University Grant Program Research Report

THE RELATIONSHIPS OF LONG RANGE STRATEGIC PLANNING TO FIRM SIZE AND TO FIRM GROWTH

by

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School of Business Administration,
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August, 1975.

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Chapter 1

PURPOSE AND ORGANIZATION

Introduction

This research pertains to the general management task of strategic planning. The primary purpose of the project was to provide a basis for improving the managerial practice of strategic planning. A secondary purpose was to generate empirically based findings which would be useful to other researchers interested in the theory of planning. More effective planning should result from increased understanding of present planning practices. This study attempted to add insights into the practice of long range strategic planning by considering the relationships among long range planning, firm size and firm growth. Review of the literature on planning and analysis of empirical data were the two vehicles pursued in search of this understanding. The analytical investigations were conducted in two different ways. One method built on a 1968 survey of long range planning practices in Canada's 300 largest firms. Using this data, the relationships of long range planning to each of firm size and actual firm subsequent growth were considered. The other method considered the relationships of certain sub systems in the long range planning process to each of firm size and management's expectations of future firm growth. This second study was based upon personal interviews with top managers, conducted in the summer of 1973.

Literature on Long Range Planning

Long range strategic planning is a controversial topic. The literature splits naturally into three categories -- that advocating it, that expressing reservations about it, and that describing it as part of the socio-economic system. The literature advocating planning emphasizes the alleged benefits to be received from its practice. Planning advocates state:

- planning will improve any firm's performance,
- firms that plan will do better than similar firms which do not,
- the greater the effort devoted to planning the greater the benefits, and
- planning should be practiced in a comprehensive all encompassing manner.

The advocates, in addition, state; the practice of long range strategic planning has equal applicability in all types of firms -- large or small, and with low or high growth expectancies.

Others, however, remain unconvinced about the alleged benefits of long range strategic planning. Many top managers and other observers of business suggest planning is merely a fad touted by consultants and academics who have little, if any, contact with real power, decision making, and management processes. Such skeptics of planning state: it is too expensive, too complicated, too far removed from operating reality, and too inflexible. They suggest serious

long range strategic planning is conducted only in extreme adversity. To them, managers use planning to avoid perhaps unconsciously, their responsibilities. As such, they feel planning has been oversold and is rarely worth the effort.

Galbraith and other analysts of the economic system, who are in general agreement with his point of view, have another perspective on planning. The contend business firms use planning as the main instrument to ensure survival, to grow, to contain competition, to manage supply and demand, to influence government, and to otherwise control their environments. In this context they observe more planning is done in larger firms and more planning is done in firms that grow slower.

This study is designed to examine two key relationships in regard to planning. Review of the literature indicated contradictory viewpoints with respect to these issues. The key issues were:

1. Does long range planning vary by firm size?
2. Does long range planning vary by the growth position of firms? Growth was considered both in terms of actual subsequent growth and in terms of management's expectations of future growth.

The Process of Long Range Planning

Much of the confusion surrounding long range strategic planning is caused by a misunderstanding of its meaning. Long range strategic planning is often considered to be primarily forecasting one or a few dimensions critical to a

firm's success. Others perceive it to be anything concerned with future management decisions. In fact, long range strategic planning is a relatively formal, complicated, comprehensive, analytical process. The process obtains, structures and analyses information relevant to each of today's major decisions. Due consideration is given to present and future effects of the other major decisions being considered. In one sentence, strategic long range planning is deciding company goals and objectives and formulating a strategy for accomplishing these goals and objectives.

In this context, company goals are broad, qualitative statements which provide basic guidelines for the company's activities. Company objectives are quantitative statements falling within the braod framework of the company goals. Strategy is a set of top management decisions that commit the organization and its resources to a sequence of major moves designed to accomplish agreed upon goals and/or objectives. These moves are conditional, depending upon the firm's environment in the future. A specific date should be set for each of these future moves.

The process of formulating a long range strategic plan with its goals, objectives and strategy theoretically considers all possibilities with the aid of standardized practices developed for the purpose. The firm's environment, its resources, and the values of its stakeholders are analysed. Written standard procedures are used to ensure a

planned approach to the long range planning activities. Some of the common sub-process inputs used in most firms are:

- size-up of the firm's weaknesses and strengths,
- market and sales forecasts,
- analysis of competitors,
- economic forecasts,
- forecasts in the functional areas of finance, production, and personnel.

These analyses are iteratively matched and coordinated to produce sets of action alternatives for the firm. Simultaneously, attention is focused on methods of implementing each alternative. Key activities are identified, assigned and coordinated. Provision is made for reformulation of the strategy based on changes in the environment and the progress of the firm.

