level executives for data gathering is to be found in the nature of the field itself. The field of business policy focuses on the organization as a whole. And only people at the top have this overall, organization-wide perspective. Most successful top executives are said to have the "helicopter quality" - an ability to see problems from an overall perspective. Besides their responsibilities require that they have an access to information about how the entire organization operates. Therefore, top-level executives (unlike divisional or functional managers) are the most knowledgeable people to provide reliable and meaningful information about their firm's overall operations and environments. This factor becomes equally important in case of managerial perceptions of their firm's environments. Unlike divisional or functional managers, the boundary spanning role of top-level executives is not restricted or partial. As grand strategists, they are responsible for an on-going appraisal of the total environment and for formulating appropriate strategic responses for the accomplishment of corporate goals.

And finally, one important reason why the data for this study was gathered from top-level executives is that in case of most variables, this was the only feasible way. For variables like size, industry

classification or the predominant production system, the research investigator can obtain measures of these variables through personal observations or through data collected by independent and reliable secondary sources. Therefore, measurement of such variables do not pose any problems, and where respondents are asked, as a matter of convenience, to give such information about their organizations, its veracity can be easily verified by reference to the relevant secondary data. Such verification, of course, was not possible in this study since the respondents had a choice to remain anonymous, and without which most top-level executives would have been reluctant to give any information about their companies, making data collection (and therefore, the entire study) an almost impossible task.

However, variables like the grand corporate strategy currently pursued by the firm can only be measured by the top-level executives of the firm itself. If the research investigator were to do this himself he would have to spend an inordinate amount of time going through the various company records and talking to different top managers; assuming of course that he is allowed an access to these sources by all the firms in his study sample, which would of necessity be very small. Clearly, this has to be ruled out. Secondly, available published data also cannot be used for this purpose. For one thing, most published data relates to past performance rather than the current grand strategy of the firm. And thirdly, given our current knowledge and understanding about corporate strategy, determination of a firm's grand corporate strategy is impossible to measure on a nominal scale by a set of objective indicators that do not rely on top management's perceptions and assertions. Thus, the only feasible approach was to have the senior

executives evaluate their own firms. Accordingly, the chief executive officer of each firm was asked on the questionnaire to identify the grand corporate strategy currently being pursued by his firm by using detailed descriptions of the four types of grand corporate strategies.

Conclusion

This chapter described the research methodology used in this study, it also provided detailed explanations for the data collection and analysis procedures. The results of the statistical analysis of data are presented in the following chapter.

FOOTNOTE

[1]For an extended discussion of least significant difference (LSD) tests see: (1) Steel, Robert G. D. and James H. Torrie. Principles and Procedures of Statistics. New York: McGraw-Hill, 1960, pp. 106-107. (2) Snedecor, George W. and William G. Cochran. Statistical Methods, Sixth Edition, Ames, Iowa: The Iowa State University Press, 1973, pp. 271-275. (3) Smith, Lee H. and Donald R. Williams. Statistical Analysis for Business Decisions: A Conceptual Approach. Belmont, Calif.: Wadsworth Publishing Co., 1971, pp. 462-468.

CHAPTER VI

ANALYSES OF DATA

Having set forth the nature of this study's research methodology in the previous chapter, this chapter deals with the analyses of data relevant to the research questions delineated in Chapter IV and Chapter V. Additional analyses of data not directly related to the research questions raised in this study are also presented. The significance and implications of the results will be discussed in Chapter VII.

Research Question 1

Research Question 1. Is the relative strategic significance of the seven different organizational functions different for firms pursuing different grand corporate strategies?

For this research question, the study's sample of 249 firms was categorized by grand corporate strategy and for each category the seven organizational functions were ranked by their mean strategic significance scores. As shown in Table XIX, General Administration was the top-ranked function for the overall sample followed by Finance, Personnel, and Marketing. The top three functions in each of the four classes of grand corporate strategy were different from those in the overall sample. Only General Administration was ranked among the top three functions in each type.

TABLE XIX

RANKINGS OF THE SEVEN ORGANIZATIONAL FUNCTIONS BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES WITHIN EACH OF THE 4 CELLS IN A ONE-WAY CLASSIFICATION BY GRAND CORPORATE STRATEGY

Grand Corporate Strategy									
Stability		Internal Growth		External Acquisitive Growth		Retrenchment		All Firms (Grand Means)	
$N_1 = 29$		$N_2 = 104$		$N_3 = 96$		$N_4 = 20$		$N = 249$	
GADM	4.97	GADM	5.02	MKTG	4.71	MKTG	4.56	GADM	4.79
PERS	4.74	PERS	4.83	GADM	4.66	PERS	3.96	FIN	4.55
PGR	4.70	FIN	4.77	FIN	4.44	GADM	3.94	PERS	4.47
FIN	4.65	ERD	4.69	PERS	4.12	FIN	3.79	MKTG	4.47
ERD	4.52	PGR	4.51	PGR	4.08	PROD	3.50	ERD	4.28
PROD	4.44	MKTG	4.28	ERD	3.93	ERD	3.50	PGR	4.28
MKTG	4.31	PROD	4.19	PROD	3.84	PGR	3.44	PROD	4.03
$F = 1.51$		$F = 10.06^{**}$		$F = 21.01^{**}$		$F = 4.7^{*}$		$F = 16.97^{**}$	

*Significant at $p < .05$ level.

**Significant at $p < .01$ level.

Note: (1) Scores are based on a 7-point Likert-type rating scale where, 1 = completely strategically insignificant, and 7 = of the greatest strategic significance.

(2) Legend: GADM = General Administration, PROD = Production/ Operations, ERD = Engineering and R&D, MKTG = Marketing, FIN = Finance, PERS = Personnel, and PGR = Public & Government Relations.

(3) In each cell, the horizontal dividing line(s) indicate that the set of mean values above that line (or between two such lines) are not significantly different from each other but are significantly different from the mean values below that line. This was ascertained by administering in each cell paired t-tests (significant at $p < .05$ level) as approximate Least Significant Difference (LSD) tests. If a particular cell has no horizontal dividing lines, it means that in that cell the paired t-tests resulted in overlapping paired differences, with the result no mean value(s) emerged as significantly different from the rest.

For each of the five cells in Table XIX, an attempt was made to determine the mean values that were significantly different from others (see note 3 to the Table). This was done by administering in each cell paired t-tests (significant at $p < .05$ level) as "approximate" Least Significant Difference (LSD) tests. The results are shown in Table XIX.

For firms pursuing Stability strategy, the paired t-tests resulted in overlapping paired differences with the result that no function(s) emerged as having a mean score(s) significantly different from the rest.

For firms pursuing Internal Growth strategy, the mean score of General Administration was found to be significantly different from the mean scores of all the other functions. Thus, for firms pursuing Internal Growth strategy, General Administration was found to have the highest strategic significance.

For firms pursuing External Acquisitive Growth strategy, there was no significant difference between the mean scores of the two top-ranked functions, Marketing and General Administration. However, their mean scores were significantly different from the mean scores of the remaining five functions. Similarly, the mean score of Finance was significantly different from all the others.

For firms pursuing Retrenchment strategy, the mean score of Marketing was found to be significantly different from the mean scores of all the other functions . Thus, for such firms Marketing was found to have the highest strategic significance.

For all firms considered together, the mean strategic significance score of General Administration was found to be significantly different from the mean scores of all the other functions. The mean scores of

Finance, Personnel and Marketing were not significantly different from each other, but as a group their mean scores were significantly different from the remaining four functions. The mean score of the last-ranked function Production was significantly different from the six higher-ranked functions. Thus, for all industrial firms General Administration was found to have the highest strategic significance; the next three strategically significant functions were Finance, Personnel, and Marketing. Of all the seven functions, Production was found to have the lowest strategic significance.

In addition to the approximate LSD tests for each cell in Table XIX, an F ratio was also calculated from an analysis of variance (one-way classification by organizational function) for the strategic significance score (grand mean) in each cell. The F ratios shown in Table XIX were calculated on the assumption that the mean strategic significance scores of each of the seven organizational functions came from seven independent samples rather than from the same sample (a repeated measures design); thus it was assumed that the mean scores in each cell were independent. This necessitated a change in the degrees of freedom from the calculated F ratios for ascertaining the critical values. Thus in a repeated measures AOV test, our assumption of independence yeilds critical values (for F ratios) that are approximate but conservative, in the sense that significance is never likely to be overstated.

From Table XIX we find that F ratios are significant (at $p < .05$ level) for all cells except cell 1 (Stability strategy). For firms pursuing Stability strategy, the means scores of the seven functions were not significantly different. Whereas for firms pursuing the other

three grand corporate strategies and also for all the firms in the sample (N = 249), the mean scores of the seven functions were significantly different (at $p < .05$ level). These F ratios, therefore, indicate the magnitude of differences between mean scores of different functions in each cell.

Finally, as shown in Table XX (column AOVI), an analysis of variance (one-way classification by Grand Corporate Strategy) for the mean strategic significance scores of each of the seven different organizational functions indicated significant differences (at $p < .01$ level). In fact, the actual critical value for the F ratio of each function (except Marketing) was $p < .005$, indicating highly significant differences. The data presented in Table XX clearly indicate that significant differences do exist among the mean strategic significance socre of each function attributable to the grand corporate strategies.

Thus, the results of these analyses provide evidence that the strategic significance of each organizational function is not the same for the four types of grand corporate strategies.

Research Question 2

Research Question 2. For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms of different size?

For this research question, the study's sample of 249 firms was categorized into 12 cells by means of a 3 x 4 factorial design of Firm Size x Grand Corporate Strategy. As shown in Table XXI, within each of the 12 cells, and the overall column and row cells, the seven

TABLE XX

CALCULATED F RATIOS FROM ONE-WAY ANALYSIS OF VARIANCE (N=249) FOR THE MEAN STRATEGIC SIGNIFICANCE SCORES OF EACH OF THE SEVEN DIFFERENT ORGANIZATIONAL FUNCTIONS

Organizational Function	AOV I $F_{3,245}$	AOV II $F_{2,246}$	AOV III $F_{3,245}$	AOV IV $F_{3,245}$	AOV V $F_{2,246}$	AOV VI $F_{4,244}$	AOV VII $F_{1,247}$
1. General Administration	17.02**	0.56	0.98	2.20	3.18*	0.40	0.18
2. Production/Operations	7.74**	1.17	0.35	5.01**	1.62	0.45	2.21
3. Engineering and R&D	14.58**	6.21**	2.74*	0.83	4.96**	2.59*	0.11
4. Marketing	3.90**	0.34	0.21	5.01**	4.09*	0.95	6.73**
5. Finance	9.76**	5.17**	1.90	0.75	1.14	2.73*	0.59
6. Personnel	18.28**	0.43	0.62	0.37	2.38	0.71	1.50
7. Public & Government Relations	8.20**	12.38**	2.79*	1.22	4.94**	1.33	0.53

AOV I = one-way classification by grand corporate strategy
AOV II = one-way classification by firm size
AOV III = one way classification by corporate diversity
AOV IV = one-way classification by industry
AOV V = one-way classification by production system
AOV VI = one-way classification by organizational structure
AOV VII = one way classification by perceived environmental uncertainty

*significant at $p < .05$ level

**significant at $p < .01$ level

TABLE XXI

RANKINGS OF THE SEVEN ORGANIZATIONAL FUNCTIONS BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES WITHIN EACH OF THE 12 CELLS IN A 3 X 4 FACTORIAL DESIGN OF FIRM SIZE X GRAND CORPORATE STRATEGY

FIRM SIZE	Grand Corporate Strategy: Stability	Internal Growth	External Acquisitive Growth	Retrenchment	Overall Row Means
	$N_{11} = 5$	$N_{12} = 24$	$N_{13} = 22$	$N_{14} = 9$	$R_1 = 60$
Small	GADM 4.40	GADM 5.14	MKTG 4.52	MKTG 4.31	GADM 4.71
	FIN 4.13	PERS 4.89	GADM 4.52	PERS 4.22	MKTG 4.49
	PERS 3.86	FIN 4.86	FIN 4.31	GADM 4.18	PERS 4.44
	PROD 3.76	ERD 4.80	PERS 4.16	PROD 3.86	FIN 4.41
	MKTG 3.40	MKTG 4.76	PROD 3.91	FIN 3.62	PROD 4.13
	ERD 3.24	PROD 4.51	ERD 3.74	PGR 3.17	ERD 4.03
	PGR 2.95	PGR 4.19	PGR 3.72	ERD 3.11	PGR 3.76
					F = 5.57*
	$N_{21} = 9$	$N_{22} = 35$	$N_{23} = 34$	$N_{24} = 6$	$R_2 = 84$
Medium	GADM 5.28	GADM 4.87	GADM 4.75	MKTG 4.75	GADM 4.79
	PERS 5.27	PERS 4.77	MKTG 4.70	ERD 3.93	PERS 4.43
	PGR 5.11	FIN 4.57	FIN 4.30	FIN 3.91	FIN 4.41
	PROD 4.96	PGR 4.42	PERS 4.00	GADM 3.82	MKTG 4.40
	ERD 4.69	ERD 4.29	PGR 3.95	PERS 3.60	PGR 4.23
	FIN 4.55	MKTG 4.01	ERD 3.83	PGR 3.42	ERD 4.12
	MKTG 4.54	PROD 3.87	PROD 3.81	PROD 3.27	PROD 3.92
					F = 8.11**
	$N_{31} = 15$	$N_{32} = 45$	$N_{33} = 40$	$N_{34} = 5$	$R_3 = 105$
Large	PGR 5.03	GADM 5.06	MKTG 4.81	MKTG 4.78	GADM 4.83
	GADM 4.98	ERD 4.95	GADM 4.67	FIN 3.96	FIN 4.74
	FIN 4.88	FIN 4.87	FIN 4.65	PGR 3.95	PGR 4.62
	ERD 4.85	PERS 4.84	PGR 4.40	PERS 3.94	ERD 4.55
	PER 4.72	PGR 4.74	PERS 4.19	ERD 3.68	PERS 4.53
	MKTG 4.48	PROD 4.26	ERD 4.11	GADM 3.64	MKTG 4.51
	PROD 4.35	MKTG 4.23	PROD 3.84	PROD 3.14	PROD 4.06
					F = 9.14**
	$C_1 = 29$	$C_2 = 104$	$C_3 = 96$	$C_4 = 20$	$N = 249$
Overall Column Means	GADM 4.97	GADM 5.02	MKTG 4.71	MKTG 4.56	GADM 4.79
	PERS 4.74	PERS 4.83	GADM 4.66	PERS 3.96	FIN 4.55
	PGR 4.70	FIN 4.77	FIN 4.44	GADM 3.94	PERS 4.47
	FIN 4.65	ERD 4.69	PERS 4.12	FIN 3.79	MKTG 4.47
	ERD 4.52	PGR 4.51	PGR 4.08	PROD 3.50	ERD 4.28
	PROD 4.44	MKTG 4.28	ERD 3.93	ERD 3.50	PGR 4.26
	MKTG 4.31	PROD 4.19	PROD 3.84	PGR 3.44	PROD 4.03
	F = 1.51	F = 10.06**	F = 21.01**	F = 4.7*	F = 16.97**

*Significant at $p < .05$ level

**Significant at $p < .01$ level

See notes to Table XIX

organizational functions were ranked by their mean strategic significance scores.

The results of approximate LSD tests showed significant differences in mean values for only 3 cells. For large firms with Internal Growth strategies, the lowest-ranked Production and Marketing had mean scores significantly different from those of the five higher-ranked functions. For medium-sized firms with External Acquisitive Growth strategies the mean scores of the top-ranked General Administration and Marketing were found to be significantly different from the mean scores of the other five functions; the third-ranked Finance had a mean score significantly different from the rest. For large firms with External Acquisitive Growth strategies, the cellar function Production had a mean score significantly different from all the other higher-ranked functions.

However, the same tests showed significant differences for the overall row means. For both small and medium-sized firms, the top-ranked General Administration had mean scores significantly different from all other functions; Marketing, Personnel, and Finance had mean scores that were not significantly different from one another, but were significantly different from those of the four other functions. In large firms the lowest-ranked Production had a mean score significantly different from all the other higher-ranked functions.

The F ratios for all the three size groups were significant at $p < .05$ level (see Table XXI). Thus, the mean scores of the seven functions in each size group were significantly different.

However, the F ratios from one-way analysis of variance by size for the mean strategic significance score of each function showed

significance (at $p < .01$ level) for only three functions: Engineering and R&D, Finance, and Public and Government Relations (see Table XX). Thus it appears that there do exist significant differences among the mean strategic significance score of each of these three functions attributable to firm size. On the other hand, the strategic significance of General Administration, Production/Operations, Marketing, and Personnel appears to be the same for the three size categories.

An unweighted AOV for the mean strategic significance score of each function in the factorial design shown in Table XXII, showed significance (at $p < .01$ level) for only two functions - Engineering and R&D, and Public & Government Relations - when the effect of size were considered. The effect of size on Finance was found to be significant at only $p < .1$ level. The results of these unweighted factorial AOVs, in so far as they relate to the effect of size, corroborate the results of one-way AOVs by size discussed in the preceding paragraph. F ratios for the effect of grand corporate strategy showed significance (at $p < .05$ level) for all the seven functions. Similarly, the F ratios for the interaction effect of size and grand corporate strategy were also significant (at $p < .05$ level) for all functions except Finance ($F = 0.68$, $p > .5$).

To sum up, the results seem to indicate that when the effects of firm size and grand corporate strategy are considered, with the exception of Finance, there do exist significant differences among the mean strategic significance score of each function. The strategic significance of Finance, on the other hand, does not seem to differ in industrial firms when the interacting effects of size and grand corporate strategy are considered.

TABLE XXII

CALCULATED F RATIOS FROM UNWEIGHTED ANALYSIS OF VARIANCE FOR THE MEAN STRATEGIC SIGNIFICANCE SCORES OF EACH OF THE SEVEN DIFFERENT ORGANIZATIONAL FUNCTIONS IN EACH OF THE SIX DIFFERENT FACTORIAL DESIGNS USED IN DATA ANALYSES

1. 4 x 3 Factorial Design of Grand Corporate Strategy X Firm Size:

Organizational Function	Effect of GCS $F_{3,237}$	Effect of Size $F_{2,237}$	Interaction Effect $F_{6,237}$
1. General Administration	20.82**	0.42	2.58*
2. Production/Operations	8.97**	0.22	3.41**
3. Engineering and R & D	8.38**	5.88**	2.64*
4. Marketing	2.62*	1.66	2.46*
5. Finance	9.10**	2.68	0.68
6. Personnel	10.76**	0.48	3.94**
7. Public and Government Relations	5.95**	12.11**	2.73*

*significant at $p < .05$ level

**significant at $p < .01$ level

TABLE XXII (continued)

2. 4 x 4 Factorial Design of Grand Corporate Strategy X Corporate Diversity:

Organizational Function	Effect of GCS $F_{3,233}$	Effect of Corporate Diversity $F_{3,233}$	Interaction Effect $F_{9,233}$
1. General Administration	17.07**	0.27	0.76
2. Production/Operations	7.74**	0.15	0.59
3. Engineering and R & D	8.41**	2.09	2.64**
4. Marketing	1.40	0.69	1.01
5. Finance	10.24**	1.46	0.68
6. Personnel	11.59**	0.57	0.97
7. Public & Government Relations	8.69**	2.69*	3.88**

3. 4 x 4 Factorial Design of Grand Corporate Strategy X Industry:

Organizational Function	Effect of GCS $F_{3,233}$	Effect of Industry $F_{3,233}$	Interaction Effect $F_{9,233}$
1. General Administration	17.91**	2.29	1.94*
2. Production/Operations	11.36**	4.54**	1.36
3. Engineering and R & D	10.75**	2.27	0.46
4. Marketing	1.02	3.08*	0.44
5. Finance	11.10**	0.21	0.78
6. Personnel	12.35**	0.29	1.38
7. Public & Government Relations	10.59**	1.91	1.38

*significant at $p < .05$ level

**significant at $p < .01$ level

TABLE XXII (continued)

4. 4 x 3 Factorial Design of Grand Corporate Strategy X Production System:

Organizational Function	Effect of GCS $F_{3,237}$	Effect of Production System $F_{2,237}$	Interaction Effect $F_{6,237}$
1. General Administration	18.18**	2.30	0.89
2. Production/Operations	7.79**	1.63	0.85
3. Engineering and R & D	8.28**	1.46	1.21
4. Marketing	2.43	1.20	1.26
5. Finance	9.71**	0.21	0.26
6. Personnel	8.68**	0.37	0.76
7. Public & Government Relations	7.36**	5.19**	0.53

5. 4 x 5 Factorial Design of Grand Corporate Strategy X Organizational Structure:

Organizational Function	Effect of GCS $F_{3,229}$	Effect of Organizational Structure $F_{4,229}$	Interaction Effect $F_{12,229}$
1. General Administration	18.27**	0.83	1.74
2. Production/Operation	8.41**	0.80	0.54
3. Engineering and R & D	4.39**	1.44	1.46
4. Marketing	1.28	0.74	0.46
5. Finance	8.12**	1.65	1.92*
6. Personnel	10.36**	1.17	3.16**
7. Public & Government Relations	5.56**	1.53	2.88**

*significant at $p < .05$ level

**significant at $p < .01$ level

TABLE XXII (continued)

6. 4 x 2 Factorial Design of Grand Corporate Strategy X Perceived Environmental Uncertainty (PEU)

Organizational Function	Effect of GCS $F_{3,241}$	Effect of PEU $F_{1,241}$	Interaction Effect $F_{3,241}$
1. General Administration	11.78**	0.02	0.03
2. Production/Operations	4.68**	1.12	0.05
3. Engineering and R & D	3.93**	1.29	2.12
4. Marketing	1.26	2.88	0.68
5. Finance	4.68*	2.48	0.71
6. Personnel	4.88**	2.02	0.60
7. Public & Government Relations	1.86	0.01	5.79**

*significant at $p < .05$ level

**significant at $p < .01$ level

Research Question 3

Research Question 3. For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms with different degrees of corporate diversity?

For this research question, the study's sample of 249 firms was categorized into 16 cells by means of a 4 x 4 factorial design of Corporate Diversity x Grand Corporate Strategy. As shown in Table XXIII, within each of the 16 cells, and the overall column and row cells, the seven organizational functions were ranked by their mean strategic significance scores.

The results of approximate LSD tests showed significant differences in mean scores for only seven cells. General Administration's mean score was significantly higher than all other functions for the related business firms with Internal Growth strategy. For the dominant business firms with External Growth strategy, the mean scores of the top-ranked Marketing and General Administration were significantly different from the mean scores of the other five functions. The mean scores of the top three functions - Marketing, General Administration, and Finance - were significantly different from those of the remaining four functions in case of both the related and unrelated business firms with External Growth strategy. In case of all the related business firms, the top-ranked General Administration and lowest-ranked Production had mean scores significantly different from all other functions.

F ratios for the repeated measures AOVs for the four diversity groups showed significance (at $p < .05$ level) only in case of the

TABLE XXIII

RANKINGS OF THE SEVEN ORGANIZATIONAL FUNCTIONS BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES WITHIN EACH OF THE 16 CELLS IN A 4 X 4 FACTORIAL DESIGN OF CORPORATE DIVERSITY x GRAND CORPORATE STRATEGY

CORPORATE DIVERSITY	Grand Corporate Strategy: Stability	Internal Growth	External Acquisitive Growth	Retrenchment	Overall Row Means
Single Business	N_{11} = 5	N_{12} = 10	N_{13} = 8	N_{14} = 5	R_1 = 28
	PGR 5.30	GADM 5.26	GADM 4.35	MKTG 4.73	GADM 4.74
	GADM 5.00	FIN 5.02	MKTG 4.17	PERS 4.43	PERS 4.57
	PERS 5.00	PERS 5.01	FIN 4.07	GADM 4.06	FIN 4.47
	MKTG 4.63	PGR 4.98	PERS 3.82	FIN 3.95	PGR 4.37
	PROD 4.54	PROD 4.25	ERD 3.75	PGR 3.85	MKTG 4.34
	FIN 4.53	MKTG 4.15	PROD 3.75	PROD 3.76	PROD 4.07
	ERD 4.12	ERD 3.86	PGR 3.34	ERD 3.40	ERD 3.79
					F = 1.83
Dominant Business	N_{21} = 5	N_{22} = 20	N_{23} = 25	N_{24} = 5	R_2 = 55
	ERD 5.00	PERS 4.90	MKTG 4.77	MKTG 3.98	GADM 4.65
	PERS 4.86	GADM 4.86	GADM 4.62	GADM 3.86	MKTG 4.46
	GADM 4.82	ERD 4.76	FIN 4.21	PERS 3.63	PERS 4.38
	PGR 4.75	FIN 4.72	PERS 4.02	PROD 3.46	FIN 4.35
	PROD 4.70	PGR 4.46	PGR 4.00	FIN 3.42	ERD 4.19
	FIN 4.47	MKTG 4.31	ERD 3.90	ERD 2.52	PGR 4.09
	MKTG 4.05	PROD 4.12	PROD 3.73	PGR 2.45	PROD 3.93
					F = 4.06
Related Business	N_{31} = 14	N_{32} = 54	N_{33} = 42	N_{34} = 6	R_3 = 116
	GADM 5.11	GADM 5.04	MKTG 4.71	MKTG 4.92	GADM 4.85
	PGR 5.07	PERS 4.80	GADM 4.68	ERD 3.97	FIN 4.60
	ERD 4.79	ERD 4.70	FIN 4.60	GADM 3.73	PERS 4.53
	FIN 4.75	FIN 4.68	PGR 4.33	PERS 3.69	MKTG 4.50
	PERS 4.71	PGR 4.53	PERS 4.24	FIN 3.64	PGR 4.47
	PROD 4.47	MKTG 4.30	ERD 3.98	PGR 3.54	ERD 4.41
	MKTG 4.46	PROD 4.10	PROD 3.90	PROD 3.32	PROD 4.03
					F = 9.35**
Unrelated Business	N_{41} = 5	N_{42} = 20	N_{43} = 21	N_{44} = 4	R_4 = 50
	GADM 4.70	ERD 5.03	MKTG 4.83	MKTG 4.53	GADM 4.81
	FIN 4.64	GADM 4.97	GADM 4.80	FIN 4.30	FIN 4.69
	PERS 4.46	FIN 4.94	FIN 4.55	PERS 4.21	MKTG 4.48
	PROD 3.98	PERS 4.74	PERS 4.10	GADM 4.18	PERS 4.40
	MKTG 3.85	PROD 4.47	PGR 3.99	ERD 4.15	ERD 4.36
	ERD 3.72	PGR 4.26	ERD 3.90	PGR 4.00	PROD 4.10
	PGR 3.00	MKTG 4.26	PROD 3.90	PROD 3.50	PGR 4.00
					F = 5.62*
Overall Column Means	C_1 = 29	C_2 = 104	C_3 = 96	C_4 = 20	N = 249
	GADM 4.97	GADM 5.02	MKTG 4.71	MKTG 4.56	GADM 4.79
	PERS 4.74	PERS 4.83	GADM 4.66	PERS 3.96	FIN 4.55
	PGR 4.70	FIN 4.77	FIN 4.44	GADM 3.94	PERS 4.47
	FIN 4.65	ERD 4.69	PERS 4.12	FIN 3.79	MKTG 4.47
	ERD 4.52	PGR 4.51	PGR 4.08	PROD 3.50	ERD 4.28
	PROD 4.44	MKTG 4.28	ERD 3.93	ERD 3.50	PGR 4.28
	MKTG 4.31	PROD 4.19	PROD 3.84	PGR 3.44	PROD 4.03
	F = 1.51	F = 10.06**	F = 21.01**	F = 4.7*	F = 16.97**

*Significant at p < .05 level

**Significant at p < .01 level

See notes to Table XIX

related and unrelated business firms. Thus, the mean scores of the seven functions in these two categories were significantly different. Conversely, the mean scores of the seven functions in case of the single dominant business firms were not significantly different.

As shown in Table XX, the F ratios from the AOV (one-way) classification by corporate diversity) for the mean strategic significance score of each function showed significance (at $p < .05$ level) for only two functions: Engineering and R&D, and Public and Government Relations. The F ratios for the effect of corporate diversity in an unweighted AOV for a 4 x 4 factorial design of Strategy x Diversity (Table XXII) showed significance (at $p < .05$ level) only in the case of Public and Government Relations. However, the effect of grand corporate strategy was significant for all functions except Marketing. The F ratios for the interaction effect of grand corporate strategy and corporate diversity showed significance only in case of Engineering and R&D and Public and Government Relations. F ratios for Marketing showed no significant effects of strategy, corporate diversity or their interaction.

The results of the analyses by grand corporate strategy and corporate diversity indicate that there do not exist significant differences among the mean strategic significance score of Marketing attributable to grand corporate strategy and/or corporate diversity. Conversely, for Public and Government Relations, there do exist significant differences among their respective mean scores attributable to grand corporate strategy and/or corporate diversity. For General Administration, Production/Operations, Finance and Personnel, the effect of corporate diversity and the interaction effect of strategy and

diversity do not seem to show any differences among these functions' mean strategic significance scores.

Research Question 4

Research Question 4. For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms in different industries?

For this research question, the study's sample of 249 firms was categorized into 16 cells by means of a 4 x 4 factorial design of Industry x Grand Corporate Strategy. As shown in Table XXIV, within each of the 16 cells and the overall column and row cells, the seven organizational functions were ranked by their mean strategic significance scores.

The results of approximate LSD tests showed significant differences in the mean scores only in a few cases. In case of firms with Stability and Retrenchemnt strategies, the sample size in some cells was less than 5. For firms in the capital goods industry with Stability strategy, the mean scores of the top four functions were significantly different from the mean scores of the bottom three functions. The mean scores of Marketing, General Administration, and Finance were significantly different from the mean scores of the last four functions in both the capital and producer goods industries for firms with External Acquisitive Growth strategy. Production had significantly lower scores than all other functions in both the consumer nondurable and producer goods industries. General Administration on the other hand, had significantly higher scores than all the other functions in both the capital and producer goods industries.

TABLE XXIV

RANKINGS OF THE SEVEN ORGANIZATIONAL FUNCTIONS BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES WITHIN EACH OF THE 16 CELLS IN A 4 X 4 FACTORIAL DESIGN OF INDUSTRY X GRAND CORPORATE STRATEGY

INDUSTRY	Grand Corporate Strategy: Stability	Internal Growth	External Acquisitive Growth	Retrenchment	Overall Row Means
Consumer Nondurable Goods	N_{11} = 10	N_{12} = 32	N_{13} = 25	N_{14} = 6	R_1 = 73
	GADM 4.77	GADM 5.11	MKTG 4.54	MKTG 4.60	GADM 4.70
	PGR 4.58	FIN 4.92	GADM 4.41	PERS 4.24	FIN 4.53
	FIN 4.51	PERS 4.89	FIN 4.23	PGR 3.88	PGR 4.48
	ERD 4.50	PGR 4.84	PGR 4.12	FIN 3.77	MKTG 4.45
	MKTG 4.29	ERD 4.68	PERS 3.95	GADM 3.60	PERS 4.43
	PERS 4.29	MKTG 4.40	ERD 3.77	PROD 3.33	ERD 4.21
	PROD 3.91	PROD 4.11	PROD 3.41	ERD 3.10	PROD 3.78
					F = 7.35**
Consumer Durable Goods	N_{21} = 4	N_{22} = 10	N_{23} = 14	N_{24} = 6	R_2 = 34
	PERS 5.50	ERD 4.94	MKTG 4.79	MKTG 4.88	MKTG 4.76
	GADM 5.48	GADM 4.66	GADM 4.68	ERD 4.07	GADM 4.60
	PROD 5.38	MKTG 4.64	FIN 4.24	PGR 4.04	ERD 4.49
	FIN 5.23	PERS 4.60	ERD 4.19	PERS 3.88	FIN 4.38
	ERD 5.10	FIN 4.55	PERS 4.09	FIN 3.88	PERS 4.37
	MKTG 4.88	PGR 4.53	PROD 4.07	GADM 3.73	PGR 4.24
	PGR 4.75	PROD 4.52	PGR 3.98	PROD 3.23	PROD 4.21
					F = 1.58
Capital Goods	N_{31} = 4	N_{32} = 28	N_{33} = 24	N_{34} = 5	R_3 = 61
	GADM 5.33	GADM 5.19	MKTG 4.88	MKTG 4.45	GADM 4.95
	PROD 4.85	ERD 4.92	GADM 4.77	GADM 4.18	MKTG 4.70
	PERS 4.82	FIN 4.84	FIN 4.58	PERS 3.86	FIN 4.64
	FIN 4.68	PERS 4.83	PERS 4.20	PROD 3.84	PERS 4.50
	MKTG 4.38	MKTG 4.64	PROD 4.19	FIN 3.76	ERD 4.36
	PGR 4.13	PROD 4.42	PGR 4.13	ERD 3.32	PROD 4.31
	ERD 4.05	PGR 4.37	ERD 3.98	PGR 2.80	PGR 4.13
					F = 5.11*
Producer Goods	N_{41} = 11	N_{42} = 34	N_{43} = 33	N_{44} = 3	R_4 = 81
	PGR 5.00	GADM 4.89	GADM 4.76	GADM 4.60	GADM 4.82
	PERS 4.86	PERS 4.83	MKTG 4.67	MKTG 4.00	FIN 4.56
	GADM 4.85	FIN 4.63	FIN 4.59	PROD 3.80	PERS 4.53
	FIN 4.55	ERD 4.44	PERS 4.19	PERS 3.76	PGR 4.23
	ERD 4.51	PGR 4.30	PGR 4.07	FIN 3.70	ERD 4.19
	PROD 4.43	PROD 3.96	ERD 3.90	ERD 3.47	MKTG 4.19
	MKTG 4.10	MKTG 3.76	PROD 3.82	PGR 2.42	PROD 3.96
					F = 9.21**
Overall Column Means	C_1 = 29	C_2 = 104	C_3 = 96	C_4 = 20	N = 249
	GADM 4.97	GADM 5.02	MKTG 4.71	MKTG 4.56	GADM 4.79
	PERS 4.74	PERS 4.83	GADM 4.66	PERS 3.96	FIN 4.55
	PGR 4.70	FIN 4.77	FIN 4.44	GADM 3.94	PERS 4.47
	FIN 4.65	ERD 4.69	PERS 4.12	FIN 3.79	MKTG 4.47
	ERD 4.52	PGR 4.51	PGR 4.08	PROD 3.50	ERD 4.28
	PROD 4.44	MKTG 4.28	ERD 3.93	ERD 3.50	PGR 4.28
	MKTG 4.31	PROD 4.19	PROD 3.84	PGR 3.44	PROD 4.03
	F = 1.51	F = 10.06**	F = 21.01**	F = 4.7*	F = 16.97**

See notes to Table XIX

*Significant at $p < .05$ level

**Significant at $p < .01$ level

The F ratios for the repeated measures AOVs for each of the four industry groups showed significance (at $p < .05$ level) in case of the consumer nondurable, capital and producer goods industries. Thus, the mean scores of the seven functions in these three industries were significantly different. On the other hand, the mean scores of the seven functions in case of the consumer durable goods industries were not significantly different.

The results of one-way AOVs by Industry (Table XX), and unweighted AOVs of the factorial design of Grand Corporate Strategy x Industry (Table XXII), for the mean strategic significance score of each function showed significance for the effect of industry for only two functions: Production/Operations and Marketing. Thus it appears that barring these two functions there do not exist significant differences in the mean strategic significance scores of different functions. The effect of grand corporate strategy (main effect) was found to be significant for all functions except Marketing; whereas the interaction effect was significant only for General Administration.

The results of these AOVs seem to indicate significant differences among the mean scores of Production/Operations, Marketing, and General Administration attributable to grand corporate strategy and/or industry. For Engineering and R&D, Finance, Personnel, and Public & Government Relations, the effect of industry types and the interaction effect of industry and strategy do not seem to show any differences among these functions' mean strategic significance scores.

Research Question 5

Research Question 5. For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven

different organizational functions different for firms with different production systems?

For this research question, the study's sample of 249 firms was categorized into 12 cells by means of a 3 x 4 factorial design of Production System x Grand Corporate Strategy. As shown in Table XXV, within each of the 12 cells and the overall column and row cells, the seven organizational functions were ranked by their mean strategic significance scores.

The results of approximate LSD tests revealed significant differences in the mean scores of different functions for only 6 cells. Engineering and R&D had significantly lower mean score compared to all the other functions for firms with Stability strategy and the unit and small batch production system. For firms with Internal Growth strategy, General Administration had mean score significantly higher than all other functions in case of the large batch and mass production; and Marketing had mean score significantly lower than all the functions in case of the continuous process production. For firms with External Growth strategy, Marketing and General Administration had mean scores significantly higher than the rest for the large batch and mass production; whereas Marketing, General Administration, and Finance had mean scores significantly higher than four lower-ranked functions in case of the continuous process production. In case of the continuous process production firms with Retrenchment strategy, Finance, Production, and Engineering and R&D has mean scores significantly lower than the other four higher-ranked functions. General Administration had significantly higher mean score than all other functions for firms with both the small batch and mass production systems. Additionally, for firms with the mass production

TABLE XXV

RANKINGS OF THE SEVEN ORGANIZATIONAL FUNCTIONS BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES WITHIN EACH OF THE 12 CELLS IN A 3 X 4 FACTORIAL DESIGN OF PRODUCTION SYSTEM X GRAND CORPORATE STRATEGY

PRODUCTION SYSTEM	Grand Corporate Strategy: Stability	Internal Growth	External Acquisitive Growth	Retrenchment	Overall Row Means
	$N_{11} = 4$	$N_{12} = 17$	$N_{13} = 14$	$N_{14} = 6$	$R_1 = 41$
Unit and Small Batch	GADM 5.33	GADM 4.76	GADM 4.96	MKTG 4.29	GADM 4.80
	PROD 4.85	ERD 4.58	MKTG 4.59	GADM 4.18	MKTG 4.42
	PERS 4.82	FIN 4.50	FIN 4.54	PROD 3.80	FIN 4.41
	FIN 4.68	PERS 4.45	ERD 4.40	PERS 3.79	PERS 4.32
	MKTG 4.38	MKTG 4.32	PERS 4.24	FIN 3.67	ERD 4.25
	PGR 4.13	PROD 4.02	PROD 4.16	ERD 3.10	PROD 4.12
	ERD 4.05	PGR 3.90	PGR 3.98	PGR 2.79	PGR 3.79
					F = 3.79
	$N_{21} = 13$	$N_{22} = 66$	$N_{23} = 50$	$N_{24} = 9$	$R_2 = 138$
Large Batch and Mass	GADM 4.93	GADM 5.14	MKTG 4.80	MKTG 4.67	GADM 4.87
	PERS 4.84	PERS 4.92	GADM 4.70	PERS 3.94	FIN 4.62
	PGR 4.63	ERD 4.85	FIN 4.46	FIN 3.92	MKTG 4.61
	FIN 4.62	FIN 4.83	PERS 4.17	GADM 3.84	PERS 4.58
	ERD 4.62	PGR 4.57	PGR 4.16	ERD 3.80	ERD 4.45
	MKTG 4.29	MKTG 4.53	ERD 4.00	PGR 3.64	PGR 4.37
	PROD 4.28	PROD 4.28	PROD 3.92	PROD 3.23	PROD 4.08
					F = 10.44**
	$N_{31} = 12$	$N_{32} = 21$	$N_{33} = 32$	$N_{34} = 5$	$R_3 = 70$
Continuous Process	PGR 4.96	GADM 4.84	MKTG 4.62	MKTG 4.68	GADM 4.61
	GADM 4.90	PERS 4.83	GADM 4.48	PERS 4.23	FIN 4.50
	FIN 4.66	PGR 4.81	FIN 4.38	PGR 3.85	PGR 4.40
	PERS 4.62	FIN 4.80	PGR 4.01	GADM 3.80	PERS 4.36
	ERD 4.58	ERD 4.28	PERS 3.98	FIN 3.71	MKTG 4.23
	PROD 4.47	PROD 4.03	ERD 3.61	PROD 3.62	ERD 3.96
	MKTG 4.31	MKTG 3.47	PROD 3.58	ERD 3.44	PROD 3.87
					F = 6.75*
	$C_1 = 29$	$C_2 = 104$	$C_3 = 96$	$C_4 = 20$	N = 249
Overall Column Means	GADM 4.97	GADM 5.02	MKTG 4.71	MKTG 4.56	GADM 4.79
	PERS 4.74	PERS 4.83	GADM 4.66	PERS 3.96	FIN 4.55
	PGR 4.70	FIN 4.77	FIN 4.44	GADM 3.94	PERS 4.47
	FIN 4.65	ERD 4.69	PERS 4.12	FIN 3.79	MKTG 4.47
	ERD 4.52	PGR 4.51	PGR 4.08	PROD 3.50	ERD 4.28
	PROD 4.44	MKTG 4.28	ERD 3.93	ERD 3.50	PGR 4.28
	MKTG 4.31	PROD 4.19	PROD 3.84	PGR 3.44	PROD 4.03
	F = 1.51	F = 10.06**	F = 21.01**	F = 4.7*	F = 16.97**

*Significant at $p < .05$ level

**Significant at $p < .01$ level

See notes to Table XIX

system, Production had significantly lower mean score than all other functions.

F ratios for the repeated measures AOVs for each of the three types of production system showed significance (at $p < .05$ level) in case of the large batch and mass, and continuous process production systems. On the other hand, the mean scores of the seven functions in case of the unit and small batch production system were not significantly different.

The result of unweighted AOVs of the factorial design of Grand Corporate Strategy x Production System (see Table XXII) for the mean strategic significance score of each function seem to indicate that the effect of grand corporate strategy was significant for all functions except Marketing; and the effect of production system was significant only in the case of Public and Government Relations. The interaction effect was not significant for any of the functions.

The F ratios in one-way AOVs by Production System (Table XX) did show significance for four functions: General Administration, Engineering and R&D, Marketing, and Public and Government Relations.

The results seem to indicate that the strategic significance of Public and Government Relations seems to vary when effects of strategy and production system are considered. For all other functions, when firms are classified by strategy and production system the relative strategic significance of these functions seem to vary mainly because of the differences in their grand corporate strategy and not because of the differences in their production systems.

Research Question 6

Research Question 6. For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven

different organizational functions different for firms with different types of organizational structures?

For this research question, the study's sample of 249 firms was categorized into 20 cells by means of a 5 x 4 factorial design of Organizational Structure x Grand Corporate Strategy. As shown in Table XXVI, within each of the 20 cells, and the overall column and row cells, the seven organizational functions were ranked by their mean strategic significance scores. In case of firms with Stability and Retrenchment strategies, the sample size in many cells was less than 5.

The results of approximate LSD tests revealed significant differences in the mean scores of different functions for only a few cells. For firms with External Growth strategy, Marketing had significantly higher mean scores than all the other functions, in the geographic division and holding company structures. In case of Retrenchment strategy, for firms whose organizational structure was functional with one or more divisions, Marketing had a significantly higher mean score than all the other functions. For firms classified as functional with one or more product divisions or subsidiaries, General Administration had a significantly higher, and Production had a significantly lower, mean score than all other functions. In case of the product division firms, General Administration and Finance had significantly higher mean scores than the other five functions, and Production had a significantly lower mean score than all the other functions.

F ratios for the repeated measures AOVs for each of the five types of organizational structure showed significance in case of only one type - product division. In other words, with the exception of product division, the mean scores of the seven functions in each type of

TABLE XXVI

RANKINGS OF THE SEVEN ORGANIZATIONAL FUNCTIONS BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES WITHIN EACH OF THE 20 CELLS IN A 5 X 4 FACTORIAL DESIGN OF ORGANIZATIONAL STRUCTURE X GRAND CORPORATE STRATEGY

ORGANIZATIONAL STRUCTURE	Grand Corporate Strategy: Stability	Internal Growth	External Acquisitive Growth	Retrenchment	Overall Row Means
Functional	N_{11} = 6	N_{12} = 7	N_{13} = 8	N_{14} = 7	R_1 = 28
	GADM 4.65	GADM 5.51	GADM 4.28	PERS 4.39	GADM 4.67
	PGR 4.50	FIN 5.35	MKTG 4.18	MKTG 4.34	PERS 4.40
	PERS 4.26	PERS 5.29	FIN 3.94	GADM 4.29	MKTG 4.24
	PROD 4.23	PGR 5.04	PERS 3.73	PROD 3.94	FIN 4.17
	ERD 4.17	ERD 4.57	PROD 3.64	FIN 3.61	PROD 4.05
	MKTG 4.02	PROD 4.47	ERD 3.43	PGR 3.25	PGR 3.91
	FIN 3.76	MKTG 4.41	PGR 3.06	ERD 3.09	ERD 3.79
					F = 1.94
Functional With One or More Divisions or Subsidaries	N_{21} = 11	N_{22} = 21	N_{23} = 19	N_{24} = 6	R_2 = 57
	GADM 5.35	GADM 4.78	GADM 4.82	MKTG 4.58	GADM 4.78
	PGR 5.20	PERS 4.71	MKTG 4.65	FIN 3.76	PERS 4.52
	PERS 5.13	ERD 4.48	FIN 4.45	GADM 3.58	FIN 4.45
	FIN 5.03	PGR 4.37	PGR 4.30	ERD 3.57	MKTG 4.41
	ERD 4.91	FIN 4.34	PERS 4.26	PERS 3.55	PGR 4.40
	PROD 4.68	PROD 4.07	ERD 4.13	PGR 3.33	ERD 4.35
	MKTG 4.59	MKTG 4.04	PROD 3.98	PROD 3.25	PROD 4.07
					F = 2.98
Product Division	N_{31} = 8	N_{32} = 56	N_{33} = 44	N_{34} = 3	R_3 = 111
	ERD 4.68	GADM 4.98	GADM 4.74	MKTG 4.71	GADM 4.82
	GADM 4.54	FIN 4.81	MKTG 4.72	PGR 3.67	FIN 4.69
	PGR 4.53	ERD 4.80	FIN 4.66	GADM 3.57	MKTG 4.48
	FIN 4.52	PERS 4.75	PERS 4.19	FIN 3.45	PERS 4.47
	PERS 4.48	PGR 4.36	PGR 4.14	PERS 3.29	ERD 4.43
	PROD 4.14	MKTG 4.32	ERD 3.99	ERD 3.13	PGR 4.26
	MKTG 4.09	PROD 4.10	PROD 3.88	PROD 2.87	PROD 3.98
					F = 11.57**
Geographic Division	N_{41} = 2	N_{42} = 14	N_{43} = 14	N_{44} = 2	R_4 = 32
	FIN 5.05	PERS 5.30	MKTG 4.89	ERD 4.70	GADM 4.86
	GADM 4.95	PGR 5.27	GADM 4.57	MKTG 4.63	PERS 4.63
	PROD 4.80	GADM 5.20	PGR 4.27	FIN 4.41	MKTG 4.61
	ERD 4.40	FIN 4.97	FIN 4.21	GADM 4.40	FIN 4.61
	PERS 4.00	ERD 4.70	PERS 4.12	PERS 4.07	PGR 4.52
	MKTG 3.88	MKTG 4.44	PROD 3.91	PROD 3.65	ERD 4.31
	PGR 2.88	PROD 4.42	ERD 3.86	PGR 2.63	PROD 4.18
					F = 1.6
Holding Comapny	N_{51} = 2	N_{52} = 6	N_{53} = 11	N_{54} = 2	R_5 = 21
	PERS 5.86	GADM 5.12	MKTG 4.88	MKTG 4.94	GADM 4.70
	GADM 5.60	FIN 4.68	GADM 4.45	PGR 4.88	MKTG 4.69
	FIN 5.27	ERD 4.53	FIN 4.23	PERS 4.64	FIN 4.48
	PGR 5.00	PROD 4.52	PGR 4.00	FIN 4.41	PERS 4.25
	MKTG 4.94	PERS 4.31	PERS 3.86	ERD 4.10	PGR 4.18
	PROD 4.55	MKTG 4.19	ERD 3.78	GADM 3.85	ERD 3.95
	ERD 3.00	PGR 4.00	PROD 3.54	PROD 3.50	PROD 3.91
					F = 3.22
Overall Column Means	C_1 = 29	C_2 = 104	C_3 = 96	C_4 = 20	N = 249
	GADM 4.97	GADM 5.02	MKTG 4.71	MKTG 4.56	GADM 4.79
	PERS 4.74	PERS 4.83	GADM 4.66	PERS 3.96	FIN 4.55
	PGR 4.70	FIN 4.77	FIN 4.44	GADM 3.94	PERS 4.47
	FIN 4.65	ERD 4.69	PERS 4.12	FIN 3.79	MKTG 4.47
	ERD 4.52	PGR 4.51	PGR 4.08	PROD 3.50	ERD 4.28
	PROD 4.44	MKTG 4.28	ERD 3.93	ERD 3.50	PGR 4.28
	MKTG 4.31	PROD 4.19	PROD 3.84	PGR 3.44	PROD 4.03
	F = 1.51	F = 10.06**	F = 21.01**	F = 4.7*	F = 16.97**

*Significant at p < .05 level

**Significant at p < .01 level

See Notes to Table XIX

organizational structure were not significantly different.