The process of actually conducting the above described conceptualization of long range planning involves many sub-processes. These sub-processes are traditional activities practiced by firms, many of which are considered to be part of the total management information system. Some of the more common sub-processes employed include: operating statements, annual profit plans, staff studies and reports, market and sales forecasts for one year and longer, market share reports, financial, production and personnel forecasts, etc.

The combination of the informational inputs from these sub-processes and much analysis often results in the preparation of a formal long range plan document. This document contains the relevant analysis, the goals and objectives and the strategy the firm intends to implement and upon which current decisions are to be made.

Research Design

As mentioned above, this research project consisted of two studies. While the subject matters were related, one study could be considered to be of primary interest to the business practitioner and the other study of primary interest to other researchers interested in developing the theory of planning. The similarity of the subject matter of the two studies provided an opportunity to assess the degree of corroboration among the two sets of findings.

The practitioner oriented study investigated the relationships of each of firm size and management's expectations of future firm growth to each of a number of common sub systems in the long range planning process. Information on each of these variables was obtained by personally interviewing a top manager in a sample of 40 firms. The sample firms were chosen from slow and high growth industries. Taxonomies for classifying each of the three types of variables; firm size, growth expectancies, and planning sub-processes, were developed. After categorizing each sample firm, analytical and statistical procedures for investigating the possible associations were applied to the total sample.

The second study explored the possible association between long range strategic planning and each of firm size and actual firm subsequent growth. In this study, each firm's long range strategic planning was measured on the basis of secondary information obtained from a survey of long range planning practices, previously conducted in 1968. Using ten variables surveyed in those questionnaires, a taxonomy and ranking methods were developed to measure each sample firm's long range planning practices. Firm size was measured in three ways from information in the questionnaires. Subsequent growth measures were determined by obtaining financial performance measurements for each firm as of 1971. The sample consisted of 43 firms chosen from the 162 that responded to the previous survey. Statistical procedures were applied to analyse the possible associations.

Brief Summary of Findings

The major findings of this study are as follows:

1) Bigger firms practice long range planning more frequently than small firms. The practice of long range planning increases with firm size.
2) Firms with lower growth expectancies practice long range planning more frequently than firms with higher growth expectancies.
3) Firms with more long range planning experience lower subsequent growth than firms with less long range planning.

4) The practice of long range planning is not consistently comprehensive. Firms with greater size or lower growth have more comprehensive long range planning processes than firms of smaller size or higher growth.

Based on these findings it is inferred that comprehensive and systemic long range strategic planning is found in firms that subsequently have poorer economic performance. Since firms with lower growth expectancies have more long range planning, the development of a firm's long range planning process appears to be determined by how well management perceives it will do. This suggests that long range strategic planning offers substantial economic pay-off only when properly employed.

It is evident that long range planning is an evolutionary process. To acquire its benefits, managers should monitor the development of their long range strategic planning process to ensure that the emphasis placed on the various sub-processes inherent in the total process is compatible with the particular circumstances of their firm.

Organization of This Report

Chapter 2 summarizes the research literature in the field of long range strategic planning. It outlines the underlying theory of the practice from the viewpoints of the advocates, skeptics, and the observers of the industrial system. The varying assumptions and recommendations are described. It also reviews the limited empirically based research that has been conducted in the area.

Chapter 3 explains the research methodology of the interview based research project study exploring the relationships of the actual process of long range strategic planning, to growth expectancies, and to firm size. It describes the information gathering approach, the interview guideline and the categories devised for each of the long range planning process elements. A distribution of the sample data is presented.

Chapter 4 presents the analysis of the above research study. A comparison of the long range planning process with each of firm size and firm growth expectancies is made. An attempt is made to ascertain which of firm size and firm growth expectancies are more important in indicating the presence of the managerial phenomenon of long range planning. Tentative conclusions are presented.

Chapter 5 explains the research methodology of the research study exploring the relationships of the degree of long range planning practiced, to firm size, and to actual subsequent growth. Descriptions are given of the data base employed, the method used to discriminate the long range planning effort among the firm's, the measures of subsequent growth, the measures of firm size and a description of the statistical procedures.

Chapter 6 presents the analysis of the above research study. It shows the relationships between firm size and long range strategic planning; firm subsequent growth and long range strategic planning; firm size and firm subsequent

growth; and the interaction of firm size, firm growth, and long range strategic planning. Tentative conclusions drawn from these findings are presented.

Chapter 7 summarizes and discusses the research findings. Consideration is given to the degree of corroboration found in the two studies. Tentative possible explanations are advanced and discussed for the findings. The possible implications for business managers are discussed.

Chapter 2

THE LITERATURE ON LONG RANGE PLANNING

Planning is discussed in the literature from two points of view - the firm and the total economic system. The most common viewpoint is the individual firm. This viewpoint splits naturally into two categories - the planning advocates and those with reservations about planning. The differences between the advocates and those with reservations are rarely discussed in literature. This may be because those who question the value of planning do not think the subject worthy of comment.