The results of one-way AOVs by Organizational Structures (Table XX) showed significance for only two functions: Engineering and R&D and Finance. The data therefore seem to indicate that for the other five functions there do not exist significant differences among their mean strategic significance scores attributable to organizational structure.

The results of unweighted AOVs for the entire factorial design of Grand Corporate Strategy x Organizational Structure (Table XXII) for the mean strategic significance score of each function seem to indicate that the effect of grand corporate strategy was significant for all functions except Marketing; and the effect of organizational structure was not significant for any function. The interaction effect was significant for only three functions: Personnel, Public and Government Relations, and Finance.

The results, therefore, seem to indicate that when industrial firms are classified by strategy and structure, the relative strategic significance of different functions seem to vary mainly because of the differences in their grand corporate strategies, and not because of the differences in their organizational structures.

Research Question 7

Research Question 7. For firms pursuing a particular grand corporate strategy, is the relative strategic significance of the seven different organizational functions different for firms with different degrees of perceived environmental uncertainty?

For this research question, the study's sample of 249 firms was

categorized into 8 cells by means of a 2 x 4 factorial design of Perceived Environmental Uncertainty (PEU) x Grand Corporate Strategy. As shown in Table XXVII, within each of the 8 cells, and the overall column and row cells, the seven organizational functions were ranked by their mean strategic significance scores.

For firms with Stability and Retrenchment strategies the functional mix was different for firms with high and low PEU. Again, the very small sample sizes of firms with high PEU would make any generalization misleading. Perhaps the only prudent conclusion seems to be that Marketing had the highest strategic significance for firms with Retrenchment strategy, in case of both low and high PEU.

The approximate LSD tests revealed the following results: In case of firms with Stability strategy and facing low PEU, Production and Marketing had significantly lower mean scores than the other five functions. For firms with Internal Growth strategy facing low PEU, General Administration's mean score was significantly higher than all the other functions. In case of firms with External Growth strategy facing high PEU, Marketing and General Administration had mean scores significantly higher than the other five. In case of Retrenchment strategy firms facing low PEU, Marketing's mean score was significantly higher than all the other functions. Firms facing low PEU had General Administration's mean score significantly higher (and Production's mean score significantly lower) than the mean scores of all the other functions.

F ratios for the repeated measures AOVs for each of the two PEU groups indicated that the mean scores of the seven functions were significantly different in the low PEU group.

TABLE XXVII

RANKINGS OF THE SEVEN ORGANIZATIONAL FUNCTIONS BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES WITHIN EACH OF THE 8 CELLS IN A 2 X 4 FACTORIAL DESIGN OF PERCEIVED ENVIRONMENTAL UNCERTAINTY X GRAND CORPORATE STRATEGY

PERCEIVED ENVIRONMENTAL UNCERTAINTY	Grand Corporate Strategy: Stability	Internal Growth	External Acquisitive Growth	Retrenchment	Overall Row Means
Low	N_{11} = 25	N_{12} = 82	N_{13} = 70	N_{14} = 17	R_1 = 194
	GADM 4.97	GADM 5.00	MKTG 4.68	MKTG 4.46	GADM 4.78
	PGR 4.91	PERS 4.78	GADM 4.64	GADM 3.94	FIN 4.53
	PERS 4.75	FIN 4.75	FIN 4.44	PERS 3.87	PERS 4.44
	FIN 4.59	ERD 4.62	PERS 4.07	FIN 3.70	MKTG 4.39
	ERD 4.56	PGR 4.43	PGR 4.05	PROD 3.47	ERD 4.27
	PROD 4.42	MKTG 4.15	ERD 3.98	ERD 3.33	PGR 4.25
	MKTG 4.31	PROD 4.12	PROD 3.79	PGR 3.26	PROD 3.98
					F = 14.06**
High	N_{21} = 4	N_{22} = 22	N_{23} = 26	N_{24} = 3	R_2 = 55
	FIN 5.02	GADM 5.05	MKTG 4.79	MKTG 5.13	GADM 4.82
	GADM 4.98	PERS 5.01	GADM 4.71	PERS 4.48	MKTG 4.76
	PERS 4.71	ERD 4.95	FIN 4.44	ERD 4.47	FIN 4.62
	PROD 4.53	FIN 4.81	PERS 4.25	PGR 4.42	PERS 4.60
	MKTG 4.31	PGR 4.80	PGR 4.17	FIN 4.30	PGR 4.38
	ERD 4.30	MKTG 4.75	PROD 3.98	GADM 3.90	ERD 4.32
	PGR 3.38	PROD 4.43	ERD 3.78	PROD 3.67	PROD 4.18
					F = 3.58
Overall Column Means	C_1 = 29	C_2 = 104	C_3 = 96	C_4 = 20	N = 249
	GADM 4.97	GADM 5.02	MKTG 4.71	MKTG 4.56	GADM 4.79
	PERS 4.74	PERS 4.83	GADM 4.66	PERS 3.96	FIN 4.55
	PGR 4.70	FIN 4.77	FIN 4.44	GADM 3.94	PERS 4.47
	FIN 4.65	ERD 4.69	PERS 4.12	FIN 3.79	MKTG 4.47
	ERD 4.52	PGR 4.51	PGR 4.08	PROD 3.50	ERD 4.28
	PROD 4.44	MKTG 4.28	ERD 3.93	ERD 3.50	PGR 4.28
	MKTG 4.31	PROD 4.19	PROD 3.84	PGR 3.44	PROD 4.03
	F = 1.51	F = 10.06**	F = 21.01**	F = 4.7*	F = 16.97**

*Significant at p < .05 level

**Significant at p < .01 level

See notes to Table XIX

The results of one-way AOVs by PEU (Table XX) showed significance for only one function: Marketing. Therefore, for the other six functions, there do no seem to exist significant differences among their mean strategic significance scores attributable to the degree of PEU.

The results of unweighted AOVs for the entire factorial design of Grand Corporate Strategy x PEU (Table XXII) for the mean strategic significance score of each function seem to indicate that the effect of grand corporate strategy was significant for all functions except Marketing, and Public and Government Relations; the effect of PEU was not significant for any function. The interaction effect was significant for only Public and Government Relations.

The results therefore seem to indicate that when firms are classified by strategy and PEU, the relative strategic significance of different functions seem to vary mainly because of the differences in their grand corporate strategy and not because of the differences in the degree of PEU.

Analyses of Data Not Directly Related to the Research Objectives

For this study, as explained in Chapter III, the responding senior executives were not asked to evaluate each of the seven functions in terms of its strategic significance on a Likert-type rating scale. Instead, a normative list of fifty-five key result areas (grouped under seven organizational functions) was developed and the senior executives were asked to rate each key result area separately in terms of its strategic significance to effective implementation of the firm's grand corporate strategy. The evaluation of each key result area was based

upon a seven-point rating scale from 1 to 7. For each firm the strategic significance of each function was based on the average of the ratings of key result areas in that functional category.

Although the focus of this study is on the strategic significance mix of different functions rather than the strategic significance mix of different key result areas, it was thought that additional analyses by key result areas would provide some interesting and useful data. Appendix E contains tabulation of distribution of responses among rating scales and identification of mode and mean ratings and their rankings for all key result areas. The top sixteen key result areas, ranked by their mean strategic significance scores, are listed in Table XXVIII. Each of the seven functions is represented in this list of top sixteen (out of a total of fifty-five) key result areas.

As shown in Table XIX, General Administration had the highest strategic significance among all functions for the overall sample. The analysis by key result areas makes this fact even more obvious. Three out of the top four and five out of the top ten key result areas are from the General Administration category. Interestingly enough, out of the five General Administration key result areas (shown in Table XXVIII), the following three directly relate to the area of business policy and strategic planning.

1. Ability to perceive new business opportunities and potential threats.
2. Achieving a better overall control of general corporate performance.
3. Developing a more effective company-wide strategic planning system for planned overall corporate development.

TABLE XXVIII

THE TOP SIXTEEN KEY RESULT AREAS RANKED BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES (N = 249)

Key Result Area			Mean Strategic Significance Score
1.	GADM 1	Attracting and retaining well-trained and competent top managers	6.06
2.	MKTG 33	Maintaining a highly trained, motivated, vigorous and dynamic sales organization	5.82
3.	GADM 3	Ability to perceive new business opportunities and potential threats	5.47
4.	GADM 2	Achieving a better overall control of general corporate performance	5.33
5.	FIN 38	Sound capital structure allowing flexibility to raise additional capital for internal growth and acquisitions	5.26
6.	GADM 5	Ability to unify conflicting opinions, improve coordination and enhance effective collaboration between key executives, generate enthusiasm and motivate sufficient managerial drive for growth and profits.	5.15
7.	ERD 21	Improvement in research and new product development capabilities	5.08
8.	MKTG 27	Widening the customer base by intensive market penetration and development	5.06
9.	FIN 34	Improving bond ratings and common stock market performance	5.00
10.	GADM 6	Developing a more effective company-wide strategic planning system for planned overall corporate development	5.00
11.	PROD 11	An ongoing plant modernization program to keep the efficiency of equipment comparable to that of the major competitors	4.87
12.	FIN 39	Strong working capital position allowing flexibility to raise short-term capital at low cost	4.84
13.	PERS 48	Improved employee motivation, job satisfaction and morale	4.84

TABLE XXVIII(Continued)

Key Result Area			Mean Strategic Significance Score
14.	PERS 49	Stimulating and rewarding creativity in employees and installing incentive performance reward systems	4.79
15.	PERS 46	Effective and efficient personnel policies for hiring, training, promotion, compensation and employee services	4.79
16.	PGR 55	Improving overall corporate image	4.77

Legend: GADM = General Administration
PROD = Production/Operations
ERD = Engineering and R&D
MKTG = Marketing
FIN = Finance
PERS = Personnel
PGR = Public and Government Relations

Appendix F provides comparisons of the top ten key result areas ranked by their mean strategic significance scores and separately analyzed by grand corporate strategy, size, corporate diversity, industry, production system, organizational structure, and perceived environmental uncertainty. Table XXX (included in Appendix F) provides a comparison of the top ten key result areas in firms pursuing different grand corporate strategies. In Firms pursuing Stability, Internal Growth, and External Growth strategies, the highest importance is given to the ability to attract and retain well-trained and competent top managers; and only one of the top ten key result areas is not included in the overall top sixteen. In firms pursuing Retrenchment strategy, the highest importance seems to be given to maintaining a highly trained, motivated, vigorous and dynamic sales organization; and three of the top ten key result areas are not included in the overall top sixteen. These three key result areas, of special importance to firms pursuing Retrenchment strategy, relate to the firm's ability to:

1. use more novel and effective sales promotion and advertising campaigns;
2. maintain effective relations with trade unions; and
3. widen and improve the product distribution networks and improve distributor relations.

Another major difference lies in the fact that firms with Stability, and Internal and External Growth strategies, consider their ability to perceive new business opportunities and potential threats as one of the top five key result areas. In the case of Retrenchment strategy firms, the above-mentioned key result area does not figure in the list of the top ten.

Conclusion

This chapter has presented the results of analyses of data collected for the study. The strategic mixes of organizational functions for effective imolementation of different grand corporate strategies have been identified. Statistical tests clearly indicate that there do exist significant differences among the mean strategic significance score of each function attributable to grand corporate strategies pursued by the firms. The collective perceptions of the senior executives in industrial firms seem to suggest that the relative strategic significance of the seven different organizational functions is different for firms pursuing different grand corporate strategies.

When the influence of firm size, corporate diversity, industry, production system, organizational structure, and perceived environmental uncertainty were considered for each type of grand corporate strategy, the strategic mixes of organizational functions were found to be different. Of the four types of grand corporate strategies, the External Acquisitive Growth strategy seemed to be the least vulnerable to the influence of these mediating variables. The analyses by grand corporate strategy and each of the mediating variables indicated that the grand corporate strategy was responsible for most of the explained variance of mean strategic significance scores of different organization functions.

With the results of the study having been presented, the next chapter will fully discuss these results, provide a summary of findings and present some conclusions.

CHAPTER VII

DISCUSSION OF RESULTS, SUMMARY AND CONCLUSIONS

This chapter presents a discussion of the results of the study's empirical analyses of data. It provides a summary of the findings, and a conclusion to this chapter summarizes the salient features of the importance of this study and the implications for further research.

Discussion of Results

At the outset, it is important to reiterate that this study's conceptual framework is not a theory in the strict sense of the term. This study is exploratory in nature and the aim is to develop a better understanding of the concept of corporate strategy. It has integrated several different concepts from the fields of corporate strategy and organization theory. The primary thrust of this study is to investigate the relationships between grand corporate strategies pursued and the strategic mixes of seven organizational functions in industrial firms. The secondary thrust of this study is to identify the nature of influence of size, corporate diversity, industry type, production system, organizational structure, and perceived environmental uncertainty, on the interrelationships between the grand corporate strategy pursued and the relative importance of different functional tasks. Thus, the aim of the study is to provide understanding - to determine the relationships that exist, and therefore no cause and effect conclusions can

be drawn. The discussion in this section will be broken down by the major areas of the study.

Relative Strategic Significance of Different Organizational Functions

For the entire sample of 249 industrial firms, the mean strategic significance score of the top-ranked General Administration was significantly higher than the remaining six functions (Table XIX). Finance, Personnel, and Marketing (ranked second, third, and fourth, respectively), had mean strategic significance scores not significantly different from one another. The fourth and fifth place went to Engineering and R&D, and Public and Government Relations. Production was ranked last among the seven functions with mean strategic significance score significantly lower than all the others.

As shown in Table XXVIII, the key result areas included under General Administration category account for five of the top ten. Of these five key result areas, the first related to the ability to attract and retain competent top managers; the second relates to the leadership role of general management in a large organization; and the remaining three directly relate to the area of business policy and planning. These findings empirically affirm the paramount importance of the general management function in large industrial firms. It also highlights the top management interest and involvement in strategic planning. It seems that the prognosis by many management writers that the decade of 70's would go down in the management history as the "decade of strategic planning," would after all come true. It also suggests that the current upsurge in the academic interest in "strategic management" is also very

timely, and none too soon. A need for a clear dichotomy between strategic and operating management has never been greater.

The highest importance given to general management seems to support the findings of Stevenson (1968) and Steiner (1969a). The identification of Finance as the second most important function, highlights the important contribution that the chief financial officer can make to a large industrial firm. It supports Pohl's (1973) contention, that the trend toward an increase in the direct involvement of the chief financial officers in the strategic issues handled by top management is likely to continue.

Godiwalla (1977) in his study of the influence of functional managements (general management excluded) on the overall corporate strategy, found marketing, finance, and production as the three most crucial functions in order of importance. In this study, after General Administration, Finance had the highest strategic significance, followed by Personnel and Marketing; Production on the other hand had the lowest strategic significance. The study's analyses, therefore do not support Godiwalla's findings. The lowest rank of Production seems to support Heau's (1976) contention that it is only in the case of vertical integration that the top management is production-oriented.

To sum up, the aggregate analysis of data clearly indicate that the relative strategic significance of the seven functions is different in industrial firms. The data was further analyzed by grand corporate strategy, size, corporate diversity, industry, production system, organizational structure, and perceived environmental uncertainty. Table XXIX shows the rankings of functions in different schemes of classification. It might be pointed out that General Administration

TABLE XXIX

RANKINGS OF THE SEVEN ORGANIZATIONAL FUNCTIONS
BASED ON THE MANAGERIAL PERCEPTIONS OF
THEIR STRATEGIC SIGNIFICANCE

	N	Organizational Functions A	B	C	D	E	F	G
1. In firms pursuing different Grand Corporate Strategies:								
a) Stability	29	1	6	5	7	4	2	3
b) Internal Growth	104	1	7	4	6	3	2	5
c) External Acquisitive Growth	96	2	7	6	1	3	4	5
d) Retrenchment	20	3	5	6	1	4	2	7
2. In firms with different Size (Annual Sales revenue in millions):								
a) $200 and less	60	1	5	6	2	4	3	7
b) $201 - $599	84	1	7	6	4	3	2	5
c) $600 and over	105	1	7	4	6	2	5	3
3. In firms with different degrees of Corporate Diversity:								
a) Single Business Firms	28	1	6	7	5	3	2	4
b) Dominant Business Firms	55	1	7	5	2	4	3	6
c) Related Business Firms	116	1	7	6	4	2	3	5
d) Unrelated Business Firms	50	1	6	5	3	2	4	7
4. In firms in different Industries:								
a) Consumer Nondurable Goods	73	1	7	6	4	2	5	3
b) Consumer Durable Goods	34	2	7	3	1	4	5	6
c) Capital Goods	61	1	6	5	2	3	4	7
d) Producer Goods	81	1	7	5	6	2	3	4
5. In firms with different types of Production Systems:								
a) Unit and Small Batch	41	1	6	5	2	3	4	7
b) Large Batch and Mass	138	1	7	5	3	2	4	6
c) Continuous Process	70	1	7	6	5	2	4	3
6. In firms with different types of Organizational Structure:								
a) Functional	28	1	5	7	3	4	2	6
b) Functional with one or more Product Divisions or Subsidiaries	57	1	7	6	4	3	2	5
c) Product Division	111	1	7	5	3	2	4	6
d) Geographic Division	32	1	7	6	3	4	2	5
e) Holding Company	21	1	7	6	2	3	4	5

TABLE XXIX (Continued)

	N	Organizational Functions						
		A	B	C	D	E	F	G
7. In firms facing different degrees of Perceived Environmental Uncertainty:								
a) Low	194	1	7	5	4	2	3	6
b) High	55	1	7	6	2	3	4	5
All Firms (Overall)	249	1	7	5	4	2	3	6

Note: (1) Column 'N' denotes the number of firms sampled in each category.

(2) Legend: A = General Administration
B = Production/Operations
C = Engineering and R&D
D = Marketing
E = Finance
F = Personnel
G = Public and Government Relations

had the top rank in all but a few sub-groups. In the next seven sections, the results of the analyses of data by strategy, size, diversity, industry, production system, organizational structure, and PEU, are discussed separately.

Analysis by Grand Corporate Strategy

In this section, the results of the analysis of data by grand corporate strategy are discussed first. The effects of further analyses by size, corporate diversity, industry, production system, organizational structure, and perceived environmental uncertainty are then discussed separately.

When the aggregate data was analyzed by grand corporate strategy, the strategic mixes of organizational functions were found to be different for each strategy type. As shown in Table XIX, only in the case of Internal Growth strategy (General Administration) and Retrenchment strategy (Marketing) did the top-ranked function have a significantly higher score than all the other functions. In case of External Growth strategy, Marketing and General Administration had significantly higher scores than the remaining five functions. We can therefore conclude that General Administration appears to be a critical function for Internal and External Growth strategies, whereas Marketing is a critical function for Retrenchment and External Growth strategies. There seems to be no one or two critical functions for firms pursuing Stability strategy; although in line with the aggregate data, General Administration seems to be strategically very important. The data also seem to indicate relatively higher importance for Public and Government Relations in the case of firms pursuing Stability strategy.

Statistical analyses discussed in the previous chapter clearly indicates that the effect of grand corporate strategy on the relative strategic importance of the seven functions is highly significant, it is more significant than the effect of any other mediating variable, to be discussed later in this section. Almost every function is significantly affected by the grand corporate strategy pursued. It is therefore extremely important that when a large firm changes its grand corporate strategy, it must reevaluate its priority of critical functions otherwise the effective implementation of the new grand corporate strategy is likely to be hampered. These findings seem to support Allen's (1972) study of the differences in conglomerates and vertically integrated companies, Heau's (1976) study of the critical functions in vertically integrated and conglomerate firms, and Miles and Snow's (1978) typology of organizations with distinguishing features consistent with the organizational strategies.

In the following sections the effects of size, corporate diversity, industry type, production system, organizational structure, and perceived environmental uncertainty, on the interrelationships between the grand corporate strategy pursued and the relative importance of different functional tasks, are examined separately.

Effect of Size. Table XXI shows the effect on the strategic mixes of organizational functions when firms in each of the four strategy groups are further analyzed by their size. For each strategy group, the rankings of functions in different size categories are different.

In case of Stability strategy, the effect of size seems to the most pronounced for Public and Government Relations; and Finance seems

to have a relatively higher importance in small-sized firms. However, the LSD tests revealed no significant differences in the mean scores of the different functions in any size category.

For firms pursuing Internal Growth strategy, General Administration seems to be very important irrespective of firm size. However, the LSD tests showed significant differences in mean scores only in the case of large firms; the lowest-ranked Production and Marketing had mean scores significantly lower than the remaining five functions.

For firms pursuing External Growth strategy, the results of LSD tests indicate that: (1) Production had a mean score significantly lower than all the other six functions in the case of large firms; and (2) General Administration and Marketing had mean scores significantly higher than the remaining five functions in the case of medium-sized firms. In the case of small-sized firms, LSD tests showed no significant differences. The data seem to suggest that Marketing and General Administration are very important functions irrespective of firm size.

There seems to be no one or two critical functions for firms pursuing Retrenchment strategies, although in line with the aggregate data, Marketing seems to be strategically very important.

The results of unweighted factorial AOVs show that when firms pursuing different grand corporate strategies were sub-classified by size, the effect of size, on the relative importance of functional tasks, was most pronounced on two functions: Engineering and R&D, and Public and Government Relations. For the other five functions the effect of size showed no significance (at $p < .05$ level). On the other hand the effect of grand corporate strategy was significant for all

functions. Therefore, grand corporate strategy seems responsible for most of the explained variance of mean strategic significance score of different organizational functions.

The findings of this study with regard to the effect of size should be interpreted with caution. The study's sample came from a population of 1000 largest U.S. industrial firms, the smallest of which had annual sales exceeding $100 million. Therefore, the terms "small" and "medium," used in this study to distinguish firms in the sample by size, have rather specific meaning. This might also be an important reason why the results do not seem to support the importance of size as a contextual variable, as suggested by many organization theorists.

Effect of Corporate Diversity. Table XXIII shows the effect on the strategic mixes of organizational functions when firms in each of the four strategy groups are further analyzed by corporate diversity. For each strategy group, the rankings of functions in different diversity categories are different.

In case of Stability strategy, Public and Government Relations, and Engineering and R&D, seem to be most affected by differences in the degree of corporate diversity. However, the LSD tests did not reveal any significant differences in the mean scores in any of the four cells.

In case of Internal Growth strategy, General Administration was the critical function for the related business firms. The importance of Engineering and R&D seemed to increase with diversity.

In case of External Growth strategy the analysis by diversity did not seem to change the importance of Marketing, General Administration, and Finance. Marketing and General Administration were the most strategic functions in the dominant business firms. Marketing, General

Administration, and Finance were the most strategic functions in the related and unrelated business firms.

In case of Retrenchment strategy, Marketing was given the highest importance in the related business firms. In the other three cells, the LSD tests did not reveal any significant differences, although the overall trends seem to suggest that Marketing is a crucial function irrespective of the degree of corporate diversity.

The results of unweighted factorial AOVs show that when firms pursuing different grand corporate strategies were sub-classified by the degree of corporate diversity, the effect of corporate diversity was most pronounced on Public and Government Relations and the interaction effect (of corporate diversity and grand corporate strategy) was most pronounced on Public and Government Relations, and Engineering and R&D. On the other hand the effect of grand corporate strategy was significant for all functions except Marketing.

The relative strategic significance of Marketing, therefore, does not seem to change in industrial firms when their grand corporate strategies and their degree of diversity are taken into account. On the other hand, differences in strategy and diversity seem to have a considerable influence on the relative strategic significance of Public and Government Relations, and Engineering and R&D in industrial firms. For General Administration, Production/Operations, Finance, and Personnel, strategy and not diversity, seems responsible for most of the differences in their relative strategic significance.

The studies by Chandler (1962), Fouraker and Stopford (1968), Rumelt (1974), Khandwalla (1974), Miller and Springate (1978), and Galbraith and Nathanson (1978) found systematic structural

differences in firms pursuing different diversification strategies; however the data for this study do not show any systematic differences in the relative strategic importance of different functional tasks when firms in different strategy groups are further analyzed by corporate diversity.

Effect of Industry Table XXIV shows the effect on the strategic mixes of organizational functions when firms in each of the four strategy groups are further analyzed by industry.

In case of Stability strategy, Engineering and R&D, Public and Government Relations, and Personnel seemed to be most affected by differences in industry types.

In case of Internal Growth strategy, Engineering and R&D seemed to have a relatively higher importance in the consumer durable goods industries.

In case of External Growth strategy, the analysis by industry showed little difference. The results of LSD tests showed Marketing, General Administration, and Finance as critical functions in the capital and producer goods industries.

In case of Retrenchment strategy, the LSD tests did not reveal any significance in any of the four cells. This coupled with the small sample size in each cell precludes any generalization.

The results of unweighted factorial AOVs show that when firms pursuing different grand corporate strategies were sub-classified by industry the effect of industry was significant only in Production and Marketing, and the interaction effect was significant only in case of General Administration. The effect of grand corporate strategy was, however, significant for all functions except Marketing.

To conclude, the differences in strategy and industry have a significant effect on the relative importance of Production. The relative strategic significance of Marketing seems to be affected by the differences in industry rather than by differences in strategy. And, for the remaining five functions, contrary to the findings of Lawrence and Lorsch (1967) and Miles and Snow (1978), strategy and not industry seems to be responsible for most of the differences in their relative importance.

Effect of Production System. Table XXV shows the effect on the strategic mixes of organizational functions when firms in each strategy group are further analyzed by production system.

In case of Stability strategy, the results of LSD tests showed that Engineering and R&D had a significantly lower mean score than all the other six functions in the unit and small batch production system.

In case of Internal Growth strategy, the analyses by LSD tests indicated General Administration to be the most strategic function in the mass production system, and Marketing to be the least strategic function in the process production system.

In case of External Growth strategy, further analysis by production system did not show any major changes; the results of LSD tests showed that Marketing and General Administration were the critical functions in the mass production and (along with Finance) in the process production systems.

In case of Retrenchment strategy, LSD tests did not reveal any critical function(s); however Marketing seemed to be very important, irrespective of the type of production system.

The results of unweighted factorial AOVs show that when firms pursuing different grand corporate strategies were sub-classified by production system the effect of production system was significant only in Public and Government Relations, the effect of grand corporate strategy was significant for all seven functions but Marketing, and the interaction effect was not significant in any function.

Therefore, differences in strategy and production system have a significant effect on the relative importance of Public and Government Relations; on the other hand, differences in strategy and production system do not seem to influence the relative importance of Marketing in industrial firms. For the other five functions, strategy and not production system seems responsible for most of the differences in their relative importance.

As per the findings of the organization theorists like Woodward (1965), Thompson (1967), Hickson et al. (1969), Perrow (1970) and Murphy (1972), the firm's predominant production system affects the structural and scale (size) aspects of the organization. The analyses of the study's data seem to indicate that compared to the grand corporate strategy, the production system seems to have considerably less influence on the relative importance of different functional tasks.

Effect of Organizational Structure. Table XXVI shows the effect on the strategic mixes of organizational functions when firms in each of four strategy groups are further analyzed by organizational structure.

In case of firms with Stability and Retrenchment strategies the strategic mixes of functions were different in different types of structures, however, the extremely small sample sizes make the

generalizations of findings rather questionable. For firms pursuing Retrenchment strategy, the results of LSD tests showed Marketing to be the most strategic function in firms whose structure was functional with one or more product divisions or subsidiaries.

In case of Internal Growth strategy, the relative strategic significance of different functions seemed to change with structure, but General Administration seemed to have very high strategic significance irrespective of the type of organizational structure.

In Case of External Growth strategy, Marketing was the most strategic function for firms with both the geographic division and the holding company structures.

The results of unweighted factorial AOVs show that when firms pursuing different grand corporate strategies were sub-classified by organizational structure, the effect of organizations structure was not significant for any function; the effect of grand corporate strategy was significant for all functions except Marketing; and the interaction effect was significant for Finance, Personnel, and Public and Government Relations.

Therefore, differences in strategy and organizational structure do not seem to have any effect on the relative strategic significance of Marketing in industrial firms. For the other six functions, strategy and not organizational structure seems responsible for most of the differences in their relative importance.

The major research findings in the area of organization theory highlight the importance of organizational structure as a crucial contextual variable, the business policy research findings also consider structure as a crucial variable in the area of strategy implementation.

However, the analyses of the study's data seem to indicate that organizational structure does not have any significant influence on the relative importance of different functions in large industrial firms.

Effect of Perceived Environmental Uncertainty. Table XXVII shows the effect on the strategic mixes of organizational functions when firms in each of the four strategy groups are further analyzed by perceived environmental uncertainty (PEU).

In case of firms pursuing Stability and Retrenchment strategies, the very small sample sizes for firms with high PEU, make any generalization misleading. Although for Retrenchment strategy, LSD tests showed that Marketing had the highest strategic significance for firms with low PEU.

For the two growth strategies, analyses by PEU showed few differences in the strategic mixes of functions for high and low PEU. The results of LSD tests showed that in case of firms pursuing External Growth strategies, Marketing and General Administration were the Critical functions for firms with high PEU; and Marketing, General Administration and Finance were the critical functions for firms with low PEU.

The results of unweighted factorial AOVs show that when firms pursuing different grand corporate strategies were sub-classified by PEU, the effect of PEU was not significant for any function; the effect of grand corporate strategy was significant for all functions except Marketing, and Public and Government Relations; and the interaction effect was significant for only Public and Government Relations. Therefore, differences in strategy and PEU do not seem to have any effect on the relative strategic significance of Marketing in industrial firms. For the other six functions, strategy and not PEU seems responsible for most of the differences in their relative importance. The results do not support the findings

of Lawrence and Lorsch (1967), and Miles and Snow (1978) regarding the effect of PEU on the relative strategic importance of different functions.

Analysis by Firm Size

The analysis of aggregate data by size (Table XXI, overall row cells) revealed differences in the strategic mixes of functions for different sizes. General Administration had the highest mean strategic significance scores in all size categories, although LSD tests revealed significance only for the small and medium size categories. The results of LSD tests also showed that Marketing had the lowest strategic importance in large firms. The relative importance of Finance and, Public and Government Relations seemed to increase with size, whereas the importance of Marketing declined with the increase in size. Large firms also gave higher importance to Engineering and R&D and lower importance to Personnel

The results of one-way AOVs by size indicated significance for Engineering and R&D, Finance, and Public and Government Relations. Therefore, the relative strategic significance of each of these three functions seem to vary with size. Conversely, the relative strategic significance of General Administration, Production, Marketing, and Personnel do not seem to change with the change in size.

Godiwalla's (1977) findings regarding the strategic functional managements in firms of different size are not comparable with this study's findings because of the difference in the definitions of size.

Analysis by Corporate Diversity

The analysis of aggregate data by corporate diversity (Table XXIII,

overall row cells) did show changes in the strategic mixes of organizational functions for different degrees of corporate diversity. The results of LSD tests showed that for the related business firms General Administration had the highest strategic significance, and Production had the lowest strategic significance. No significant differences in the mean scores were observed for the other three diversity categories.

However, the results of one-way AOVs by corporate diversity showed significance in case of only two functions: Engineering and R&D, and Public and Government Relations. Thus, there do exist significant differences in the relative importance of these two functions attributable to corporate diversity. Conversely, in industrial firms the relative importance of General Administration, Production, Marketing, Finance and Personnel, do not seem to vary with the change in the degree of corporate diversity.

Analysis by Industry

The analysis of aggregate data by industry (Table XXIV, overall row cells) revealed differences in the strategic mixes of organizational functions for different industries. The results of LSD tests showed that General Administration had the highest strategic significance in the capital and producer goods industries; and Production had the lowest strategic significance in the consumer nondurable and producer goods industries. Public and Government Relations had higher importance in the consumer nondurable goods industry. Marketing seemed more important in the consumer durable and capital goods industries.

The results of one-way AOVs by industry showed significance for Production and Marketing; therefore we would expect the relative

strategic importance of Production and Marketing to differ in different industries. Thus, the relative strategic importance of General Administration, Engineering and R&D, Finance, Personnel, and Public and Government Relations, in industrial firms seem to remain the same irrespective of the type of industry.

The study's findings do not seem to support the conclusions from Miles and Snow's (1978) study. According to them, the chief executives' ranking of top three functions were different in food processing and electronics industries. In food processing industry, the top three functions were: sales and marketing, production, and long range planning. According to data from this study, in the consumer nondurable goods industries, General Administration (including long-range planning) was found to have the highest mean score, Marketing had the fourth highest mean score, and Production was the least important function.

According to Lawrence and Lorsch (1967b), ". . . marketing had more influence than production in both container-manufacturing and food-processing firms, apparently because of its involvement in (uncertain) innovations and with customers" (Hickson et al., 1971, p. 219). This study's findings indicate that Marketing had higher mean scores than Production in all four types of industries.

Analysis by Production System

The analysis of aggregate data by production system (Table XXV, overall raw cells) showed changes in the strategic mixes of functions for different production systems. General Administration got the highest rank in the unit and small batch, and mass production systems; for the continuous process production system, the LSD tests showed no

significant differences in the mean scores of different functions. Apparently, senior executives do not consider Production function to be strategically important to effective implementation of grand corporate strategies. In the case of mass and process production systems, Production had the lowest strategic importance.

The results of one-way AOVs by production system showed significance for General Administration, Engineering and R&D, Marketing, and Public and Government Relations. Therefore, it seems that there do exist significant differences in the relative importance of these functions attributable to production system. Conversely, the relative importance of Production, Finance, and Personnel do not seem to vary with the change in the production system. The most surprising result is that the differences in the predominant production system do not seem to have any effect, on the perceptions of senior executives in industrial firms, about the relative strategic significance of the Production function.

Woodward (1965) identified development, production, and marketing as the critical functions for unit and small batch, large batch and mass, and process production system, respectively. The study's findings do not support Woodward's conclusions, none of the three functions were found to be "critical" for any type of production system. In fact for mass production system, the Production function not only had the lowest rank but also had mean score significantly lower than all the other functions. If Woodward's three functions alone were considered, for each of the three types of production system, the rank ordering was: marketing, development and production.

The study's findings also partially support Godiwalla's (1977) findings about the influence of functional managements on overall corporate strategy in firms with different production systems. Godiwalla found Marketing and Finance as the two top functions for all three types of production system. However, the data from this study indicates similar results only for the unit and small batch type; besides, Finance and Marketing were the top functions in the mass production and Finance and Public and Government Relations in the process production. The relative importance of R&D and Production identified by Godiwalla also differs from this study's findings.

Analysis by Organizational Structure

The analysis of aggregate data by organizational structure (Table XXVI, overall row cells) revealed no major changes. The top four functions in all types of organizational structures (not necessarily in that order) were: General Administration, Finance, Personnel and Marketing.

The results of one-way AOVs by organizational structure showed significance for only two functions: Finance, and Engineering and R&D. Therefore, barring these two functions, the relative importance of functional tasks in industrial firms do not seem to vary with their organizational structures.

Analysis by Perceived Environmental Uncertainty

The analysis of aggregate data by perceived environmental uncertainty (Table XXVII, overall row cells) revealed a few changes. The rankings of functions in case of firms with low PEU were the same as those

for the aggregate data. For firms with high PEU, Marketing was ranked second to General Administration. Therefore, a high degree of perceived environmental uncertainty seems to increase the relative strategic significance of Marketing in industrial firms. However, it must be noted that LSD tests revealed no significant differences in the mean scores of different functions for firms facing high PEU. The results of one-way AOVs by PEU showed significance in only one function - Marketing. Thus, with the exception of Marketing, differences in the degree of perceived environmental uncertainty do not seem to influence the perceptions of senior executives in industrial firms about the strategic significance of different functional tasks.

The study's findings do not quite support Miles and Snow's (1978) contention that firms facing high PEU place greater emphasis on externally oriented functions like product development and market research. Although, the firms facing high PEU considered Marketing important; the same phenomenon was not observed for Engineering and R&D, and Public and Government Relations.

Summary of Findings

The central point of the study's findings indicate that General Administration is perceived by the senior executives as having the highest strategic significance in industrial firms. The strategic significance score of General Administration was the highest among all functions, approximate LSD tests showed that the mean score for General Administration was significantly higher than all other functions. The next three strategically important functions were Finance, Personnel and Marketing. As a group their mean scores were significantly higher than those of the last three functions. The next in the order of

importance were Engineering and R&D, and Public and Government Relations. Production was found to be strategically the least important function in industrial firms.

Analysis by grand corporate strategy showed that strategic mixes of functions were different for the four types of grand corporate strategies. For Stability strategy, General Administration had the highest mean strategic significance score. For Internal Growth strategy, LSD tests showed that General Administration had significantly higher mean score than all other functions. For External Acquisitive Growth strategy, the top three functions were Marketing, General Administration and Finance; of which Marketing and General Administration had significantly higher mean scores than the remaining five functions. For Retrenchment strategy, Marketing had mean score significantly higher than all other functions. One-way AOVs by grand corporate strategy showed significance in case of all functions. The relative strategic significance of each of the seven functions is therefore different for firms pursuing different grand corporate strategies.

The influence of size as a mediating variable was assessed through unweighted factorial AOVs of size x strategy. The effect of strategy was found to be significant for all functions. The effect of size, however, was limited to only two functions: Engineering and R&D, and Public and Government Relations. The interaction effect was significant for all functions except Finance.

The results of unweighted AOVs of corporate diversity x strategy showed that the effect of strategy was significant for all functions except Marketing; the effect of corporate diversity was significant only for Public and Government Relations. The interaction effect showed

significance only for Engineering and R&D, and Public and Government Relations.

The results of unweighted factorial AOVs of industry x strategy showed that the effect of strategy was significant for all functions except Marketing. The effect of industry was significant for only Production and Marketing and the interaction effect was significant only for General Administration.

The results of unweighted factorial AOVs of production system x strategy again showed the effect of strategy to be significant for all functions except Marketing. The effect of production system showed significance only in case of Public and Government Relations, and the interaction effect showed no significance for any function.

The results of unweighted factorial AOVs of organizational structure x strategy showed that the effect of strategy was significant for all functions except Marketing. The effect of organizational structure was not significant for any function; however, the interaction effect was significant for Finance, Personnel, and Public and Government Relations.

And finally, the results of unweighted factorial AOVs of perceived environmental uncertainty (PEU) x strategy showed that the effect of strategy was significant for all functions except Marketing, and Public and Government Relations, the interaction effect was significant only for Public and Government Relations, and the effect of PEU showed no significance for any function.

The statistical analyses, therefore, clearly indicate that the relative strategic importance of different functions is affected more

by grand corporate strategy than any other organizational characteristics. The grand corporate strategy affected the strategic significance of all the seven functions; the other organizational variables affected the strategic significance of some of the functions, as delineated below:

The size was found to affect the strategic significance of Engineering and R&D, Finance, and Public and Government Relations.

The extent of corporate diversity was found to affect the strategic significance of Engineering and R&D, and Public and Government Relations.

The type of industry was found to affect the strategic significance of Production and Marketing.

The type of Production system was found to affect the strategic significance of General Administration, Engineering and R&D, Marketing, and Public and Government Relations.

The type of organizational structure was found to affect the strategic significance of Engineering and R&D, and Finance.

And finally, the degree of PEU was found to affect the strategic significance of Marketing.

It is therefore clear that these seven organizational characteristics have differing impact on the relative strategic importance of different functional tasks in industrial firms. In terms of their impact on the number of functions, the seven organizational characteristics may be rank ordered as shown below:

1. Grand corporate strategy
2. Production system
3. Size
4. Industry

5. Corporate diversity
6. Organizational structure
7. Perceived environmental uncertainty

The relative strategic importance of each of the seven organizational functions is affected by differences in grand corporate strategy. Conversely, out of the seven functions, the relative strategic importance of Marketing alone seems to differ significantly with varying degree of perceived environmental uncertainty.

To sum up, the relative strategic importance of General Administration varies significantly in industrial firms pursuing different strategies and having different production systems. The relative strategic importance of Production varies significantly in firms with different strategies and in different industries. The relative strategic importance of Engineering and R&D varies significantly with differences in strategy, size, corporate diversity, production system, and organizational structure. The relative strategic importance of Marketing varies significantly with differences in strategy, industry, production system, and PEU. The relative strategic importance of Finance varies significantly with differences in strategy, size and organizational structure. The relative strategic importance of Personnel seems to be affected only by strategy. And finally, the relative strategic importance of Public and Government Relations varies significantly in industrial firms with differences in strategy, size, corporate diversity, and production system.

Conclusions

PURPOSE

This business policy research has sought to identify the strategic mixes of organizational functions in industrial firms pursuing different grand corporate strategies. It has also sought to identify differences in the strategic mixes of organizational functions between firms pursuing a particular grand corporate strategy classified by their size, corporate diversity, industry, production system, organizational structure, and perceived environmental uncertainty. The data for this study was obtained from senior executives of large U. S. industrial corporations, their collective experience, judgement and insights have endowed the research findings with the verisimilitude of the real world of business.

The contingency approach of this study recognizes that the relative strategic significance of different functional tasks cannot be the same in all types of industrial firms, however there are definable patterns of relationships for different types of industrial firms that can be empirically determined. The central concept derived from the study's findings suggests that there is no one universally effective strategic mix of organizational functions for all industrial firms. The nature and content of the strategic mix of functions for a firm would depend upon the nature of some key organizational characteristics, the most important of which, as the study's findings indicate, is the firm's grand corporate strategy. The strategic mix of functions is one which is perceived to be essential for the effective implementation of the grand corporate strategy pursued by a firm during a particular time frame.

This section will provide a discussion of the implications of the study's findings, suggestions for future research, and concluding statements.

Implications of the Findings

Implications for Theory. This research has identified the nature of contribution of each functional task to effective implementation of different grand corporate strategies in industrial firms facing different contingencies. It has enriched the field of corporate strategy by integrating certain key concepts from organization theory and behavior. It has also provided empirical support for the integrative approach to the study of corporate strategy through the identification of strategic mixes of organizational functions. Business policy courses are designed to provide the students, among other things, with a means for functional integration. This study has attempted to integrate the different fields of management by identifying critical functional tasks; however its research approach is based more on functional decomposition rather than functional integration. Its aim was to determine the relative strategic significance of different functions for effective implementation of grand corporate strategies in industrial firms facing different contingencies.

The functional approach to the study of corporate strategy is of a very recent origin. The results of the study provide important contributions to the existing body of knowledge regarding the influence of grand corporate strategy, size, corporate diversity, industry, production system, organizational structure, and perceived environmental uncertainty on the strategic mixes of functions in industrial firms. The influence of grand corporate strategy appears to be the most crucial among these

different contingencies. The study has also provided empirical evidence that, contrary to certain expectations, the degree of perceived environmental uncertainty does not by itself influence the firm's strategic mix of functions.

The study has been largely of an exploratory nature but contains several questions which have differing degrees of theoretical and empirical support. It has provided a research methodology for integrating, interdisciplinary, and exploratory research using the functional approach to the study of grand corporate strategy; and has thereby opened many research avenues to the study of grand strategy in other business and non-business oragnizations.

Implications for Organizational Practices. Aside from the preceding implications for theory and research, there are some significant implications for organizational practice which may be based on the results of the study. The study's findings are based on the perceptions of the senior executives of large industrial firms and thus are likely to be of interest to all practicing managers. Depending upon the nature of contingencies facing the firm, its senior executives can compare their strategic mix of functions with those identified by the senior executives participating in this study. This will help practicing managers become aware of the key strategic functions in their firms and induce them to search for possible reasons for a particular strategic mix; this might require identification of strategic key result areas in each functional task as well as the establishment of an ongoing information system for close monitoring.

The identification of strategic key result areas for a particular firm would be similar to the management audit. Since most senior

executives are pressed for time, their concentration on the strategically significant areas would not only result in the more productive use of top management time but would also result in the more effective implementation of chosen strategy and better overall corporate performance. As Steiner (1969a) points out

> . . . that by identifying the majority of strategic factors which businessmen themselves think are most important in their firm's success, the basis will be laid for a more systematic evaluation of these factors by each executive to find that combination which, when identified and followed, will enhance the fortunes of his company and benefit all those interested in its well-being (p. 56).

The contingency approach of this study has another significant implication for practicing executives. If a change occurs in any of the major organizational characteristics (e.g., grand corporate strategy, diversity, industry, etc.), it certainly calls for a reassessment of the firm's strategic mix of functions (and also strategic key result areas in different functions), although it may or may not necessitate a realignment of functional priorities. This is necessary even when (or if you prefer, especially when) the firm has a formal planning system. As Allison (1971) points out: "Long range planning tends to become institutionalized and then disregarded" (Heau, Chap. X, p. 12).

The foregoing remarks indicated the importance of identifying strategic mixes of functions for effective implementation of grand strategy at the corporate level. However, similar processes of identification of strategic functions and key result areas, could be extremely beneficial at the division level, as well as at the business level within a division. For large divisionalized firms this may in fact be essential.

The specific findings of this study also have some significant implications for management practitioners. The identification of Marketing as the most critical function for firms pursuing retrenchment strategies has a very clear message to the top executives. For such firms a reduction in resources allocated to the Marketing function, as a part of an across-the-board cost reduction program, may prove to be counterproductive. Especially in the early stages of the problems, such firms may in fact want to strengthen their Marketing function, this action might be an effective turnaround strategy in the long run.

The identification of General Administration as the most critical function in most types of industrial firms highlights the importance of strategic planning and management in general, and planning for top management manpower in particular. Most managers require some broadening in order to be effective generalists, and the chief executive officers, personnel managers, and management training and development managers need to be cognizant of this phenomenon. In fact, awareness and understanding of top management's functions and responsibilities should be the single most important criterion for determining the promotability of a functional manager. The findings of the study seem to emphasize this point especially for production executives; most senior executives do not regard Production as a critical function, the production executives can, therefore, increase their visibility for promotion to top management positions by increasing their knowledge and experience in the area of general management. This holds true for all young managers in quest for self-development who aspire to be chief executive officers.

Implications for Business Educators. The implications of the findings for the business educators are even more obvious. The development of student awareness and understanding of the general management functions and responsibilities is one sure way of developing tomorrow's business leaders. According to Tavernier (1979), the Royal Dutch/Shell Group is convinced it can identify managers with the potential for senior-level promotion on the strength of only four basic qualities.

> They are: the power of analysis, imagination, a sense of reality and the 'helicopter' quality, the ability to look at facts and problems from an overall viewpoint . . . The helicopter quality, which has become the hallmark of successful Shell executives world-wide, is considered by far the most crucial in predicting management potential, particularly in the early stages of a career (p. 36).

Most business policy/strategic management courses have as their primary objective, the development of this "helicopter" quality in students. It is also not surprising that most well-known business schools have business policy/strategic management as a core course in their MBA programs.