The other point of view considers long range planning as part of the total economic society. The most widely read observer with this perspective is Professor John Kenneth Galbraith. Galbraith's discussion of economic society contains many controversial comments on planning. He states large firms use planning as a major instrument to control their environments, markets, and competitors.

This review of the long range planning literature considers both viewpoints. The individual firm viewpoint is discussed under the headings of the pro-long range planning viewpoint, and the reservations about planning. The total economic society viewpoint receives separate discussion.

The purpose of this literature review is to uncover and present principles and theories about associations with long range planning. Relationships between the practice of long range planning and either the nature of firms, or the nature

of the firms' environments, were considered. Knowledge of such relationships should increase the potential for improving the practice of long range planning. The specific variables studied are firm size and firm growth. Generally speaking, associations with long range planning have not been well investigated in the literature.

The anti-planning viewpoint expresses no comment on any relationships, although a few may be implicit.

The literature from the pro-long range planning viewpoint suggests specific relationships. In addition, some empirically-based testing has been conducted by writers in this group. None of this research has, however, considered firm size and only tangentially has it considered firm growth. Much of the empirically-based research has surveyed long range planning practices. Some have considered relationships between long range planning and economic performance - i.e. does long range planning pay off? This limited research is of questionable quality due to the presence of research difficulties. For example, it is not possible to determine how a firm which is planning would have performed had it not been planning nor how a firm that is not planning would have performed if it had been planning.

It is important to clarify possible confusion over the distinction between economic performance, as measured by profits, and growth. Two separate, but related, issues exist in the comparison of long range planning and growth. The empirically-based studies of long range planning and

economic performance attempt to determine if planning pays off. They do not address the separate issue of whether long range planning is associated with higher or lower growth rates. This latter issue is of major importance in this research. It may be that firms which practice long range planning perform better, or it may be that they perform worse, in similar circumstances, than firms which do not. Concurrently, it may be that firms which practice long range planning are generally characterized by slower or higher growth opportunities than those which do not.

The controversial writers whose observations concern total economic society suggest that associations do exist with the practice of long range planning. Their suggestions, however, are mainly subjective interpretations. No empirical testing has been conducted to support their opinions.

A brief overview of each of these views on long range planning follows. The weight of the arguments and the limited evidence suggest that associations do exist. It would appear that:

1) Long range planning would increase with firm size;
2) Firms with more long range planning would be more likely to be confronted with slower growth.

The Pro-Long Range Planning Viewpoint

Since the 1960's, the number of articles and books published advocating strategic long range planning has increased substantially. This literature is of three types:

(1) ideas developed from empirical case descriptions, (2) normative, prescriptive writings, and to a much lesser extent, (3) empirically based hypothesis testing research. All of these writings have one common underlying theme - it is good to have a strategy (i.e. it is good to have objectives and a long range plan rather than to only react).

The theory and concept of strategy has received much attention among business managers, teachers, consultants and researchers since the mid-1960's. Reduction of the concept to a theoretical framework makes the concept of strategy appear simple. Actual implementation is difficult and complex. In order to avoid confusion, the meaning of the concept of strategy is discussed.

Strategy has been defined by most commentators on general management. These definitions are essentially similar. Some examples follow. Andrews of the Harvard Business School advances a general definition of strategy:

> "For us strategy is the pattern of objectives, purposes or goals and major policies and plans for achieving these goals, stated in such a way as to define what business is in or is to be in, and the kind of company it is to be."[1]

Some of the ambiguity of the above definition is removed by McArthur and Scott's definition of the strategy of business:

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[1]Learned, Christenson, Andrews & Guth Business Policy Text and Cases (Homewood, Ills.: Richard D. Irwin Inc., 1965), p. 17.

(1) A concept of how to compete in an industry or industries (this should spell out the markets or market segments which the company intends to serve, the kinds of products needed to serve these markets effectively, and the skills and resources the company must have to develop these specific kinds of products).

(2) The statement of specific goals against which progress can be measured.

(3) A timed sequence of conditional moves."[2]

This definition is more complete because it stresses the importance of a planned series of specific sequential management action moves.

The idea of allocating limited internal resources is not indicated by either of the above definitions. This is expressed in a definition by D.H. Thain:

"a timed sequence of conditional moves for allocating resources to opportunities in a competitive environment."[3]

One or two sentence definitions of strategy oversimplify the concept of strategy. Of the many descriptions of this theory, one of the most straightforward is contained in the paper "Strategy as a Problem Solving Theory in Business

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[2]John H. McArthur, and Bruce R. Scott, Industrial Planning in France (Cambridge, Mass.: Division of Research, Harvard School, 1969), p. 116.