Implications for Further Research

Future research on the areas studied and reported herein should entail a replication of the present study. Replication can do much in evaluating the value and generalizability of this study's findings. Further empirical work is needed to see if these results may be generalized to industrial firms classified as "small businesses." The study's findings indicate the importance of the general management function and especially the need for effective strategic planning systems. In small business the dichotomy between planning and doing is

not always clear-cut, and routine activities tend to take a large proportion of top management time. Therefore, empirical identification of critical functions and critical key result areas can be very helpful to small business managers.

The functional approach to the study of grand strategy can be modified and applied to settings other than large industrial corporations. In every organization, there exists a number of functional tasks. Any research that helps identify critical functions and critical key result areas for a particular type of organization can be very fruitful. The functional approach to the study of grand strategy needs to be extended to other business and non-business organizations.

Other variables should be incorporated into the study of strategic mixes of functions for effective implementation of grand corporate strategies. Such variables as performance, investment intensity, and others have been suggested or examined in other corporate strategy studies. For instance, it might be fruitful to empirically test the differences in the strategic mixes of functions for a particular grand corporate strategy, when the firms are categorized into high and low performers. It might also be useful to replicate the study using a different measure of perceived environmental uncertainty, to evaluate the generalizability of the findings pertaining to the influence of perceived environmental uncertainty.

In this study, the focus of the research was to identify the strategic mixes of functions for effective implementation of grand corporate strategies. The study's approach might be modified to identify the influence of different functions in the formulation of different types of grand corporate strategies.

More research of a longitudinal type is also needed in a study of this type, since the concept of strategy is essentially dynamic. It is extremely important to bear in mind that even for the same firm, and even without a change in the grand corporate strategy, the same top manager may perceive the strategic mix of functions differently at two different points of time. Through longitudinal research, studies can be undertaken for a small sample of homogeneous firms to assess causality in the relationships being tested.

Finally, further empirical work also needs to be done to identify strategic mixes of functions for different divisional strategies within a firm, for different business strategies within a division, and for different key result areas within a function. For large multi-unit companies with tremendous diversity, strategic planning needs to be analyzed as a multi-level process, the purpose of which is determined at each hierarchical level by the perceptions that the managers have of their task. According to Berg (1963): "For the purpose of corporate long range planning, a large, multiunit company cannot usefully be regarded as a single economic unit with a single set of interests" (Heau, 1976, Chap. X, p. 19).

Concluding Statements

To conclude, this thesis has made contributions to the study of corporate strategy. It has integrated different concepts from corporate strategy literature and organizational theory and behavior literature in a coherent manner and has empirically studied certain relationships. The study has also contributed to the research methodology in the field of corporate strategy. It is important to note that

research in corporate strategy is, for the most part, in embryonic stages. The major purpose of any research should be to add to existing knowledge in the area. It is believed that this thesis has provided evidence for further theoretical and empirical research, utilizing the strategic functional mix approach, in the area of corporate strategy; and has also provided several implications for organizational practices.

BIBLIOGRAPHY

Ackoff, Russell L. A Concept of Corporate Planning. New York: Wiley Interscience, 1970.

Ackoff, Russell L. "The Corporate Rain Dance." The Wharton Magazine, Vol. 1 (Winter 1977), pp. 36-41.

Aguilar, Francis J. Scanning the Business Environment. New York: Macmillan, 1967.

Aldrich, Howard E. "Technology and Organizational Structure: A Reexamination of the Findings of the Aston Group." Administrative Science Quarterly, Vol. 17 (1972), pp. 26-43.

Allen, Stephen A. III. "Management Issues in Multidivisional Firms." Sloan Management Review, Vol. 13 (Spring 1972), pp. 53-66.

Allison, Graham. Essence of Decision. Boston: Little Brown & Co., 1971.

American Institute of Management. Management Audit Questionnaires (Fact-Gathering for the Management Audit). New York: The American Institute of Management, 1961.

Anastasi, Anne. Psychological Testing. New York: Macmillan, 1968.

Anderson, Carl R. and Frank T. Paine. "Managerial Perceptions and Strategic Behavior." Academy of Management Journal, Vol. 18 (1975), pp. 811-823.

Andrews, Kenneth R. The Concept of Corporate Strategy. Homewood, Ill.: Dow Jones-Irwin, 1971.

Anshen, Melvin and William D. Guth. "Strategies for Research in Policy Formulation." Journal of Business, Vol. 46 (1973), pp. 499-511.

Ansoff, H. Igor. "Strategies for Diversification." Harvard Business Review, Vol. 35 (September-October 1957), pp. 113-124.

Ansoff, H. Igor. Corporate Strategy: An Analytic Approach to Business Policy for Growth and Expansion. New York: McGraw-Hill, 1965.

Ansoff, H. Igor. "The State of Practice in Planning System." Sloan Management Review, Vol. 18 (Winter 1977), pp. 1-24.

Ansoff, H. Igor and R. G. Brandenburg. "The General Manager of the Future." California Management Review, Vol. 13 (Spring, 1969), pp. 61-72.

Ansoff, H. Igor and James C. Leontiades. "Strategic Portfolio Management." Journal of General Management, Vol. 4 (Autumn 1976), pp. 13-29.

Anthony, Robert N. Planning and Control Systems: Framework for Analysis. Boston: Division of Research, Harvard Business School, 1965.

Anthony, Robert N. and John Dearden. Management Control Systems: Text and Cases. Homewood, Ill.: Irwin, 1976.

Berg, Norman A. The Allocation of Strategic Funds in a Large Diversified Industrial Company. Unpublished doctoral dissertation, Harvard Business School, 1963.

Bird, Monroe M. "Major Problem Areas as Perceived by Presidents of Small Manufacturing Firms: A Case Study." Academy of Management Journal, Vol. 16 (1973), pp. 510-514.

Birley, Sue. "Acquisition Strategy or Acquisition Anarchy." Journal of General Management, Vol. 3 (Spring 1976) pp. 67-73.

Bloom, Paul N. and Philip Kotler. "Strategies for High Market-share Companies." Harvard Business Review, Vol. 53 (November-December 1975), pp. 63-72.

Bowman, Edward H. "Epistemology, Corporate Strategy, and Academe." Sloan Management Review, Vol. 15 (Winter 1974), pp. 35-50.

Bradish, Richard D. "Accountants in Top Management." Journal of Accountancy, June 1970, pp. 49-53.

Buchele, Robert B. "How to Evaluate a Firm." California Management Review, Vol. 5 (Fall 1962), pp. 5-17.

Burack, Elmer. Organizational Analysis: Theory and Applications. Hinsdale, Ill.: Dryden Press, 1975.

Burns, Tom and G. M. Stalker. The Management of Innovation. London, England: Tavistock Publications, 1961.

Cannon, J. Thomas. Business Strategy and Policy. New York: Harcourt Brace & World, 1968.

Carter, E. Eugene. "The Behavioral Theory of the Firm and Top-Level Corporate Decisions." Administrative Science Quarterly, Vol. 16 (1971), pp. 413-428.

Chandler, Alfred D., Jr. Strategy and Structure: Chapters in the History of the American Industrial Enterprise. Cambridge, Mass.: MIT Press, 1962.

Channon, Derek F. The Strategy and Structure of British Enterprise. Boston: Division of Research, Harvard Business School, 1973.

Child, John. "More Myths of Management Organization?" Journal of Management Studies, Vol. 7 (1970), pp. 376-390.

Child, John. "Organization Structure, Environment and Performance--The Role of Strategic Choice." Sociology, Vol. 6 (1972a), pp. 1-23.

Child, John. "Organization Structure and Strategies of Control: A Replication of the Aston Study." Administrative Science Quarterly, Vol. 17 (1972b), pp. 163-177.

Child, John. "Managerial and Organizational Factors Associated with Company Performance - Part II. A Contingency Analysis." The Journal of Management Studies, Vol. 12 (1975), pp. 12-27.

Cleland, David I. and William R. King. "Organizing for Long-Range Planning." Business Horizons, Vol. 17 (August 1974), pp. 25-32.

Cohen, Kalman J. and Richard M. Cyert. "Strategy: Formulation, Implementation and Monitoring." Journal of Business, Vol. 46 (1973), pp. 349-367.

Corey, E. Raymond and Steven H. Star. Organization Strategy: A Marketing Approach. Boston, Mass.: Division of Research, Harvard Business School, 1971.

Cyert, Richard M. and James G. March. A Behavioral Theory of the Firm. Englewood Cliffs, N.J.: Prentice-Hall, 1963.

Daft, Richard L. and Norman B. McIntosh. "A New Approach to Design and Use of Management Information." California Management Review, Vol. 21 (Fall 1978), pp. 82-92.

Dewar, Robert and Jerald Hage. "Size, Technology, Complexity and Structural Differentiation: Toward a Theoretical Synthesis." Administrative Science Quarterly, Vol. 23 (1978), pp. 111-136.

Dill, William R. "Environment as an Influence on Managerial Autonomy." Administrative Science Quarterly, Vol. 2 (1958), pp. 409-443.

Downey, H. Kirk and John W. Slocum. "Uncertainty: Measures, Research, and Sources of Variation." Academy of Management Journal, Vol. 18 (1975), pp. 562-578.

Drucker, Peter F. "Long-Range Planning: Challenge to Management Science." Management Science, Vol. 5 (April 1959), pp. 238-249.

Drucker, Peter F. Management: Tasks, Responsibilities, Practices. New York: Harper & Row, 1974.

Dun & Bradstreet Million Dollar Directory, 1978. New York: Dun & Bradstreet, Inc., 1977.

Duncan, Robert B. "Characteristics of Organizational Environments and Perceived Environmental Uncertainty." Administrative Science Quarterly, Vol. 17 (1972), pp. 313-327.

Easton, Allan. Managing for Negative Growth: A Handbook for Practitioners. Reston, Va.: Reston Publishing Co., 1976.

Emery, F. E. and E. L. Trist. "The Causal Texture of Organizational Environments." Human Relations, Vol 18 (1965), pp. 21-32.

Emory, C. William. Business Research Methods. Homewood, Ill.: Irwin, 1976.

Ewing, David W. "Corporate Planning at a Crossroads." Harvard Business Review, Vol. 45 (July-August 1967), pp. 77-86.

Ferguson, Charles R. Measuring Corporate Strategy. Homewood, Ill.: Dow Jones-Irwin, 1974.

Ford, Jeffrey D. and John W. Slocum, Jr. "Size, Technology, Environment and the Structure of Organizations." Academy of Management Review, Vol. 2 (1977), pp. 561-575.

"The Fortune Directory of the 500 Largest U.S. Industrial Corporations." Fortune, May 8, 1978, pp. 238-263.

"The Fortune Directory of the Second 500 Largest U.S. Industrial Corporations." Fortune, June 19, 1978, pp. 170-196.

Fouraker, Lawrence E. and John M. Stopford. "Organizational Structure and the Multinational Strategy." Administrative Science Quarterly, Vol. 13 (June 1968), pp. 47-64.

Fox, Harold W. "A Framework for Functional Coordination." Atlanta Economic Review, Vol. 23, No. 6 (1973), pp. 8-11.

Gaedeke, Ralph M. and Dennis H. Tootelian. "The Fortune '500' List - An Endangered Species for Academic Research." Journal of Business Research, Vol. 4 (1976), pp. 283-288.

Galbraith, J. K. The New Industrial State. Boston: Houghton Mifflin, 1967.

Galbraith, Jay R. and Daniel A. Nathanson. Strategy Implementation: The Role of Structure and Process. St. Paul, Minn.: West Publishing Company, 1978.

Gilmore, Frank F. "Formulating Strategy in Smaller Companies." Harvard Business Review, Vol. 49 (May-June 1971), pp. 71-81.

Gilmore, Frank F. and Richard G. Brandenburg. "Anatomy of Corporate Planning." Harvard Business Review, Vol. 40 (November-December 1962), pp. 61-69.

Gilmour, Clark and Gary Sheehan." The Effect of Crisis on Organizational Planning." Journal of General Management, Vol. 4 (Winter 1976/77), pp. 50-58.

Glueck, William F. "Business Policy: Reality and Promise." Academy of Management Proceedings, 1972, pp. 108-111.

Glueck, William F. Business Policy: Strategy Formation and Management Action. New York: McGraw-Hill, 1976.

Glueck, William F. and Robert Willis. "Documentary Sources and Strategic Management Research." Academy of Management Review, Vol. 4 (1979), pp. 95-102.

Godiwalla, Yezdi M. Overall Corporate Strategy: The Functional Managements' Influence-Mix Approach. Unpublished doctoral dissertation, Oklahoma State University, 1977.

Godiwalla, Yezdi M., W. A. Meinhart and W. D. Warde. "Corporate Planning - A Functional Approach." Long Range Planning, Vol. 11 (October 1978), pp. 47-54.

Grinyer, Peter H. "The Anatomy of Business Strategic Planning Reconsidered." The Journal of Management Studies, Vol. 8 (1971), pp. 199-212.

Guth, William D. "Toward a Social System Theory of Corporate Strategy." Journal of Business, Vol. 49 (1976), pp. 374-388.

Hake, Bruno (English version by Peter G. Lucas). Hazards of Growth: How to Succeed through Company Planning. London: Longman Group, 1974. (Original German edition published as Wachstum Sinnvoll Planen by Econ Verlag, Dusseldorf, 1971.)

Hall, Richard H. Organizations: Structure and Process. Englewood Cliffs, N.J.: Prentice-Hall, 1977.

Halpin, A. W. Theory and Research in Administration. New York: Macmillan, 1968.

Hambrick, Donald C. and Charles C. Snow. "A Contextual Model of Strategic Decision Making in Organizations." Academy of Management Proceedings, 1977, pp. 109-112.

Haner, F. T. Business Policy, Planning and Strategy. Cambridge, Mass.: Winthrop Publishers, 1976.

Heau, Dominique G. Long Range Planning in Divisionalized Firms: A Study of Corporate Divisional Relationships. Unpublished doctoral dissertation, Harvard Business School, 1976.

Hickson, D. J., C. R. Hinnings, C. A. Lee, R. E. Schneck, and J. M. Pennings. "A Strategic Contingencies' Theory of Intraorganizational Power." Administrative Science Quarterly, Vol. 16 (1971). pp. 216-229.

Hickson, D. J., D. S. Pugh, and Diana C. Pheysey. "Operations Technology and Organization Structure: An Empirical Reappraisal." Administrative Science Quarterly, Vol. 14 (1969), pp. 378-397.

Hill, William E. "Planning for Profits: A Four-Stage Method." California Management Reivew, Vol. 1 (Spring 1959), pp. 28-38.

Hitt, Michael A., R. Dennis Middlemist and Robert L. Mathis, Effective Management. St. Paul, Minn.: West Publishing Co., 1979.

Hofer, Charles W. "Some Preliminary Research on Patterns of Strategic Behavior." Academy of Management Proceedings, 1973, pp. 46-60.

Hofer, Charles W. "Towards a Contingency Theory of Business Strategy." Academy of Management Journal, Vol. 18 (1975), pp. 784-810.

Hofer, Charles W. "Research on Strategic Plannings: A Survey of Past Studies and Suggestions for Future Efforts." Journal of Economics and Business, Vol. 28 (Spring-Summer 1976), pp. 261-286.

Hofer, Charles W. Conceptual Constructs for Formulating Corporate and Business Strategy. Boston: Intercollegiate Case Clearing House, #9-378-754, 1977.

Hofer, Charles W. and Dan Schendel. Strategy Formulation: Analytical Concepts. St. Paul, Minn.: West Publishing Co., 1978.

Howell, Robert A. "Plan to Integrate Your Acquisitions." Harvard Business Review, Vol. 48 (November-December 1970), pp. 66-76.

Hrebiniak, Lawrence G. Complex Organizations. St. Paul, Minn.: West Publishing Co., 1978.

Huggins, David E. C. "The Compleat Corporate Planner." Planning Review, Vol. 7 (January 1979), pp. 16-19.

Jurkovich, Ray. "A Core Typology of Organizational Environments." Administrative Science Quarterly, Vol. 19 (1974), pp. 380-394.

Kaplan, Abraham. The Conduct of Inquiry: A Methodology for Behavioral Sciences. New York: Chandler Publishing Co., 1964.

Kast, Fremont E. and James E. Rosenzweig. Contingency Views of Organization and Management. Chicago, Ill.: Science Research Associates, 1973.

Katz, Daniel and Robert L. Kahn. The Social Psychology of Organizations. New York: Wiley, 1966.

Katz, Robert L. Cases and Concepts in Corporate Strategy. Englewood Cliffs, N.J.: Prentice-Hall, 1970.

Kendall, Maurice G. and William R. Buckland. A Dictionary of Statistical Terms. Edinburgh, England: Oliver and Boyd for the International Statistical Institute, 1971.

Kerin, Roger A. and Michael G. Harvey. "Methodological Considerations in Corporate Mail Surveys: A Research Note." Journal of Business Research, Vol. 4 (1976), pp. 277-281.

Kerlinger, Fred N. Foundations of Behavioral Research. New York: Holt, Rinehart and Winston, 1973.

Khandwalla, Pradip N. "Mass Output Orientation of Operations Technology and Organization Structure." Administrative Science Quarterly, Vol. 19 (1974), pp. 74-97.

Khandwalla, Pradip N. "The Techno-Economic Ecology of Corporate Strategy." Journal of Management Studies, Vol. 13 (1976), pp. 62-75.

Khandwalla, Pradip N. The Design of Organizations. New York: Harcourt Brace Jovanovich, 1977.

Kimberly, John R. "Organizational Size and the Structural Perspective: A Review, Critique, and Proposal." Administrative Science Quarterly, Vol. 21 (1976), pp. 571-597.

Kitching, John. "Why Do Mergers Miscarry?" Harvard Business Review, Vol. 45 (November-December 1967), pp. 84-101.

Koontz, Harold. "Making Strategic Planning Work." Business Horizons, Vol. 19 (April 1976), pp. 37-47.

Kotler, Philip. Marketing Management: Analysis, Planning and Control. Englewood Cliffs, N.J.: Prentice-Hall, 1972.

Lawrence, Paul R. and Jay W. Lorsch. "Differentiation and Integration in Complex Organizations." Administrative Science Quarterly, Vol. 12 (1967a), pp. 1-47.

Lawrence, Paul R. and Jay W. Lorsch. Organization and Environment. Boston, Mass.: Harvard Graduate School of Business Administration, 1967b.

Learned, Edmund P., C. Ronald Christensen, Kenneth R. Andrews, and William D. Guth. Business Policy. Homewood, Ill.: Richard D. Irwin, 1969.

Leifer, Richard and George P. Huber. "Relationship Among Perceived Environmental Uncertainty, Organizational Structure, and Goundary - Spanning Behavior." Administrative Science Quarterly, Vol. 22 (1977), pp. 235-247.

Lilienthal, David E. Management: A Humanistic Art. New York: Columbia University Press, 1967.

Lindsay, William M. and Leslie W. Rue. "Impact of the Business Environment on the Long-Range Planning Process: A Contingency View." Academy of Management Proceedings, 1978, pp. 116-120.

Litschert, Robert J. and T. W. Bonham. "A Conceptual Model of Strategy Formation." Academy of Management Review, Vol. 3 (1978), pp. 211-219.

Litschert, Robert J. and Edward A. Nicholson. "Formal Long-Range Planning Groups: Their Evolutionary Nature." Journal of Economics & Business, Vol. 25 (Fall 1972), pp. 45-52.

Lorange, Peter. "Divisional Planning: Setting Effective Direction." Sloan Management Review, Vol. 17 (Fall 1975), pp. 77-91.

Lorange, Peter and Richard Vancil. Strategic Planning Systems. Englewood Cliffs, N.J.: Prentice-Hall, 1977.

Lorsch, Jay W. "Environment, Organization, and the Individual." In Negandhi, Anant R. (ed.), Modern Organizational Theory: Contextual, Environmental, and Socio-Cultural Variables. Kent, Ohio: The Kent State University Press, 1973.

March, James G. and Herbert A. Simon. Organizations. New York: John Wiley & Sons, 1958.

Mason, R. Hal, Jerome Harris and John McLaughlin. "Corporate Strategy: A Point of View." California Management Review, Vol. 13 (1971), pp. 5-12.

McNicholas, Thomas J. Policy Making and Executive Action: Cases on Business Policy. New York: McGraw-Hill, 1972.

Miles, Raymond E. and Charles C. Snow. Organizational Strategy, Structure, and Process. New York: McGraw-Hill, 1978.

Miles, Raymond E., Charles C. Snow and Jeffrey Pfeffer. "Organization-Environment: Concepts and Issues." Industrial Relations, Vol. 13 (1974), pp. 244-264.

Miles, Raymond E., C. C. Snow, A. D. Meyer and H. J. Coleman, Jr. "Organizational Strategy, Structure and Process." Academy of Management Review, Vol. 3 (1978), pp. 546-562.

Miller, Richard D. and David J. Springate. "The Relationship of Strategy, Structure and Management Process." Academy of Management Proceedings, 1978, pp. 121-125.

Mintzberg, Henry. "Policy as a Field of Management Theory." Academy of Management Review, Vol. 2 (1977), pp. 88-103.

Moody's Industrial Manual (Vol. 1 and Vol. 2). New York: Moody's Investor Service, Inc., 1977.

Moody's OTC Industrial Manual. New York: Moody's Investor Service, Inc., 1978.

Murdick, R. G. "The Long-Range Planning Matrix." California Management Review, Vol. 7 (Winter 1964), pp. 35-42.

Murdick, Robert G. Business Research: Concept and Practice. Scranton, PA: International Textbook Co., 1969.

Murdick, Robert G., Richard H. Eckhouse, R. Carl Moor and Thomas W. Zimmerer. Business Policy: A Framework for Analysis. Columbus, Ohio: Grid, 1976.

Murphy, David Charles. "Decentralization: The Effect of Technology." Academy of Management Proceedings, 1972, pp. 63-65.

Nachmias, David and Chava Nachmias. Research Methods in the Social Sciences. New York: St. Martin's Press, 1976.

Najarian, Gerald. "The Role of the Financial Executive in Planning Support." Management Focus (PMM & Co.), Vol. 26 (January-February 1979), pp. 36-40.

Newman, William H. "Shaping the Master Strategy of Your Firm." California Management Review, Vol. 9 (Spring 1967), pp. 77-88.

Newman, William H. "Strategy and Management Structure." Academy of Management Proceedings, 1971, pp. 8-24.

Newman, William H. and James P. Logan. Strategy, Policy, and Central Management. Cincinnati, Ohio: South-Western Publishing Co., 1971.

Nunnally, Jum C. Psychometric Theory. New York: McGraw Hill, 1967.

Paine, Frank T. and William Naumes. Strategy and Policy Formulation: An Integrative Approach. Philadelphia, Penn.: W. B. Saunders Co., 1974.

Paul, R. N., N. B. Donavan and J. W. Taylor. "The Reality Gap in Strategic Planning." Harvard Business Review, Vol. 56 (May-June 1978), pp. 124-130.

Pavan, Robert J. "Strategy and Structure: The Italian Experience." Journal of Economics & Business, Vol. 28 (Spring-Summer 1976), pp. 254-260.

Payne, Bruce. "Steps in Long-Range Planning." Harvard Business Review, Vol. 35 (March-April 1957), pp. 95-106.

Perrow, Charles. Organizational Analysis: A Sociological View. Belmont, Calif.: Wadsworth, 1970.

Petit, Thomas A. "Systems Problems of Organizations and Business Policy." Academy of Management Proceedings, 1972, pp. 103-107.

Pitts, Robert A. "Diversification Strategies and Organizational Policies of Large Diversified Firms." Journal of Economics & Business, Vol. 28 (Spring-Summer 1976), pp. 181-188.

Pitts, Robert A. "Strategies and Structures for Diversification." Academy of Management Journal, Vol. 20 (1977), pp. 197-208.

Pohl, Hermann H. "The Coming Era of the Financial Executive." Business Horizons, Vol. 16 (June 1973), pp. 15-22.

Porokhovsky, Anatoly A. "Structure and Strategy: Causes of Change." University of Michigan Business Review, Vol. 29 (May 1977), pp. 28-32.

Porter, Michael E. "How Competitive Forces Shape Strategy." Harvard Business Review, Vol. 57 (March-April 1979), pp. 137-145.

Pugh, D. S., D. J. Hickson, C. R. Hinings, and C. Turner. "The Context of Organization Structures." Administrative Science Quarterly, Vol. 14 (1969), pp. 91-114.

Quinn, James Brian. "Top Management Guides for Research Planning." In Bright, James R., Technological Planning at the Corporate Level. Boston: Division of Research, Harvard Business School, 1962.

Ramsey, Jackson E.. "A Framework for the Interaction of Corporate Value Objectives, Corporate Performance Objectives and Corporate Strategy." Journal of Economics and Business, Vol. 28 (Spring-Summer 1976), pp. 171-180.

Rawls, James R., Donna J. Rawls and Raymond Radosevich. "Identifying Strategic Managers." Business Horizons, Vol. 18 (December 1975), pp. 74-78.

Rhenman, Eric. Organization Theory for Long Range Planning. New York: John Wiley & Sons, 1973.

Richards, Max D. "An Exploratory Study of Strategic Failure." Academy of Management Proceedings, 1973, pp. 40-46.

Richards, Max D. Organizational Goal Structures. St. Paul, Minn.: West Publishing Co., 1978.

Rigby, Paul H. Conceptual Foundations of Business Research. New York: John Wiley & Sons, 1965.

Ringbakk, K. A. Organized Corporate Planning Systems: An Empirical Study of Planning Practices and Experiences in American Big Businesses. Unpublished doctoral dissertation, University of Wisconsin, 1968.

Rockart, John F. "Chief Executives Define Their Own Data Needs." Harvard Business Review, Vol. 57 (March-April 1979), pp. 81-93.

Ross, Joel E. and Michael J. Kami. Corporate Management in Crisis: Why the Mighty Fail. Englewood Cliffs, N.J.: Prentice-Hall, 1973.

Rumelt, Richard P. Strategy, Structure, and Economic Performance. Boston: Division of Research, Harvard Business School, 1974.

St. Thomas, Charles E. Practical Business Planning. New York: American Management Association, 1965.

Salancik, Gerald, Jeffrey Pfeffer and James Kelly. "A Contingency Model of Influence in Organizational Decision-Making." Academy of Management Proceedings, 1974, p. 55.

Salter, Malcolm S. "Stages of Corporate Development." Journal of Business Policy, Vol. 1, No. 1 (1970), pp. 40-51.

Saunders, Charles B. "What Should We Know About Strategy Formulation?" Academy of Management Proceedings, 1973, pp. 29-35.

Saunders, Charles B. "Strategy Formulation as a Political Process." Journal of General Management, Vol. 2, No. 3 (1975), pp. 80-86.

Schendel, Dan E. and Kenneth A. Hatten. "Business Policy or Strategic Management: A Broader View for an Emerging Discipline." Academy of Management Proceedings, 1972, pp. 99-102.

Schendel, Dan E. and Charles W. Hofer (eds.). Strategic Management: A New View of Business Policy and Planning. Boston: Little Brown & Co., 1979.

Schendel, Dan, G. R. Patton and James Riggs. "Corporate Turnaround Strategies: A Study of Profit Decline and Recovery." Journal of General Management, Vol. 3 (Spring 1976), pp. 3-11.

Schoeffler, Sidney, Robert D. Buzzell, and Donald F. Heany. "Impact of Strategic Planning on Profit Performance." Harvard Business Review, Vol. 52 (March-April 1974), pp. 137-145.

Scott, B. R. "The Industrial State: Old Myths and New Realities." Harvard Business Review, Vol. 51 (March-April 1973), pp. 133-148.

Segal, Morley. "Organization and Environment: A Typology of Adaptability and Structure." Public Administration Review (May-June, 1974), pp. 212-220.

Smith, William and R. Charmoz. "Coordinate Line Management." Working Paper. Searle International, Chicago, Feb. 1975.

Sproul, Robert G., Jr. "Sizing Up New Acquisitions." Management Review, Vol. 49, No. 1, 1960, pp. 80-82.

Standard & Poor's Register of Corporations, Directors and Executives, Vol. 1 (Corporations), 1978. New York: Standard & Poor's Corp., 1978.

Starbuck, William H. "Organizations and Their Environments. "In Dunnette, Marvin D. (ed.), Handbook of Industrial and Organizational Psychology. Chicago: Rand McNally & Co., 1976, pp. 1069-1123.

Steiner, George A. Strategic Factors in Business Success. New York: Financial Executives Research Foundation, 1969a.

Steiner, George A. Top Management Planning. New York: Macmillan, 1969b.

Steiner, George A. Pitfalls in Comprehensive Long Range Planning. Oxford, Ohio: Planning Executives Institute, 1972.

Steiner, George A. and Warren M. Cannon (eds.). Multinational Corporate Planning. New York: Macmillan, 1966.

Steiner, Georga A. and John B. Miner. Management Policy and Strategy: Text, Readings and Cases. New York: Macmillan, 1977.

Steiner, George A., and Hans Schollhammer. "Pitfalls in Multi-National Long-Range Planning." Long Range Planning, Vol. 8 (April 1975), pp. 2-12.

Stevenson, Howard H. Defining Corporate Strengths and Weaknesses. Unpublished doctoral dissertation, Harvard Business School, 1968.

Stevenson, Howard H." Defining Corporate Strengths and Weaknesses." Sloan Management Review, Vol. 17 (Spring 1976), pp. 51-68.

Tavernier, Gerald. "Sure Signs of Success." International Management, January 1979, pp. 36-39.

Taylor, Bernard. "Introducing Strategic Management." Long Range Planning, Vol. 6 (September 1973), pp. 34-38.

Taylor, Bernard. "Strategies for Planning." Long Range Planning, Vol. 8 (August 1975), pp. 27-40.

Taylor, Bernard and Keith MacMillan. Business Policy, Teaching and Research. New York: John Wiley, 1973a.

Taylor, Bernard and Keith MacMillan (eds.). Top Management. London: Longman Group, 1973b.

Taylor, Bernard and John R. Sparkes (eds.). Corporate Strategy and Planning. New York: John Wiley, 1977.

Terreberry, Shirley. "The Evolution of Organizational Environments." Administrative Science Quarterly, Vol. 12 (1968), pp. 590-613.

Terry, P. T. "Organizational Implications for Long Range Planning." Long Range Planning, Vol. 8 (February 1975), pp. 26-30.

Thain, Donald H. "Stages of Corporate Development." Business Quarterly, Vol. 34 (Winter 1969), pp. 33-45.

Thompson, Arthur A., Jr. and A. J. Strickland, III. Strategy and Policy: Concepts and Cases. Dallas, Texas: Business Publications, 1978.

Thompson, James D. Organizations In Action. New York: McGraw-Hill, 1967.

Thorelli, Hans B. (ed.). Strategy + Structure = Performance: The Strategic Planning Imperative. Bloomington, Ind.: Indiana University Press, 1977.

Tilles, Seymour. "How to Evaluate Corporate Strategy." Harvard Business Review, Vol. 41 (July-August 1963), pp. 111-121.

Tregoe, Benjamin B. and John W. Zimmerman. "Strategic Thinking: Key to Corporate Survival." Management Review, Vol. 68 (February 1979), pp. 8-14.

Tuason, Roman V., Jr. "Corporate Life Cycle and the Evaluation of Corporate Strategy." Academy of Management Proceedings, 1973, pp. 35-40.

Vance, Jack O. "The Anatomy of a Corporate Strategy." California Management Review, Vol. 13 (Fall 1970), pp. 5-12.

Vancil, Richard F. "Strategy Formulation in Complex Organizations." Sloan Management Review, Vol. 17 (Winter 1976), pp. 1-18.

Vancil, Richard F. and Peter Lorange. "Strategic Planning in Diversified Companies." Harvard Business Review, Vol. 53 (January-February 1975), pp. 81-90.

Ward, John L. "The Opportunity to Measure Strategic Variables: An Attempt to Quantify Product-Market Diversity." Journal of Economics & Business, Vol. 28 (Spring-Summer 1976), pp. 219-226.

Weick, Karl E. The Social Psychology of Organizing. Readings, Mass.: Addison-Wesley, 1969.

Weick, Karl E. "Enactment Processes in Organizzations." In Barry M. Staw and Gerald R. Salanick (eds.), New Directions in Organizational Behavior. Chicago: St. Clair Press, 1977, pp. 267-300.

Wilson, Ian H., W. R. George and P. J. Solomon. "Strategic Planning for Marketers." Business Horizons, Vol. 21 (December 1978), pp. 65-73.

Woodward, Joan. Industrial Organization: Theory and Practice. London: Oxford University Press, 1965.

Wrapp, H. Edward. "Organization for Long-Range Planning." Harvard Business Review, Vol. 35 (January-February 1957), pp. 37-47.

Wrigley, Leonard. Divisional Autonomy and Diversification. Unpublished doctoral dissertation, Harvard Business School, 1970.

APPENDIX A

A CHECKLIST OF FUNCTIONALLY GROUPED KEY RESULT AREAS RELEVANT TO INDUSTRIAL FIRMS

A. General Administration:

1. Attracting and retaining well-trained and competent top managers.
2. Achieving a better overall control of general corporate performance.
3. Ability to perceive new business opportunities.
4. Simultaneous and continuous emphasis on efficiency (productivity) and innovation in patterns of firm's products, markets, technology and management.
5. Developing and communicating a corporate identity, corporate mission and objectives, a corporate creed and a grand corporate strategy . . . a unified sense of direction and a sense of common purpose to which all members of the organization can relate.
6. Ability to unify conflicting opinions, improve coordination and enhance effective collaboration between key executives, generate enthusiasm and motivate sufficient managerial drive for growth and profits.
7. Developing a more effective company-wide strategic planning system for planned overall corporate development. Maintaining and enhancing the management depth by ongoing training and development programs for:
8. a) Domestic operations.
9. b) Overseas operations.
10. Need for greater international orientation at senior and middle management levels.
11. Increased participative decision-making at senior and middle management levels.
12. Increased use of MBO and "responsibility accounting" reporting systems to facilitate joint goal-setting and self-evaluation of performance. Assuring and rewarding better judgement creativity and imagination in decision-making at:
13. a) Top management levels.
14. b) Lower management levels.
15. A more extensive and effective use of quantitative techniques in decision making.
16. A more extensive and cost-effective computer systems emphasizing richness, timeliness, flexibility, and accessibility of information for managerial decision-making.
17. Ability and courage to identify and undo past strategic blunders (e.g. by divestment).
18. Ability to participate and be effective in industry organization, and project a corporate image of an enlightened industry leader and a responsible corporate citizen worldwide.

B. Production/Operations:

19. Considering relocation of present production facilities in terms of opportunity costs of the existing sites.
20. An ongoing plant modernization program to keep the efficiency of equipments comparable to those of the major competitors.
21. Developing more felxibility in using facilities for different products and changing demand levels.

22. Establishing production facilities overseas.
23. A good trade-off between expanding capacity and increased sub-contracting.
24. An improved balancing of equipment capacities.
25. Increased automation of production processes.
26. Improved plant layout workflow and work environemnt.
27. More efficient and reliable multiple-source material procurement.
28. Reduced sub-contracting and more extensive backward vertical integration.
29. Owning and controlling (captive subsidiary) sources of raw materials.
30. Measuring and controlling performance of purchasing, material handling, and traffic functions as effectively as production or sales performance.
31. More effective equipment maintenance and replacement policies.
32. Increased computerization and decentralization of production control systems for better control of quality, cost and time.
33. Improved materials and inventory control.
34. Improved industrial engineering capabilities.
35. Improved energy efficiency of production processes and equipments.
36. Reduced air, noise and other pollution and greater compliance with industrial health and safety regulations.
37. Improved production-incentive systems for workers.
38. Preparing employees for technological changes.

C. Engineering and R&D:

39. Improvement in basic research capabilities.
40. Improvement in applied research and new product development capabilities.
41. Value analysis for improving present products and developing and using alternative or substitute raw materials.
42. Improved process engineering with an added emphasis on energy efficiency.
43. Better overall management of and increased productivity from R&D expenditure by matching explicit R&D objectives and strategies with present and proposed product-market domain.
44. Better cost control through shorter R&D investment payback time.
45. Using multi-disciplinary task forces or project teams for effective coordination between R&D operations and marketing (research).
46. National and international reputation for scientific and technological leadership.

D. Marketing:

47. Increased corporate commitment to the marketing concept.
48. Improved marketing research and information systems.
49. Widening the customer base by intensive market penetration and development.
50. Developing overseas markets.
51. Ability to secure large business contracts from governments and other large customers.

52. Developing new products in new markets.
53. Improved customer service.
54. Exploring and developing fundamental new ways of providing services which are exclusive and customer-oriented.
55. More effective use of different pricing strategies.
56. More novel and effective sales promotion and advertising campaigns.
57. Effective and result-oriented control of marketing costs.
58. Widening the distribution networks and improved distributor relations.
59. Establishing and maintaining an efficient product distribution system.
60. Stricter control over credit and collections.
61. Improved product management.
62. Developing more efficnet and effective product-line policy for product additions and deletions.
63. Maintaining a highly trained motivated, vigorous and dynamic sales organization.

E. Finance:

64. Improved bond ratings and common stock market performance.
65. Maintaining a steady growth of earnings and improving the health of earnings.
66. Providing a competitive return to shareholders through effective dividend policies even under price regulations.
67. Improving financial public relations in general and stock-holder relations in particular.
68. Lower cost of equity capital and borrowings.
69. Sound capital structure allowing flexibility to raise additional capital as needed.
70. Strong working capital position allowing flexibility to raise short term capital at low cost.
71. Efficient and effective working capital management.
72. Effective tax management.
73. Ability to manage foreign investment risks of inflation and exchange losses.
74. Effective capital expenditure evaluation procedures that would encourage taking risks with commensurate returns for new business opportunities in order to attain growth objectives.
75. Extensive application of ROI techniques and periodic monitoring of product-cum-market profitability.
76. Effective financial, cost and managerial accounting systems.
77. Efficient, effective and independent internal auditing system with tremendous top management backing.

F. Personnel:

78. Effective relations with trade unions.
79. Effective and efficient personnel policies for hiring, training, promotion, compensation and employee services.
80. Ability to attract and retain high quality employees through the corporate image of a model employer.

81. Optimizing employee turnover (neither too high nor too low).
82. Increased employee motivation and job satisfaction.
83. Stimulating and rewarding creativity and innovativeness in employees.
84. Achieving more effective two-way communication.
85. Reliance on promotion from within.
86. Maximum utilization of employee skills and competencies.
87. Installing incentive performance reward systems.
88. Periodical restructuring of organization structure to thwart empire-building tendencies.
89. Effective grievance procedures.
90. Stimulating more employees at all levels to continue to educate themselves to remain abreast of developments in their fields.

G. Public and Government Relations:

91. Ability to influence national policy in the industry.
92. Effective relationships with relevant regulatory bodies.
93. Better relations with consumerist groups.
94. Better relations with environmentalist groups.
95. Better relations with local community.
96. Better relations with minority groups.
97. Ability to maintain satisfactory governmental relations with local, state, federal and foreign governments.
98. Devising better and newer ways of educating people in favor of the company.
99. Promoting business and management ethics.

APPENDIX B

COVER LETTERS AND QUESTIONNAIRE USED IN THE PILOT STUDY

Oklahoma State University
COLLEGE OF BUSINESS ADMINISTRATION
STILLWATER, OKLAHOMA 74074
(405) 624-5064

July 18, 1978

There is usually an underlying logic behind the development of a business organization over time--a logic we call "corporate strategy". It is a grand design which includes, but need not be expressed in terms of, the microeconomics surrounding the engineering, manufacturing, and marketing of each of the firm's products. As a Chief Executive, you are most concerned with your firm's grand corporate strategy. Your experience provides you with a vision of what the separate things you observe (in your company) might constitute, and a trained mind to carry out effective syntheses. However, the development of a systematized body of knowledge in the field of corporate strategy for training young managers has not yet come close to matching its crucial importance to the survival and growth of contemporary business organizations.

At the Oklahoma State University, we are currently engaged in corporate strategy research designed to develop a profile of key result areas (strategic factors) in different organizational functions that are crucial to effective implementation of different grand corporate strategies. We believe that the findings of this study would be useful and applicable to both the teaching and practice of management. However, we realize that without your active support and your approval of your company's participation we would not be able to obtain the requisite information.

We would appreciate it if you would have two senior company executives (familiar with your firm's overall operations and its overall business environment) complete the enclosed two identical copies of our questionnaire independently of each other, and return the questionnaires in the enclosed self-addressed stamped envelopes, as soon as possible. We assure you that no personal questions are asked nor is any proprietary information requested. The information supplied by your company's two executives will be kept in the strictest confidence and will appear only in aggregate statistical form. The important findings of the study will be made available to all participating firms upon request.

Thank you very much for your time and cooperation.

Sincerely,

Michael A. Hitt
Associate Professor of Management
Project Director

K. A. Palia
Research Analyst

Oklahoma State University
COLLEGE OF BUSINESS ADMINISTRATION
STILLWATER, OKLAHOMA 74074
(405) 624-5064

July 18, 1978

CORPORATE STRATEGY QUESTIONNAIRE FOR SENIOR EXECUTIVES

(To be filled out by a senior executive familiar with his/her firm's overall operations and its overall business environment.)

The attached questionnaire is being administered to a select sample of firms as part of our research study on corporate strategy. The main objective of this study is to develop a profile of key result areas (strategic factors) in different organizational functions that are crucial to effective implementation of grand corporate strategies in different types of firms. We believe that senior corporate executives like you are the most knowledgeable people to provide meaningful insights on corporate strategies and therefore your support and cooperation are vital to the success of this study.

The questionnaire is designed to gather information about various aspects of your firm and its environment. No personal questions are asked nor is any proprietary information requested. We hope that the time spent by you in completing the questionnaire would be worthwhile. The information supplied in this questionnaire will be kept in the strictest confidence. This research study does not necessitate individual case studies of participating firms; we are interested in using the information in aggregated form only and hence your anonymity is guaranteed.

May we request you to kindly complete the questionnaire and return it in the attached self-addressed stamped envelope as soon as possible? If you would like to give us any advice regarding this study, we would be most happy to receive it. In particular, your comments or suggestions with respect to question wording, response structure, relevance to your firm, any notable omissions, etc., would be most welcome. The important findings of the study will be made available to all participants upon request.

Thank you very much for your time and cooperation.

Michael A. Hitt
Associate Professor of Management
Project Director

K. A. Palia
Research Analyst

Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION

STILLWATER, OKLAHOMA 74074
(405) 624-5064

September 7, 1978

About a month ago, we sent some questionnaires to you as a part of a research project on corporate strategies employed by different businesses. We have not received responses from your firm as yet. We realize that you and your colleagues have many demands. However, our project cannot be successful without participation from firms such as yours. We want you to know that we are dedicated to graduating students who can make strong contributions to Oklahoma's businesses. We are also dedicated to the development of effective extension efforts to our businesses in Oklahoma. This research project is designed to provide data which can help do both more effectively. We sincerely appreciate your support in this project. For your convenience, another set of questionnaires has been enclosed.

We would be sincerely appreciative of your having two senior company executives (familiar with your firm's overall operations and its overall business environment) complete the enclosed two identical copies of our questionnaire independently of each other, and return the questionnaires in the enclosed self-addressed stamped envelopes, as soon as possible. We assure you that no personal questions are asked nor is any proprietary information requested. The information supplied by your company's two executives will be kept in the strictest confidence and will appear only in aggregate statistical form. The important findings of the study will be made available to all participating firms upon request.

Thank you very much for your time and cooperation.

Sincerely,

Michael A. Hitt
Associate Professor of Management
Project Director

K. A. Palia
Research Analyst

MAH/KAP:rmm

Enclosure

Oklahoma State University
COLLEGE OF BUSINESS ADMINISTRATION
STILLWATER, OKLAHOMA 74074
(405) 624-5064

September 7, 1978

CORPORATE STRATEGY QUESTIONNAIRE FOR SENIOR EXECUTIVES

(To be filled out by a senior executive familiar with his/her firm's overall operations and its overall business environment.)

The attached questionnaire is being administered to a select sample of firms as part of our research study on corporate strategy. The main objective of this study is to develop a profile of key result areas (strategic factors) in different organizational functions that are crucial to effective implementation of grand corporate strategies in different types of firms. We believe that senior corporate executives like you are the most knowledgeable people to provide meaningful insights on corporate strategies and therefore your support and cooperation are vital to the success of this study.

The questionnaire is designed to gather information about various aspects of your firm and its environment. No personal questions are asked nor is any proprietary information requested. We hope that the time spent by you in completing the questionnaire would be worthwhile. The information supplied in this questionnaire will be kept in the strictest confidence. This research study does not necessitate individual case studies of participating firms; we are interested in using the information in aggregated form only and hence your anonymity is guaranteed.

May we request you to kindly complete the questionnaire and return it in the attached self-addressed stamped envelope as soon as possible? If you would like to give us any advice regarding this study, we would be most happy to receive it. In particular, your comments or suggestions with respect to question wording, response structure, relevance to your firm, any notable omissions, etc., would be most welcome. The important findings of the study will be made available to all participants upon request.

Thank you very much for your time and cooperation.

Michael A. Hitt
Associate Professor of Management
Project Director

K. A. Palia
Research Analyst

CORPORATE STRATEGY QUESTIONNAIRE FOR SENIOR EXECUTIVES

Please answer all the questions. There are no right or wrong answers. The information supplied by the participants would be used in aggregated form only and hence your anonymity is guaranteed. After completion, please return the questionnaire in the attached self-addressed stamped envelope to Mr. K. A. Palia, College of Business Administration, Oklahoma State University, Stillwater, OK 74074.

I. GRAND CORPORATE STRATEGY: This question is designed to ascertain the type of grand corporate strategy currently pursued by your firm. The grand corporate strategy is the major plan of action for achieving the sales and earnings goals for the company as a whole (rather than a product, division or market segment). It is therefore the overall, predominant or master strategy of the firm. There are no good or bad, effective or ineffective, proactive or reactive strategies and contrary to popular belief, growth strategies are not the only effective or desirable strategies. Since each company is unique it has to evolve a grand strategy for attaining its corporate goals in the context of its unique organizational and environmental characteristics. Please remember, what is required is not the grand strategy you would prefer for the firm, but the one that is actually being pursued by your firm. Check only one.

[ ] 1. Stability Strategy:
Your firm continues to serve the customers in the same or similar product-market domain, has its main strategic decision focus on incremental improvement of functional performance, and continues to pursue the same or similar objectives, adjusting the level of achievement about the same percentage each year as it has achieved in the past.

(A Note for Items 2 and 3 - Growth Strategies:
Your firm is pursuing a growth strategy if it aims at increasing the level and/or scope of its product-market objectives upward in a significant increment, much higher than an extrapolation of its past achievement levels. Thus it not only strives at intensive growth of its current product line(s) but may also add new product lines which may or may not be related to its present business.)

[ ] 2. Internal Growth Strategy:
Your firm pursues internal growth strategy if your emphasis is predominantly on growth through internal development from within the company.

[ ] 3. External Growth Strategy:
Your firm pursues external growth strategy, if your emphasis is predominantly on acquisition of, or merger or joint venture with, other firms or divisions of firms.

[ ] 4. Retrenchment Strategy:
Your firm pursues retrenchment strategy if it tries to improve its performance by scaling down the level and/or scope of its product-market objectives by cutback in costs and by reducing the scale of operations by divestment of some divisions or units.

II. FIRM SIZE: What is your firm's annual sales revenue (inclusive of service and rental revenues but exclusive of non-operating revenues and excise taxes)? Check One

[ ] 1. $200 million and less

[ ] 2. $201 million to $599 million

[ ] 3. $600 million and over

III. CORPORATE DIVERSITY: To what extent is your firm diversified? Check One

[ ] 1. Single Business:
95 percent or more of annual sales from one end product business.