[3]Donald H. Thain, "The Coming Crunch in Federal Government-Business Relations", The Business Quarterly (London, Ontario: School of Business Administration, University of Western Ontario, Autumn 1970).

Planning" (Bower, 1967).[4] A diagram of Bower's model of the concept of strategy is attached as Chart II-1.

Bower's model consists of a five part format as follows:

Formulation Phase; consisting of -

1) The Firm's Environment
   - opportunities and risks
2) The Firm's Resources
   - weaknesses and strengths
3) The Stakeholders' Values
   - motivational and behavioural constraints

Implementation Phase; consisting of -

4) Firm Structure
   - identification of key activities
5) Managerial Style
   - method of accomplishment

Bower suggests the concept of strategy helps the business manager understand his problems. It provides an exhaustive, analytical structure for utilizing the information at his disposal; by defining the relationships among the parts of the company's system and its environment; and by providing an orderly sequence of questions for the definition, analysis, and choice of alternatives. It results in the choice of goals, policies, and action programs to

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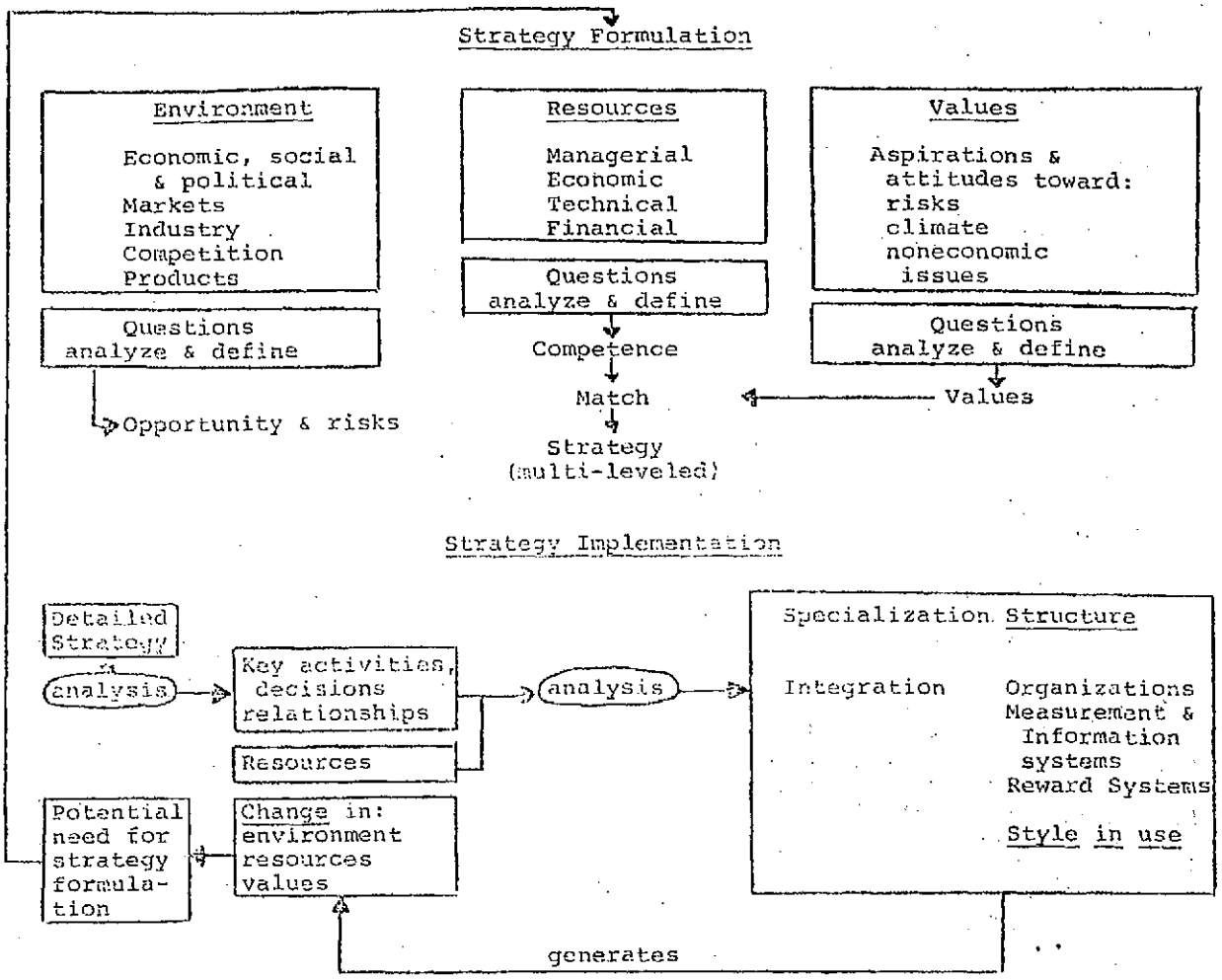
[4]Joseph L. Bower, Strategy as a Problem Solving Theory of Business Planning, BP 894, Harvard Business School, 1967.