[ ] 2. Dominant Business:
70 to 94 percent of annual sales from one end product business.

[ ] 3. Related Business:
Less than 70 percent of annual sales from one end product business and diversification primarily in concentrically related products (i.e., similar markets or similar technology).

[ ] 4. Unrelated Business:
Less than 70 percent of annual sales from one end product business, and diversification unrelated to primary end product business (for example, a widely diversified multi-industry conglomerate).

IV. PERCEIVED ENVIRONMENTAL UNCERTAINTY: This question is designed to elicit from you your perception of the environmental conditions faced by your firm as a whole during the past 3 years. We are interested in your firm's overall relationships with various sectors of the external environment (e.g. suppliers, customers, competitors). Specifically, we would like you to rate the characteristics or behavior of various sectors on the degree of their predictability, where 1 = highly predictable and 7 = highly unpredictable. The distinctions you make should be as precise as you feel you can make them.

	Predictable (circle one)						Unpredictable
1. Suppliers of your raw materials and components:							
a. their price changes are	1	2	3	4	5	6	7
b. quality changes	1	2	3	4	5	6	7
c. design changes	1	2	3	4	5	6	7
d. introduction of new materials or components	1	2	3	4	5	6	7
2. Competitors' actions:							
a. their price changes are	1	2	3	4	5	6	7
b. product quality changes	1	2	3	4	5	6	7
c. product design changes	1	2	3	4	5	6	7
d. introduction of new products	1	2	3	4	5	6	7
3. Customers:							
a. their demand for existing products is	1	2	3	4	5	6	7
b. demand for new products	1	2	3	4	5	6	7
4. The financial/capital market:							
a. interest rate changes:							
1. short-term debt	1	2	3	4	5	6	7
2. long-term debt	1	2	3	4	5	6	7
b. changes in financial instruments available:							
1. short-term debt	1	2	3	4	5	6	7
2. long-term debt	1	2	3	4	5	6	7
c. availability of credit:							
1. short-term debt	1	2	3	4	5	6	7
2. long-term debt	1	2	3	4	5	6	7
5. Government regulatory agencies:							
a. changes in laws or agency policies on pricing are	1	2	3	4	5	6	7
b. changes in laws or policies on product standards or quality	1	2	3	4	5	6	7
c. changes in laws or policies regarding financial practices	1	2	3	4	5	6	7
d. changes in labor (personnel) laws or policies	1	2	3	4	5	6	7
e. changes in laws or policies affecting marketing and distribution methods	1	2	3	4	5	6	7
f. changes in laws or policies on acceptable accounting procedures	1	2	3	4	5	6	7
6. Actions of labor unions:							
a. changes in wages, hours, and working conditions	1	2	3	4	5	6	7
b. changes in union security	1	2	3	4	5	6	7
c. changes in grievance procedures	1	2	3	4	5	6	7

V. RELATIVE STRATEGIC SIGNIFICANCE OF KEY RESULT AREAS IN DIFFERENT ORGANIZATIONAL FUNCTIONS: This question is designed to elicit from you your perceptions of relative strategic significance, of functionally grouped key result areas, to effective implementation of grand corporate strategy currently pursued by your firm. A comprehensive list of key result areas (strategic factors) grouped into seven functional categories has been prepared. Your firm's performance in these different key result areas would determine how effectively your firm's grand corporate strategy would be implemented; however the strategic significance of these key result areas would differ. We would like you to evaluate each key result area in terms of its strategic significance (to effective implementation of your grand corporate strategy) based upon a 7-point rating scale as shown below:

1 - completely strategically insignificant
2 - of very little strategic significance
3 - of somewhat less than average strategic significance
4 - of average strategic significance
5 - of somewhat more than average strategic significance
6 - of very great strategic significance
7 - of the greatest strategic significance

	completely strategically insignificant	(circle one)					of the greatest strategic significance
A. General Administration:							
1. Attracting and retaining well-trained and competent top managers.	1	2	3	4	5	6	7
2. Achieving a better overall control of general corporate performance.	1	2	3	4	5	6	7
3. Ability to perceive new business opportunities and potential threats.	1	2	3	4	5	6	7
4. Developing and communicating a corporate identity, corporate mission and objectives, a corporate creed and a grand corporate strategy . . . a unified sense of direction and a sense of common purpose to which all members of the organization can relate.	1	2	3	4	5	6	7
5. Ability to unify conflicting opinions, improve coordination and enhance effective collaboration between key executives, generate enthusiasm and motivate sufficient managerial drive for growth and profits.	1	2	3	4	5	6	7
6. Developing a more effective company-wide strategic planning system for planned overall corporate development.	1	2	3	4	5	6	7
7. Maintaining and enhancing the management depth by ongoing training and development programs for both domestic and overseas operations.	1	2	3	4	5	6	7
8. Increased use of MBO and "responsibility accounting" and increased participative decision making at senior and middle management levels.	1	2	3	4	5	6	7
9. A more extensive and effective use of quantitative techniques in decision making.	1	2	3	4	5	6	7
10. More extensive and cost-effective computer systems emphasizing richness, timeliness, flexibility and accessibility of information for managerial decision making.	1	2	3	4	5	6	7
B. Production/Operations:							
11. An ongoing plant modernization program to keep the efficiency of equipment comparable to that of the major competitors.	1	2	3	4	5	6	7
12. A good trade-off between expanding capacity and increased sub-contracting.	1	2	3	4	5	6	7
13. Increased automation of production processes.	1	2	3	4	5	6	7

(Question V continued on next page)

V. RELATIVE STRATEGIC SIGNIFICANCE OF KEY RESULT AREAS . .: (continued from page 3)

1 - completely strategically insignificant
2 - of very little strategic significance
3 - of somewhat less than average strategic significance
4 - of average strategic significance
5 - of somewhat more than average strategic significance
6 - of very great strategic significance
7 - of the greatest strategic significance

	completely strategically insignificant	(circle one)					of the greatest strategic significance
B. Production/Operations: (continued)							
14. Improved plant layout, workflow and work environment. . .	1	2	3	4	5	6	7
15. More efficient and reliable multiple-source material procurement.	1	2	3	4	5	6	7
16. More effective equipment maintenance and replacement policies.	1	2	3	4	5	6	7
17. Increased computerization and decentralization of production control systems for better control of quality, cost and time.	1	2	3	4	5	6	7
18. Improved materials and inventory control.	1	2	3	4	5	6	7
19. Improved industrial engineering capabilities.	1	2	3	4	5	6	7
20. Reduced air, noise and other pollution and greater compliance with industrial health and safety regulations. .	1	2	3	4	5	6	7
C. Engineering and R & D:							
21. Improvement in research and new product development capabilities.	1	2	3	4	5	6	7
22. Value analysis for improving present products and developing and using more economical and easily available raw material substitutes.	1	2	3	4	5	6	7
23. Improved process engineering with an added emphasis on energy efficiency.	1	2	3	4	5	6	7
24. Better overall management of and increased productivity from R & D expenditure by matching explicit R & D objectives and strategies with present and proposed product-market domain.	1	2	3	4	5	6	7
25. Using multi-disciplinary task forces or project teams for effective coordination between R & D, operations and marketing (research).	1	2	3	4	5	6	7
D. Marketing:							
26. Improved marketing research and information systems. . .	1	2	3	4	5	6	7
27. Widening the customer base by intensive market penetration and development.	1	2	3	4	5	6	7
28. Ability to secure large business contracts from governments and other large, especially overseas customers.	1	2	3	4	5	6	7
29. More effective use of different pricing strategies. . . .	1	2	3	4	5	6	7
30. More novel and effective sales promotion and advertising campaigns.	1	2	3	4	5	6	7
31. Widening and improving the product distribution networks and improving distributor relations.	1	2	3	4	5	6	7
32. Developing more efficient and effective product-line policy for product additions and deletions.	1	2	3	4	5	6	7
33. Maintaining a highly trained, motivated, vigorous and dynamic sales organization.	1	2	3	4	5	6	7

(Question V continued on next page)

V. RELATIVE STRATEGIC SIGNIFICANCE OF KEY RESULT AREAS . . : (continued from page 4)

1 - completely strategically insignificant
2 - of very little strategic significance
3 - of somewhat less than average strategic significance
4 - of average strategic significance
5 - of somewhat more than average strategic significance
6 - of very great strategic significance
7 - of the greatest strategic significance

	completely strategically insignificant	(circle one)					of the greatest strategic significance
E. Finance:							
34. Improving bond ratings and common stock market performance.	1	2	3	4	5	6	7
35. Providing a competitive return to shareholders through effective dividend policies even under price regulations .	1	2	3	4	5	6	7
36. Improving financial public relations in general and stockholder relations in particular.	1	2	3	4	5	6	7
37. Lower cost of equity capital and long-term borrowings. . .	1	2	3	4	5	6	7
38. Sound capital structure allowing flexibility to raise additional capital for internal growth and acquisitions.	1	2	3	4	5	6	7
39. Strong working capital position allowing flexibility to raise short-term capital at low cost.	1	2	3	4	5	6	7
40. Effective tax management.	1	2	3	4	5	6	7
41. Ability to manage foreign investment risks of inflation and exchange losses.	1	2	3	4	5	6	7
42. Effective capital expenditure evaluation procedures that would encourage taking risks with commensurate returns for new business opportunities in order to attain growth objectives.	1	2	3	4	5	6	7
43. Extensive application of ROI techniques and periodic monitoring of product-cum-market profitability.	1	2	3	4	5	6	7
44. Efficient, effective and independent internal auditing system.	1	2	3	4	5	6	7
F. Personnel:							
45. Effective relations with trade unions.	1	2	3	4	5	6	7
46. Effective and efficient personnel policies for hiring, training, promotion, compensation and employee services. .	1	2	3	4	5	6	7
47. Optimizing employee turnover (neither too high nor too low), through the corporate image of a model employer. . .	1	2	3	4	5	6	7
48. Improved employee motivation, job satisfaction and morale.	1	2	3	4	5	6	7
49. Stimulating and rewarding creativity in employees and installing incentive performance reward systems.	1	2	3	4	5	6	7
50. Effective grievance procedures.	1	2	3	4	5	6	7
51. Stimulating more employees at all levels to continue to educate themselves to remain abreast of developments in their fields.	1	2	3	4	5	6	7
G. Public and Government Relations:							
52. Ability to influence national policy in the industry and to maintain effective relationships with relevant regulatory bodies.	1	2	3	4	5	6	7
53. Better relations with special interest groups such as environmentalists, consumerists and others.	1	2	3	4	5	6	7
54. Ability to maintain satisfactory relations with local, state, federal and foreign governments.	1	2	3	4	5	6	7
55. Improving overall corporate image.	1	2	3	4	5	6	7

VI. INDUSTRY: What is the principal industry (representing the largest percentage of your total company sales) in which your firm operates? Check only one

[ ] 1. Consumer nondurable goods industry

[ ] 2. Consumer durable goods industry

[ ] 3. Capital goods industry

[ ] 4. Producer goods (raw materials, components and supplies) industry

VII. PRODUCTION SYSTEM: What is the single, most predominant production system used in your firm? Check only one

[ ] 1. Unit and small batch production system (e.g. production or fabrication of a single unit or a few units of products, like prototypes, custom pressings, special equipments, tools and dies, etc., according to customer specifications).

[ ] 2. Large batch and mass production system (e.g. large batches of durgs, cans and bottles, mass production of automobiles, etc.).

[ ] 3. Continuous process production system (e.g. oil refining, chemicals, etc.).

[ ] 4. None of the above (please specify) _____

VIII. ORGANIZATIONAL STRUCTURE: How would you characterize your firm's organizational structure? Check one

[ ] 1. Functional: An organization in which the major subunits deal with different organizational functions, like production, marketing and finance, rather than complete businesses. General management function is concentrated at topmost level and coordination and product-market performance are its primary responsibilities.

[ ] 2. Functional with One or More Product Divisions or Subsidiaries: An organization that is basically functional but which also has one or more separate product divisions or subsidiaries which report to top management (or in some instances to functional managers). The distinguishing characteristic of this hybrid form (which is neither wholly functional nor truly multi-divisional) is that the general managers of the product divisions are organizationally on the same level or below the functional managers.

[ ] 3. Product Division: An organization that consists of a central office and a group of quasi-autonomous divisions, each having the responsibility and resources needed to engineer, produce and market a product or set of products.

[ ] 4. Geographic Division: An organization that consists of a headquarters office and a group of operating divisions, each having the responsibility and resources needed to engineer, produce and market a product or a set of products in a different geographic area.

[ ] 5. Holding Company: An association of firms (or divisions) commonly owned by a parent corporation. Each firm is virtually autonomous and formal organization above the level of the individual firm is virtually nonexistent.

IX. NAME OF FIRM: _____

X. YOUR NAME & TITLE: _____

[ ] Check here if you wish to receive the main findings of this study.

APPENDIX C

COVER LETTER AND SURVEY INSTRUMENTS USED TO COLLECT DATA FOR THE STUDY

Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION

STILLWATER, OKLAHOMA 74074
(405) 624-5064

November 27, 1978

At the Oklahoma State University, we are currently engaged in corporate strategy research designed to develop a profile of key result areas (strategic factors) in different organizational functions that are crucial to effective implementation of grand corporate strategies in different types of firms. We believe that the findings of this study will be useful and applicable to both the teaching and practice of management. A recently completed pilot study of a select sample of industrial firms in the southwest region has shown encouraging results; most of the senior executives participating in the pilot study have shown interest in receiving a summary of the important findings of the study. The enclosed questionnaires, designed to gather information about various aspects of your firm and its environment, are now being administered to a select sample of firms as a part of our nationwide study.

We would sincerely appreciate if you will spend a few minutes answering just one question listed in the chief executive officer's questionnaire and have any senior company executive (familiar with your firm's overall operations and its overall business environment) complete the senior executive's questionnaire and return them both in the enclosed, self-addressed, stamped envelope as soon as possible. We assure you that no personal questions are asked nor is any proprietary information requested. The information supplied in these questionnaires will be kept in the strictest confidence. This research study does not necessitate individual case studies of participating firms; we are interested in using the information in aggregated form only and hence, respondents may, if they so wish, remain anonymous. The important findings of this study will be made available to all participating firms on request.

In our opinion, senior corporate executives like you are the most knowledgeable people to provide meaningful insights on corporate strategies. We also realize that you and your colleagues have many demands and we deeply appreciate your support, which you would agree is essential to this project.

Thank you very much for your time and cooperation.

Sincerely,

Michael A. Hitt
Associate Professor of Management
Project Director

K. A. Palia
Research Analyst

MAH/KAP:vh

Enclosure

CHIEF EXECUTIVE OFFICER'S QUESTIONNAIRE

(To be filled out by the firm's Chief Executive Officer)

GRAND CORPORATE STRATEGY: This question is designed to ascertain the type of grand corporate strategy currently pursued by your firm. The grand corporate strategy is the major plan of action for achieving the sales and earnings goals for the company as a whole (rather than a product, division or market segment). It is therefore the overall, predominant or master strategy of the firm. There are no good or bad, effective or ineffective, proactive or reactive strategies and contrary to popular belief, growth strategies are not the only effective or desirable strategies. Since each company is unique it has to evolve a grand strategy for attaining its corporate goals in the context of its unique organizational and environmental characteristics. Please remember, what is required is not the grand strategy you would prefer for the firm, but the one that is actually being pursued by your firm. Check only one.

[ ] 1. Stability Strategy:
Your firm continues to serve the customers in the same or similar product-market domain, has its main strategic decision focus on incremental improvement of functional performance, and continues to pursue the same or similar objectives, adjusting the level of achievement about the same percentage each year as it has achieved in the past.

(A Note for Items 2 and 3 - Growth Strategies:
Your firm is pursuing a growth strategy if it aims at increasing the level and/or scope of its product-market objectives upward in a significant increment, much higher than an extrapolation of its past achievement levels. Thus it not only strives at intensive growth of its current product line(s) but may also add new product lines which may or may not be related to its present business.)

[ ] 2. Internal Growth Strategy:
Your firm pursues internal growth strategy if your emphasis is predominantly on growth through internal development from within the company.

[ ] 3. External Acquisitive Growth Strategy (including joint ventures):
Your firm pursues external growth strategy, if your emphasis is predominantly on acquisition of, or merger or joint venture with, other firms or divisions of firms.

[ ] 4. Retrenchment Strategy:
Your firm pursues retrenchment strategy if it tries to improve its performance by scaling down the level and/or scope of its product-market objectives by cutback in costs and by reducing the scale of operations by divestment of some divisions or units.

Note: AFTER COMPLETION, PLEASE RETURN THIS QUESTIONNAIRE ALONG WITH THE SENIOR EXECUTIVE'S QUESTIONNAIRE IN THE ATTACHED SELF-ADDRESSED, STAMPED ENVELOPE.

SENIOR EXECUTIVE'S QUESTIONNAIRE

(To be filled out by a senior executive familiar with the firm's overall operations and its overall business environment.)

This questionnaire is being administered to a select sample of firms as a part of our research study on corporate strategy. The questionnaire is designed to gather information about various aspects of your firm and its environment. Please answer all the questions. There are no right or wrong answers. The information supplied by the participants would be kept in the strictest confidence and used in aggregated form only, hence your anonymity is guaranteed. After completion, please return this questionnaire, along with the chief executive officer's questionnaire, in the attached self-addressed, stamped envelope to Mr. K. A. Palia, College of Business Administration, Oklahoma State University, Stillwater, OK 74074.

I. FIRM SIZE: What is your firm's annual sales revenue (inclusive of service and rental revenues but exclusive of non-operating revenues and excise taxes)? Check One

[ ] 1. $200 million and less

[ ] 2. $201 million to $599 million

[ ] 3. $600 million and over

II. INDUSTRY: What is the principal industry (representing the largest percentage of your total company sales) in which your firm operates? Check only one

[ ] 1. Consumer nondurable goods industry

[ ] 2. Consumer durable goods industry

[ ] 3. Capital goods industry (e.g. industrial machinery and equipment)

[ ] 4. Producer goods (raw materials, components and supplies) industry

III. PRODUCTION SYSTEM: What is the single, most predominant production system used in your firm? Check only one

[ ] 1. Unit and small batch production system (e.g. production or fabrication of a single unit or a few units of products, like prototypes, custom pressings, special equipments, tools and dies, etc., according to customer specifications).

[ ] 2. Large batch and mass production system (e.g. large batches of drugs, cans and bottles, mass production of automobiles, etc.).

[ ] 3. Continuous process production system (e.g. oil refining, chemicals, etc.).

[ ] 4. None of the above (please specify) _____

IV. CORPORATE DIVERSITY: To what extent is your firm diversified? Check One

[ ] 1. Single Business:
95 percent or more of annual sales from one end product business.

[ ] 2. Dominant Business:
70 to 94 percent of annual sales from one end product business.

[ ] 3. Related Business:
Less than 70 percent of annual sales from one end product business and diversification primarily in concentrically related products (i.e., similar markets or similar technology).

[ ] 4. Unrelated Business:
Less than 70 percent of annual sales from one end product business, and diversification unrelated to primary end product business (for example, a widely diversified multi-industry conglomerate).

V. PERCEIVED ENVIRONMENTAL UNCERTAINTY: This question is designed to elicit from you your perception of the environmental conditions faced by your firm as a whole during the past 3 years. We are interested in your firm's overall relationships with various sectors of the external environment (e.g. suppliers, customers, competitors). Specifically, we would like you to rate the characteristics or behavior of various sectors on the degree of their predictability, where 1 = highly predictable and 7 = highly unpredictable. The distinctions you make should be as precise as you feel you can make them.

	Predictable (circle one)						Unpredictable
1. Suppliers of your raw materials and components:							
a. their price changes are	1	2	3	4	5	6	7
b. quality changes	1	2	3	4	5	6	7
c. design changes	1	2	3	4	5	6	7
d. introduction of new materials or components	1	2	3	4	5	6	7
2. Competitors' actions:							
a. their price changes are	1	2	3	4	5	6	7
b. product quality changes	1	2	3	4	5	6	7
c. product design changes	1	2	3	4	5	6	7
d. introduction of new products	1	2	3	4	5	6	7
3. Customers:							
a. their demand for existing products is	1	2	3	4	5	6	7
b. demand for new products	1	2	3	4	5	6	7
4. The financial/capital market:							
a. interest rate changes:							
1. short-term debt	1	2	3	4	5	6	7
2. long-term debt	1	2	3	4	5	6	7
b. changes in financial instruments available:							
1. short-term debt	1	2	3	4	5	6	7
2. long-term debt	1	2	3	4	5	6	7
c. availability of credit:							
1. short-term debt	1	2	3	4	5	6	7
2. long-term debt	1	2	3	4	5	6	7
5. Government regulatory agencies:							
a. changes in laws or agency policies on pricing are	1	2	3	4	5	6	7
b. changes in laws or policies on product standards or quality	1	2	3	4	5	6	7
c. changes in laws or policies regarding financial practices	1	2	3	4	5	6	7
d. changes in labor (personnel) laws or policies	1	2	3	4	5	6	7
e. changes in laws or policies affecting marketing and distribution methods	1	2	3	4	5	6	7
f. changes in laws or policies on acceptable accounting procedures	1	2	3	4	5	6	7
6. Actions of labor unions:							
a. changes in wages, hours, and working conditions	1	2	3	4	5	6	7
b. changes in union security	1	2	3	4	5	6	7
c. changes in grievance procedures	1	2	3	4	5	6	7

VI. RELATIVE STRATEGIC SIGNIFICANCE OF KEY RESULT AREAS IN DIFFERENT ORGANIZATIONAL FUNCTIONS: This question is designed to elicit from you your perceptions of relative strategic significance, of functionally grouped key result areas, to effective implementation of grand corporate strategy currently pursued by your firm. A comprehensive list of key result areas (strategic factors) grouped into seven functional categories has been prepared. Your firm's performance in these different key result areas would determine how effectively your firm's grand corporate strategy would be implemented; however the strategic significance of these key result areas would differ. We would like you to evaluate each key result area in terms of its strategic significance (to effective implementation of your grand corporate strategy) based upon a 7-point rating scale as shown below:

1 - completely strategically insignificant
2 - of very little strategic significance
3 - of somewhat less than average strategic significance
4 - of average strategic significance
5 - of somewhat more than average strategic significance
6 - of very great strategic significance
7 - of the greatest strategic significance

	completely strategically insignificant	(circle one)					of the greatest strategic significance
A. General Administration:							
1. Attracting and retaining well-trained and competent top managers.	1	2	3	4	5	6	7
2. Achieving a better overall control of general corporate performance.	1	2	3	4	5	6	7
3. Ability to perceive new business opportunities and potential threats.	1	2	3	4	5	6	7
4. Developing and communicating a corporate identity, corporate mission and objectives, a corporate creed and a grand corporate strategy . . . a unified sense of direction and a sense of common purpose to which all members of the organization can relate.	1	2	3	4	5	6	7
5. Ability to unify conflicting opinions, improve coordination and enhance effective collaboration between key executives, generate enthusiasm and motivate sufficient managerial drive for growth and profits.	1	2	3	4	5	6	7
6. Developing a more effective company-wide strategic planning system for planned overall corporate development.	1	2	3	4	5	6	7
7. Maintaining and enhancing the management depth by ongoing training and development programs for both domestic and overseas operations.	1	2	3	4	5	6	7
8. Increased use of MBO and "responsibility accounting" and increased participative decision making at senior and middle management levels.	1	2	3	4	5	6	7
9. A more extensive and effective use of quantitative techniques in decision making.	1	2	3	4	5	6	7
10. More extensive and cost-effective computer systems emphasizing richness, timeliness, flexibility and accessibility of information for managerial decision making.	1	2	3	4	5	6	7
B. Production/Operations:							
11. An ongoing plant modernization program to keep the efficiency of equipment comparable to that of the major competitors.	1	2	3	4	5	6	7
12. A good trade-off between expanding capacity and increased sub-contracting.	1	2	3	4	5	6	7
13. Increased automation of production processes.	1	2	3	4	5	6	7

(Question VI continued on next page)