CHART II-1

A MODEL OF THE CONCEPT OF STRATEGY



Adapted from: Joseph L. Bower, Strategy as a Problem Solving Theory of Business Planning, BP 894, Harvard Business School, 1967.

achieve those goals. The concept of strategy is conceived as two concurrent processes - strategy formulation and strategy implementation.

In the formulation phase, three broad categories of information must be addressed. These are the firm's environment, its resources, and the values of the stakeholders. Each of these undergoes an in-depth, searching, questioning analysis. Opportunities and risks are identified in the environment, weaknesses and strengths are identified within the firm, and the motivational and behavioural constraints of management values are identified. From this basis, an iterative matching process of identified strategic alternatives, present and potential corporate competences, and management values, is conducted to evolve a strategy.

This process of strategy formulation is concurrently focused towards the process of strategy implementation. The implementation phase is concerned with two broad categories of information, firm structure and managerial style. For each of these two broad categories, four subprocesses are conducted. These are:

1) analysis;
2) task specialization;
3) integration; and
4) interative reformulation.

For both firm structure and managerial style, analysis is directed towards identification of the key activities required in the strategy and how these are to be accom-

plished. Task specilization is directed towards the breakdown and assignment of the technological, economic, and behavioural activities. Integration is concerned with ensuring that specialized activities are co-ordinated. The fourth sub-process reformulation, is directed at the constant testing and reformulating of the original strategy and implementation plan.

The above brief description of the "mainstream business policy" strategy process portrays this normative concept. Other more complete descriptions are found in Andrews, The Concept of Corporate Strategy,[5] McArthur and Scott's Industrial Planning in France,[6] and in Learned, Christensen et. al. Business Policy - Text and Cases.[7] These descriptions also portray the underlying broad framework for the "how to long range plan" writings.

Fundamental to this, and to virtually all normative strategy theory, is the belief that good general management involves the formulation and implementation of strategy. Good managers are perceived as those who conduct this process in an explicit and systematic manner. The three basic implied assumptions are:

1) Firms which employ the concept of strategy formu-

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[5]Kenneth Andrews, The Concept of Corporate Strategy (Homewood, Ills.: Dow Jones Inc., 1971).

[6]John L. McArthur and Bruce R. Scott, Industrial Planning in France (Cambridge, Mass.: Division of Research, Harvard Business School, 1969), Chapter IV.

[7]Learned, E.P. et. al. Business Policy Text and Cases (Homewood, Ills.: Richard D. Irwin Inc., 1969).

lation and implementation will achieve substantially better results than they would if it were not used.

2) The better the effort devoted to the process of strategy formulation and implementation, the better will be the results in terms of performance.

3) While the detail may vary substantially with the particular circumstances, application of the theory will cover all of the bases i.e. environment, resources, and values, i.e. the strategy model constitutes a comprehensive, all-encompassing package.

Prescriptive Writings on Long Range Planning

The multitude of "how to" or prescriptive writings on long range planning build on the above or similar normative assumptions. They attempt to provide business managers and students with detailed step-by-step procedures for conducting and implementing the long range planning process.

In these writings, each of Bower's five categories is further sub-divided into the traditional nomenclature of business i.e. marketing, production, finance and personnel. Efforts are also devoted to the timing and allocation of the procedural efforts required in establishing and operating the long range planning process.

The prescriptive writings are based on the strategy

model. These authors often assume that its normative assumptions are fact. John Argenti, a British long range planning consultant, in his book Corporate Planning - A Practical Guide states that "... corporate planning has achieved remarkable success for the firms to which it has been introduced."[8] He goes further to state that "Results should start to effect profits within one year to a small extent but by the second year these results should be more extensive."[9] The belief that long range planning leads to better economic performance is clear. Argenti states that firms practicing long range planning should perform better than firms that do not. He does not address the issue of whether long range planning is associated with growth.

Another of the many scholars writing about the practice of long range planning is Professor George A. Steiner of the Graduate School of Business at Columbia University. His recent book entitled Top Management Planning[10] is currently the most comprehensive in the field. Steiner's prescriptive writings are also based on the normative theory of strategy and include its assumptions. Steiner states that "... other things being equal, comprehensive corporate planning will bring much better results than if it is not done."[11] With

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[8]John Argenti, Corporate Planning - A Practical Guide (Homewood, Ills.: Dow Jones Irwin Inc., 1969), p. 12.

[9]Ibid., p. 280.

[10]George A. Steiner, Top Management Planning (New York: The Macmillan Company Ltd., 1969).

[11]Ibid., p. 85.

respect to the practice of long range planning he states that "It seems to me that great strides have been made in the past decade. Today's status is contributing importantly to operations."[12] Steiner strongly implies that firms practicing more long range planning will perform better than firms practicing to a lesser degree. This implication is made, providing all other conditions are similar. He does not comment on whether long range planning is associated with growth. He offers no empirical evidence of a cost-benefit analysis of long range planning.

Like Argenti, Steiner clearly implies that a general process of long range planning is applicable to all firms. Steiner states, "... it is becoming clearer that there are fundamental planning generalizations or principles which apply to all organizations."[13] He maintains that it is a pitfall to assume "that effective total planning can be done piecemeal or that integration of the major parts is unnecessary."[14] While long range planning "cookbooks" recognize that each firm's circumstances will dictate more or less analysis, they do state that all of the major elements must be considered and incorporated into the planning process.

In addition to advocating complete, comprehensive, long range planning for all types of firms, Steiner strongly implies that long range planning should not vary with firm

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[12]Ibid., p. 719.

[13]Ibid., p. 718.

[14]Ibid., p. 720.

size.

Although the major portion of Steiner's book advocates one ideal, all-encompassing planning model, he recognizes the possible limitations of the present theory. He suggests further research is required. He implies the one ideal operational planning model may not be appropriate to all circumstances. An area he suggests receive further research is "probing into (the) question (of) what is the proper planning process for different sized firms, for different type operations and for various conditions."[15] He suggests further research into the question of "The overall conceptual model of corporate planning needs to be refined to fit different types of situations in different companies."[16]

Empirical Testing

Little statistical empirical testing has been published in the field of long range planning. Much of the research describes planning in particular firms or industries.[17] The authors of these studies appear to approach their analysis with normative positive beliefs. Consequently, these studies tend to reconfirm the positive assumptions of the

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[15] Ibid., p. 723.

[16] Ibid., p. 723.

[17] See for example Stewart Thompson, How Companies Plan (New York: American Management Association Inc., 1962) and Harold W. Henry, Long Range Planning Practices in 45 Industrial Companies (Englewood Cliffs, N.J.: Prentice Hall Inc., 1967).

strategy concept. It is difficult to distinguish these studies from the prescriptive writings.

Most of the actual empirical testing has been conducted to establish the extent of long range planning practice. These studies often included a general search for relationships between firm characteristics and methods of planning. Generally, these studies have not found any relationships. With loose definitions, the studies indicate that long range planning is widely practiced. For example, Cleland in a 1962 Ph.D. thesis at Ohio State University entitled The Origin and Development of a Philosophy of Long Range Planning in American Business found 85% of the firms practicing long range planning.[18] Polishuk in a 1968 study of long range planning in the American aerospace industry found 95% of the firms were practicing long range planning.[19] Probably the most extensive search for long range planning correlations is in the formal planning systems research project presently being conducted by Professor Vancil at the Harvard Business School. This is perhaps the most comprehensive study ever undertaken on long range planning. The study commenced in 1966 and expenditures to the end of 1971 were more than $500,000. Examination of his questionnaires and the limited number of articles published to date indi-

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[18]David Cleland, Origin and Development of a Philosophy of Long Range Planning in American Business (unpublished doctoral dissertation, Ann Arbor: University Microfilm Inc., 1962).

[19]Paul Polishuk, Survey of Long Range Planning in the Aerospace Industry (Wright Patterson Air Force Base, Ohio: United States Air Force, 1969).

cates no major findings have yet been published. Publication of the results of other analyses are expected shortly.

Empirical tests evaluating the effectiveness of long range planning are exceptionally sparse. A 1966 Ph.D. thesis at Ohio State entitled Planning in Small Manufacturing Companies: An Empirical Study[20], by M.A. Najjar, describes one such study. This report assessed the correlations between managerial satisfaction with profits and sales growth in firms by using four different measures of planning. Much to the author's apparent disappointment, no significant correlations were found. The results were, nonetheless, interesting. While all of the correlations were relatively low and without statistical significance, each of the eight possible comparisons was negatively correlated. Managers of firms with planning were less satisfied. The author expressed his dissatisfaction that they "are in the wrong direction. Such results throw some doubt on the satisfaction criteria as measures of business success."[21]

The author's disappointment reflected a failure to show long range planning pays off. An obvious implication of the findings was ignored. The consistently negative associations may indicate an underlying negative relationship

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[20]Mohamed A. Najjar, Planning in Small Manufacturing Companies: An Empirical Study (Ann Arbor: University Microfilm Inc., 1966).