VI. RELATIVE STRATEGIC SIGNIFICANCE OF KEY RESULT AREAS . .: (continued from page 3)

1 - completely strategically insignificant
2 - of very little strategic significance
3 - of somewhat less than average strategic significance
4 - of average strategic significance
5 - of somewhat more than average strategic significance
6 - of very great strategic significance
7 - of the greatest strategic significance

	completely strategically insignificant	(circle one)					of the greatest strategic significance
B. Production/Operations: (continued)							
14. Improved plant layout, workflow and work environment. . .	1	2	3	4	5	6	7
15. More efficient and reliable multiple-source material procurement.	1	2	3	4	5	6	7
16. More effective equipment maintenance and replacement policies.	1	2	3	4	5	6	7
17. Increased computerization and decentralization of production control systems for better control of quality, cost and time.	1	2	3	4	5	6	7
18. Improved materials and inventory control.	1	2	3	4	5	6	7
19. Improved industrial engineering capabilities.	1	2	3	4	5	6	7
20. Reduced air, noise and other pollution and greater compliance with industrial health and safety regulations. .	1	2	3	4	5	6	7
C. Engineering and R & D:							
21. Improvement in research and new product development capabilities.	1	2	3	4	5	6	7
22. Value analysis for improving present products and developing and using more economical and easily available raw material substitutes.	1	2	3	4	5	6	7
23. Improved process engineering with an added emphasis on energy efficiency.	1	2	3	4	5	6	7
24. Better overall management of and increased productivity from R & D expenditure by matching explicit R & D objectives and strategies with present and proposed product-market domain.	1	2	3	4	5	6	7
25. Using multi-disciplinary task forces or project teams for effective coordination between R & D, operations and marketing (research).	1	2	3	4	5	6	7
D. Marketing:							
26. Improved marketing research and information systems. . .	1	2	3	4	5	6	7
27. Widening the customer base by intensive market penetration and development.	1	2	3	4	5	6	7
28. Ability to secure large business contracts from governments and other large, especially overseas customers.	1	2	3	4	5	6	7
29. More effective use of different pricing strategies. . . .	1	2	3	4	5	6	7
30. More novel and effective sales promotion and advertising campaigns.	1	2	3	4	5	6	7
31. Widening and improving the product distribution networks and improving distributor relations.	1	2	3	4	5	6	7
32. Developing more efficient and effective product-line policy for product additions and deletions.	1	2	3	4	5	6	7
33. Maintaining a highly trained, motivated, vigorous and dynamic sales organization.	1	2	3	4	5	6	7

(Question VI continued on next page)

VI. RELATIVE STRATEGIC SIGNIFICANCE OF KEY RESULT AREAS . . : (continued from page 4)

1 - completely strategically insignificant
2 - of very little strategic significance
3 - of somewhat less than average strategic significance
4 - of average strategic significance
5 - of somewhat more than average strategic significance
6 - of very great strategic significance
7 - of the greatest strategic significance

	completely strategically insignificant	(circle one)					of the greatest strategic significance
E. Finance:							
34. Improving bond ratings and common stock market performance.	1	2	3	4	5	6	7
35. Providing a competitive return to shareholders through effective dividend policies even under price regulations .	1	2	3	4	5	6	7
36. Improving financial public relations in general and stock-holder relations in particular.	1	2	3	4	5	6	7
37. Lower cost of equity capital and long-term borrowings. . .	1	2	3	4	5	6	7
38. Sound capital structure allowing flexibility to raise additional capital for internal growth and acquisitions.	1	2	3	4	5	6	7
39. Strong working capital position allowing flexibility to raise short-term capital at low cost.	1	2	3	4	5	6	7
40. Effective tax management.	1	2	3	4	5	6	7
41. Ability to manage foreign investment risks of inflation and exchange losses.	1	2	3	4	5	6	7
42. Effective capital expenditure evaluation procedures that would encourage taking risks with commensurate returns for new business opportunities in order to attain growth objectives.	1	2	3	4	5	6	7
43. Extensive application of ROI techniques and periodic monitoring of product-cum-market profitability.	1	2	3	4	5	6	7
44. Efficient, effective and independent internal auditing system.	1	2	3	4	5	6	7
F. Personnel:							
45. Effective relations with trade unions.	1	2	3	4	5	6	7
46. Effective and efficient personnel policies for hiring, training, promotion, compensation and employee services. .	1	2	3	4	5	6	7
47. Optimizing employee turnover (neither too high nor too low), through the corporate image of a model employer. . .	1	2	3	4	5	6	7
48. Improved employee motivation, job satisfaction and morale.	1	2	3	4	5	6	7
49. Stimulating and rewarding creativity in employees and installing incentive performance reward systems.	1	2	3	4	5	6	7
50. Effective grievance procedures.	1	2	3	4	5	6	7
51. Stimulating more employees at all levels to continue to educate themselves to remain abreast of developments in their fields.	1	2	3	4	5	6	7
G. Public and Government Relations:							
52. Ability to influence national policy in the industry and to maintain effective relationships with relevant regulatory bodies.	1	2	3	4	5	6	7
53. Better relations with special interest groups such as environmentalists, consumerists and others.	1	2	3	4	5	6	7
54. Ability to maintain satisfactory relations with local, state, federal and foreign governments.	1	2	3	4	5	6	7
55. Improving overall corporate image.	1	2	3	4	5	6	7

VII. ORGANIZATIONAL STRUCTURE: How would you characterize your firm's organizational structure? Check one

[ ] 1. Functional: An organization in which the major subunits deal with different organizational functions, like production, marketing and finance, rather than complete businesses. General management function is concentrated at topmost level and coordination and product-market performance are its primary responsibilities.

[ ] 2. Functional with One or More Product Divisions or Subsidiaries: An organization that is basically functional but which also has one or more separate product divisions or subsidiaries which report to top management (or in some instances to functional managers). The distinguishing characteristic of this hybrid form (which is neither wholly functional nor truly multi-divisional) is that the general managers of the product divisions are organizationally on the same level or below the functional managers.

[ ] 3. Product Division: An organization that consists of a central office and a group of quasi-autonomous divisions, each having the responsibility and resources needed to engineer, produce and market a product or set of products.

[ ] 4. Geographic Division: An organization that consists of a headquarters office and a group of operating divisions, each having the responsibility and resources needed to engineer, produce and market a product or a set of products in a different geographic area.

[ ] 5. Holding Company: An association of firms (or divisions) commonly owned by a parent corporation. Each firm is virtually autonomous and formal organization above the level of the individual firm is virtually nonexistent.

Would you please promptly mail this questionnaire and the chief executive officer's questionnaire in the attached self-addressed, stamped envelope? Thank you very much!

Note: The data below is optional. Confidentiality will be respected even if you give it.

NAME OF FIRM: _____

YOUR NAME & TITLE: _____

OFFICE ADDRESS: _____

[ ] Check here if you wish to receive the main findings of this study.

APPENDIX D

RELEVANT EXCERPTS FROM LETTERS RECEIVED FROM FIRMS AND EXECUTIVES WHO DECLINED TO PARTICIPATE IN THE SURVEY

"We regret that, because of the number received, time required to complete, and frequent requests for confidential information, we have to establish a company policy of not responding to any questionnaires."

"It is the general policy of . . . Corporation not to discuss the content of corporate strategy publicly or in such questionnaires."

"It is not the policy of our company to complete questionnaires of this nature."

> . . . over a period of years we have encountered a number of serious problems in our endeavors to provide such assistance. These problems include:
> - Availability of information requested.
> - Time required by key professional people to assemble information requested.
> - An occasional reaction that our assistance was not exactly what the respondent desired in terms of content, format and timing.
>
> In view of the above, . . . has adopted a general policy of declining to submit the kind of information you requested.

> Because of the volume of correspondence and the concommitant time commitments, it has become necessary for us to decline participation in research projects of this type. In addition, we have found that information gathered by this process later becomes public property at various universities and while this might not be the case with you, we have nonetheless opted to refrain . . . This declination of participation is in no way an evaluation of your project.

> While these questionnaires are, I am sure, an excellent method to provide beneficial and functional information to utilize both for teaching and the practice of management, corporate policy precludes . . . corporation from participating.

> Throughout the year, we receive numerous letters from organizations and institutions requesting our help with their research projects. Since the amount of staff time it would take to answer each survey is far more than we can afford, we have made it a general policy to turn down all letters of this nature.

> . . . the large number of requests we receive for that type of assistance and the amount of executive time that would be required to complete the studies has made it necessary for . . . to establish a consistent policy of not cooperating in such projects.

We have been receiving so very many of these recently that we have decided, by policy, that we could not take the time to do a good job in providing information requested on these questionnaires.

...we have determined, in order to conserve management time, we can respond only to those required by government or directly related to our business.

...we have adopted a policy of limiting our responses to privately sourced requests to those few originating in organizations of which we are members.

In recent years the volume of questionnaire requests we receive has grown to extraordinary proportions. The workload in filling them out has become so heavy that we have had to adopt a policy of responding only to official questionnaires and surveys.

...of necessity, we have adopted a general policy of not participating in surveys, questionnaires, and related studies.

I am awfully sorry but I just don't have time to fill out that form. I get about eight to ten of these a week, and I would do nothing else if I filled them out.

...There is such a priority on executive time that we can hardly justify the dilution that would result from cooperating with all of the requests we receive...As an alumnus of OSU, I regret that I must refuse your request, but I hope you will understand our problem.

APPENDIX E

DISTRIBUTION OF RESPONSES AMONG RATING SCALES AND IDENTIFICATION OF MODE AND MEAN RATINGS AND THEIR RANKINGS FOR KEY RESULT AREAS

(N = 249)

Key Result Area No.	Rating Scale 1	2	3	4	5	6	7	Mode Response ÷ N %	Mode Rank	Mean Rating	Mean Rank
General Administration:											
1	2	2	3	13	34	92	103	41	1	6.06	1
2	0	6	13	26	82	93	29	37	4	5.33	4
3	0	4	5	28	93	71	48	37	13	5.47	3
4	3	9	36	63	65	40	33	26	20	4.73	18
5	0	6	25	32	68	98	20	39	3	5.15	6
6	1	5	20	50	85	67	21	34	15	5.00	10
7	1	13	34	56	61	67	17	27	11	4.73	17
8	0	26	76	53	57	31	6	31	47	4.04	40
9	9	36	80	59	47	16	2	32	46	3.62	53
10	7	41	72	53	46	26	4	29	48	3.74	50
Production/Operations:											
11	0	10	28	62	62	58	29	25	21	4.87	11
12	17	55	58	57	36	21	5	23	53	3.49	55
13	2	26	51	50	61	44	15	24	22	4.34	28
14	5	37	69	69	42	22	5	28	38	3.77	49
15	3	39	55	64	53	25	10	26	40	3.96	43
16	2	46	73	75	29	20	4	30	33	3.64	52
17	7	23	39	90	58	25	7	36	27	4.09	37
18	2	13	36	71	68	46	13	29	37	4.53	23
19	6	49	42	74	40	32	6	30	35	3.86	46
20	15	43	43	75	47	19	7	30	32	3.73	51

Key Result Area No.	Rating Scale 1	2	3	4	5	6	7	Mode Response ÷ N %	Mode Rank	Mean Rating	Mean Rank
Engineering and R & D:											
21	5	8	22	36	61	89	28	36	5	5.08	7
22	11	38	53	45	69	29	4	28	19	3.91	45
23	5	22	71	59	52	33	7	29	49	4.04	41
24	5	17	54	55	46	49	23	22	43	4.44	26
25	9	38	55	61	38	40	8	24	42	3.94	44
Marketing:											
26	4	10	48	62	60	53	12	25	41	4.49	24
27	6	11	16	36	69	81	30	33	7	5.06	8
28	45	39	39	45	30	43	8	18	45	3.55	54
29	8	21	47	76	53	39	5	31	31	4.13	36
30	13	33	27	52	56	59	9	24	12	4.28	32
31	8	20	32	43	56	80	10	32	8	4.60	20
32	10	41	64	46	49	33	6	26	52	3.83	47
33	2	5	4	26	43	78	91	37	2	5.82	2
Finance:											
34	12	12	15	31	65	82	32	33	6	5.00	9
35	6	12	25	62	82	51	11	33	16	4.60	21
36	6	12	45	72	78	27	9	31	17	4.29	30
37	4	18	15	77	75	49	11	31	30	4.57	22
38	4	3	6	52	69	77	38	31	9	5.26	5
39	2	7	19	74	68	56	23	30	34	4.84	12
40	2	32	25	78	48	37	27	31	29	4.43	27
41	23	34	33	52	42	52	13	21	44	4.06	38
42	1	24	57	43	47	51	26	23	54	4.48	25
43	2	29	65	42	47	43	21	26	51	4.27	33
44	3	32	56	45	55	41	17	22	55	4.24	34

Key Result Area No.	Rating Scale 1	2	3	4	5	6	7	Mode Response ÷ N %	Mode Rank	Mean Rating	Mean Rank
Personnel:											
45	18	8	19	56	61	70	17	28	10	4.65	19
46	1	5	21	96	49	50	27	39	25	4.79	15
47	2	20	43	96	56	25	7	39	26	4.15	35
48	0	2	25	73	73	63	13	29	18	4.84	13
49	0	4	26	80	65	56	18	32	28	4.79	14
50	3	24	45	98	57	13	9	39	24	4.03	42
51	2	25	69	59	59	24	11	28	50	4.06	39
Public & Government Relations:											
52	10	29	43	48	57	42	20	23	23	4.28	31
53	14	34	52	74	48	22	5	30	36	3.78	48
54	3	22	47	66	59	42	10	27	39	4.29	29
55	1	9	26	57	92	46	18	37	14	4.77	16

Note: (1) For the description of key result areas and the explanation of rating scale see Appendix C.

(2) Underscored numbers represent the mode response/frequency.

APPENDIX F

COMPARISON OF THE TOP TEN KEY RESULT AREAS RANKED BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES: ANALYSES BY GRAND CORPORATE STRATEGY, SIZE, CORPORATE DIVERSITY, INDUSTRY, PRODUCTION SYSTEM, ORGANIZATIONAL STRUCTURE, AND PERCEIVED ENVIRONMENTAL UNCERTAINTY

Notes to Tables included in Appendix F

(1) For the description of key result areas see Appendix C.

(2) Legend: GADM = General Administration
PROD = Production/Operations
ERD = Engineering and R & D
MKTG = Marketing
FIN = Finance
PERS = Personnel
PGR = Public & Government Relations

(3) For a list of the top sixteen key result areas and their mean strategic significance scores for all 249 firms see Table XXVIII. Unless otherwise stated, the Key Result Areas shown in different tabulations in this Appendix are included in Table XXVIII.

TABLE XXX

COMPARISON OF THE TOP TEN KEY RESULT AREAS RANKED BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES: ANALYSIS BY GRAND CORPORATE STRATEGY

	Stability (N=29)		Internal Growth (N = 104)		External Acquisitive Growth (N = 96)		Retrenchment (N=20)	
Rank	KRA No.	Mean	KRA No.	Mean	KRA No.	Mean	KRA No.	Mean
1	GADM1	6.10	GADM1	6.12	GADM1	6.10	MKTG33	6.10
2	PROD11	5.76	GADM3	5.71	FIN34	5.61	FIN34	5.60
3	GADM2	5.55	MKTG33	5.63	GADM3	5.35	GADM1	5.55
4	MKTG33	5.48	FIN38	5.55	MKTG27	5.35	GADM2	5.50
5	GADM3	5.48	FIN42*	5.40	GADM2	5.34	MKTG27	5.00
6	FIN38	5.41	PERS48	5.39	GADM5	5.34	PGR55	4.90
7	GADM5	5.31	PERS46	5.36	MKTG31*	5.20	MKTG30*	4.85
8	MKTG27	5.24	ERD21	5.34	GADM6	5.17	PERS45*	4.80
9	PROD13*	5.21	PERS49	5.30	FIN38	5.08	PROD11	4.80
10	PERS46	5.17	GADM5	5.22	ERD21	5.03	MKTG31*	4.80

*Not included in the top sixteen KRAs for all 249 firms, the overall ranks: PROD13(38), FIN42(25), MKTG31(20), MKTG30(32), and PERS45(19).

TABLE XXXI

COMPARISON OF THE TOP TEN KEY RESULT AREAS RANKED BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES: ANALYSIS BY FIRM SIZE

	Small (N = 60)		Medium (N = 84)		Large (N = 105)	
Rank	KRA No.	Mean	KRA No.	Mean	KRA No.	Mean
1	GADM1	5.90	GADM1	6.01	GADM1	6.20
2	MKTG33	5.88	MKTG33	5.75	MKTG33	5.83
3	GADM2	5.43	GADM3	5.46	GADM3	5.61
4	GADM3	5.23	GADM2	5.36	FIN38	5.42
5	FIN38	5.12	GADM5	5.23	ERD21	5.33
6	MKTG27	5.08	FIN38	5.15	GADM5	5.29
7	FIN39	5.05	FIN34	5.13	GADM2	5.24
8	GADM6	4.97	MKTG27	5.08	GADM6	5.10
9	FIN37*	4.93	ERD21	5.02	FIN34	5.08
10	PERS48	4.87	GADM6	4.90	MKTG27	5.04

*Not included in the top sixteen KRAs for all 249 firms, the overall rank :22.

TABLE XXXII

COMPARISON OF THE TOP TEN KEY RESULT AREAS RANKED BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES: ANALYSIS BY CORPORATE DIVERSITY

Rank	Single Business Firms (N=28)		Dominant Business Firms (N = 55)		Related Business Firms (N = 116)		Unrelated Business Firms (N = 50)	
	KRA No.	Mean	KRA No.	Mean	KRA No.	Mean	KRA. No.	Mean
1	MKTG33	5.75	GADM1	5.91	GADM1	6.17	GADM1	6.18
2	GADM1	5.71	MKTG33	5.89	MKTG33	5.80	MKTG33	5.80
3	GADM2	5.57	GADM2	5.29	GADM3	5.60	GADM3	5.66
4	GADM3	5.36	GADM5	5.20	FIN38	5.35	FIN38	5.48
5	PERS48	5.14	MKTG27	5.12	GADM2	5.29	GADM2	5.30
6	GADM5	5.11	GADM3	5.07	ERD21	5.19	ERD21	5.24
7	FIN38	5.07	ERD21	5.05	GADM5	5.12	GADM5	5.20
8	GADM6	5.07	FIN38	4.95	MKTG27	5.09	GADM6	5.12
9	PGR55	5.07	FIN34	4.93	FIN34	5.07	FIN34	5.02
10	FIN39	5.04	PERS48	4.87	GADM6	5.05	PROD11	5.02

TABLE XXXIII

COMPARISON OF THE TOP TEN KEY RESULT AREAS RANKED BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES: ANALYSIS BY INDUSTRY

Rank	Consumer Nondurable Goods (N = 73)		Consumer Durable Goods (N = 34)		Capital Goods (N = 61)		Producer Goods (N = 81)	
	KRA No.	Mean	KRA No.	Mean	KRA No.	Mean	KRA No.	Mean
1	GADM1	5.97	GADM1	5.85	GADM1	6.21	GADM1	6.12
2	MKTG33	5.81	MKTG33	5.76	MKTG33	6.15	MKTG33	5.59
3	GADM3	5.47	MKTG27	5.59	GADM3	5.67	GADM3	5.42
4	FIN38	5.27	ERD21	5.47	GADM2	5.56	FIN38	5.37
5	GADM2	5.23	GADM3	5.24	GADM5	5.28	GADM2	5.27
6	MKTG27	5.15	GADM2	5.24	ERD21	5.26	GADM5	5.27
7	GADM5	5.01	FIN34	5.24	FIN34	5.26	GADM4*	5.01
8	FIN39	5.01	FIN38	5.18	GADM6	5.16	GADM6	5.00
9	FIN34	5.00	MKTG31*	5.00	FIN38	5.13	PROD11	4.98
10	ERD21	4.99	GADM5	4.94	MKTG27	5.13	PERS49	4.94

*Not included in the top sixteen KRAs for all 249 firms, the overall ranks: MKTG31(20) and GADM4(18).

TABLE XXXIV

COMPARISON OF THE TOP TEN KEY RESULT AREAS RANKED BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES: ANALYSIS BY PRODUCTION SYSTEM

Rank	Unit & Small Batch (N=41)		Large Batch & Mass (N=138)		Continuous Process (N=70)	
	KRA No.	Mean	KRA No.	Mean	KRA No.	Mean
1	MKTG33	5.85	GADM 1	6.20	GADM 1	5.97
2	GADM 1	5.78	MKTG33	5.90	MKTG33	5.63
3	GADM 3	5.46	GADM 3	5.62	GADM 2	5.26
4	GADM 2	5.29	GADM 2	5.37	GADM 3	5.19
5	ERD 21	5.27	FIN 38	5.36	GADM 5	5.17
6	FIN 38	5.22	ERD 21	5.27	FIN 38	5.07
7	GADM 6	5.15	MKTG27	5.26	FIN 34	4.91
8	PROD11	5.10	GADM 5	5.21	GADM 6	4.89
9	MKTG27	5.00	FIN 34	5.11	PROD11	4.76
10	GADM 5	4.93	GADM 6	5.01	PERS45*	4.74

* Not included in the top sixteen KRAs for all 249 firms, the overall rank: 19.

TABLE XXXV

COMPARISON OF THE TOP TEN KEY RESULT AREAS RANKED BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES: ANALYSIS BY ORGANIZATIONAL STRUCTURE

Rank	Functional (N = 28)		Type II** (N = 57)		Product Division (N = 111)		Geographic Division(N=32)		Holding Company (N =21)	
	KRA No.	Mean	KRA No.	Mean	KRA No.	Mean	KRA No.	Mean	KRA No.	Mean
1	MKTG33	5.71	GADM 1	5.98	GADM 1	6.13	GADM 1	6.19	GADM 1	6.43
2	GADM 2	5.61	MKTG33	5.72	MKTG33	5.77	MKTG33	5.94	MKTG33	6.29
3	GADM 1	5.57	GADM 3	5.42	GADM 3	5.62	GADM 2	5.53	GADM 2	5.67
4	GADM 3	5.25	GADM 2	5.37	FIN 38	5.59	GADM 3	5.38	FIN 34	5.48
5	GADM 5	4.96	FIN 38	5.18	ERD 21	5.31	MKTG27	5.38	MKTG27	5.33
6	PGR 55	4.96	MKTG27	5.11	GADM 5	5.23	GADM 5	5.34	GADM 5	5.29
7	PERS45*	4.96	GADM 6	5.09	GADM 2	5.11	PGR 55	5.22	GADM 3	5.24
8	PROD11	4.93	ERD 21	4.98	GADM 6	5.05	ERD 21	5.16	PGR 55	5.14
9	PERS48	4.93	PROD11	4.96	FIN 34	5.00	FIN 38	5.13	GADM 4*	5.10
10	MKTG27	4.82	GADM 5	4.93	MKTG27	4.96	FIN 34	5.13	GADM 6	5.00

*Not included in the top sixteen KRAs for all 249 firms, the overall ranks: PERS45(19) and GADM4(18).
**Functional with one or more product divisions or subsidiaries.

TABLE XXXVI

COMPARISON OF THE TOP TEN KEY RESULT AREAS RANKED BY THEIR MEAN STRATEGIC SIGNIFICANCE SCORES: ANALYSIS BY PERCEIVED ENVIRONMENTAL UNCERTAINTY

Perceived Environmental Uncertainty					
Low (N=194)			High (N=55)		
Rank	KRA No.	Mean	Rank	KRA No.	Mean
1	MKTG33	6.22	1	GADM 1	6.05
2	GADM 1	6.11	2	MKTG33	5.70
3	GADM 3	5.51	3	GADM 3	5.46
4	MKTG27	5.40	4	GADM 2	5.31
5	ERD 21	5.38	5	FIN 38	5.27
6	GADM 2	5.36	6	GADM 5	5.11
7	GADM 5	5.31	7	ERD 21	5.00
8	FIN 38	5.22	8	MKTG27	4.97
9	FIN 34	5.13	9	FIN 34	4.97
10	GADM 6	5.13	10	GADM 6	4.96

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