[21]Ibid., p. 69.

between long range planning and managerial satisfaction with profits and sales growth. Najjar found that firms practicing long range planning were less satisfied with their performance than non-planning firms. His dissatisfaction reflects his concern with the normative assumption that long range planning pays off. Instead, his empirically based findings may indicate the practice of long range planning is more common in firms which are faced with the adversity of low growth. He did not develop this as a conclusion.

Only one other empirical research study was uncovered assessing the relationship between formal long range planning and subsequent economic performance. This study, by Thune and House, is entitled, "Where Long Range Planning Pays Off - Findings of a Survey of Formal, Informal Planners". There is no confusion about the issue addressed in this study. Thune and House attempted to determine whether planners perform better than non-planners in similar situations. Formal planners significantly outperformed informal planners with respect to five economic measures.[22] An extension of this study was subsequently conducted by D.M. Herold and published as an article entitled, "Long Range Planning and Organizational Performance A Cross Valuation Study".[23] These joint studies are the only empirical tests

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[22]S. Thune and R. House, "Where Long Range Planning Pays Off - Findings of a Survey of Formal, Informal Planners", Business Horizons (August, 1970), pp. 82-87.

[23]D.M. Herold, "Long Range Planning and Organizational Performance: A Cross Valuation Study", Academy of Management Journal (March, 1972), pp. 91-102.

supporting the major tenet of faith in the concept of strategy - the belief that strategic planning improves economic performance.

Review of these articles indicated a lack of adequate statistical evidence to advance the assumption to the status of a management principle. Many in the field of business policy do. The research design of these studies is of questionable validity. From a sample of 71 firms defined as formal planners and 21 firms defined as informal planners, Thune and House[24] "carefully" selected 17 formal planners and 19 informal planners so that the formal and informal planning firms were pair matched on the basis of broad industry classification and sales level. Since the formal planners, and to a lesser extent the informal planners, were not randomly chosen, it is unreasonable to suggest they are representative of either formal or informal planning firms. The results may not be generalizable beyond the particular circumstances of these firms. Questions also exist as to the validity of the basis of pair matching.

Herold's study[25] used the same firms and data as the Thune and House study, with the exception that the time horizon was extended four years. An additional measure of economic performance was also employed. His sample was

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[24] S. Thune and R. House, "Where Long Range Planning Pays Off - Findings of a Survey of Formal, Informal Planners", Business Horizons (August, 1970), pp. 82-87.

[25] D.M. Herold, "Long Range Planning and Organizational Performance: A Cross Valuation Study", Academy of Management Journal (March, 1972), pp. 91-102.

reduced to five pairs of firms because of mergers, acquisitions, etc. Herold's extension is subject to the limitations of the Thune and House study plus those related to the reduction in the sample size. These joint studies add to the credence of the underlying assumptions of long range planning. They do not, however, empirically justify them. To suggest that the claims made and implied for long range planning have been proven is incorrect.

Further empirical research is needed into the process of long range planning. Not only is the amount of management time devoted to it significant, but the research to date indicates there is need for further understanding of the conceptual framework. The ever-growing body of long range planning knowledge and its practice is based upon normative assumptions which have not yet been adequately empirically tested. One of the main reasons for the lack of empirical testing is the difficulty in conducting research.

Summary

Advocates of formal planning thus advance both empirical tests and informed opinions concerning the management practice of long range planning. In the area of empirically tested research, their findings are as follows:

1) Long range planning is widely practiced in North American business firms.

2) Some limited evidence supports the belief that firms which practice long range planning will perform better than similar firms which do not.

3) Some evidence indicates that firms which practice

long range planning are less satisfied with their performance than firms that do not practice it.

In the research and normative writings on long range planning a number of beliefs are evident. These are:

1) The practice of long range planning should not vary by the growth expectancies of firms.

2) The practice of long range planning should not vary with the size of the firm.

3) The basic long range planning process should be applied to all firms without variation. Details may vary, but all the general procedures and areas of analysis should be covered.

Reservations About Planning

One of the notable aspects of the literature on planning is the absence of an "anti" point of view. This obvious omission should not imply its non-existence. Instead, it indicates that believers in planning have promoted their views. Inside business firms, planning is often delegated as a staff responsibility to individuals, without accompanying operational responsibility. In such circumstances, negative writings on planning would naturally not occur.

While the literature of long range planning rarely takes a negative point of view, general management literature occasionally does. Four examples are presented here to illustrate the strength of the reservations which exist about planning. The four are: a general management class note prepared at IMEDE by Professor D.H. Thain, entitled, "Corporate Strategy - General Management Course Memorandum

No. 12"; a Harvard Business Review article by H. Edward Wrapp entitled "Good Managers Don't Make Policy Decisions"; an article by Charles Lindbloom entitled "The Science of Muddling Through"; and a classical descriptive book of general management by Cyert and March entitled "A Behavioral Theory of the Firm".

The IMEDE general management course note considers an anti-planning position. To illustrate this position, the note quotes the chairman of a leading U.K. company. This article reflects the strength of the reservations held about long range planning. For illustration purposes, a few of these quotes are presented:

> "I have accomplished a considerable degree of success in this company by concentrating on day-to-day operations. The question of living in the present or the future is not an either-or problem. Any sensible manager concentrates on today's problems but in the light of his view of the future. We have several people in our company who are concerned with new developments. Our marketing manager, for example, has just returned from a trip around the world. I spent most of yesterday with him talking about what is going on and the things he was able to observe that may tip us off as to important new developments that will affect us in the future.
>
> "I think that many managers try to create the impression that they are wiser than they really are when talking to reporters or university researchers. If more top managers were realistic and frank they would be proud of the fact that true successes are the result of putting one good decision after another day-after-day. In the company that I worked for previous to my employment here we had a remarkable 15 year record. I can give you my personal guarantee that this outstanding end result was simply the accumulation of a process of correct short-term decisions. If you are operating well on a day-to-day basis, when the days finally amount to months and years you have a record to be proud of ...

> "Another problem that I have with strategy is that people who talk about it usually get involved in long range planning. I would seriously like to ask you the question - what good are long range plans? Either you follow them or you do not. If you follow them you are sure to miss good opportunities that cannot possibly be foreseen by any planner. If you do not follow them, why bother making them in the first place? I have friends who have been bitten by the long range planning bug and I am sure that they have wasted a great deal of time and money on an activity that amounts to nothing much more than the latest management fad."[26]

Negative attitudes towards planning are also expressed by other authors. Professor H. Edward Wrapp strongly implies a distrust of comprehensive formal long range planning. He states:

> "Many of the articles about successful executives picture them as great thinkers who sit at their desks drafting master blueprints for their companies. The successful top executives I have seen at work do not operate this way. Rather than produce a full-grown decision tree, they start with a twig, help it grow, and ease themselves out on the limbs only after they have tested to see how much weight the limbs can stand.
>
> "The fifth, and most important skill I shall describe bears little relation to the doctrine that management is (or should be) a comprehensive, systematic, logical, well-programmed science. Of all the heresies set forth here, this should strike doctrinaires as the rankest of all!
>
> "The successful manager, in my observation recognizes the futility of trying to push total packages or programs through the organization."[27]

Charles Lindbloom in an article "The Science of Muddl-

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[26]Donald H. Thain, "Corporate Strategy", IMEDE (General Management Course Memorandum No. 12, 1965 and 1966).

[27]H. Edward Wrapp, "Good Managers Don't Make Policy Decisions", Harvard Business Review (September-October, 1967).

ing Through",[28] describes "the rational comprehensive method" of decision making which is similar to long range planning. With this method, the decision maker, for each of his problems, proceeds deliberately, one step at a time, to collect complete data, to analyze the data thoroughly, to study a wide range of alternatives, each with its own risks and consequences, and finally, to formulate a detailed course of action. Lindbloom dismisses "the rational comprehensive method" in favour of the "successive limited comparison". To him, the decision maker compares the alternatives which are open to him in order to learn which most closely meets his objectives. This is not a rational planning process. Instead, he sees the manager as opportunistic and reactive.

Cyert and March's "Behavioral Theory of the Firm" attempts to build a general theory of the economic behaviour of the individual business firm based on case observations. They try to fill the evident gap between the traditional economic theory of the firm and business practice. The central thesis of the authors is: management decision-making is mainly a reactive rather than a proactive process. The coalition of top managers is motivated to satisfice their aspiriation level constraints instead of maximizing anything, especially profits. In this environment, it is unreasonable to suggest that serious long range strategic

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[28]Charles Lindbloom, "The Science of Muddling Through", Business Strategy, edited by H. Igor Ansoff (Middlesex: Penguin Books).

planning would be formulated or used. The authors state:

> "Our studies indicate quite a different strategy on the part of organizations. Organizations avoid uncertainty: (1) They avoid the requirement that they correctly anticipate events in the distant future by using decision rules emphasizing short-run reaction to short-run feedback rather than anticipation of long-run uncertain events. They solve pressing problems rather than develop long-run strategies. (2) They avoid the requirement that they anticipate future reactions of other parts of their environment by arranging a negotiated environment. They impose plans, standard operating procedures, industry tradition, and uncertainty-absorbing contracts on that environment. In short, they achieve a reasonable manageable decision situation by avoiding planning where plans depend on predictions of uncertain future events and by emphasizing planning where the plans can be made self-confirming through some control device."[29]

Most planning skeptics are top managers with primary responsibility for the success or failure of a firm. Some of these view long range planning as an oversold fad, full of meaningless 'buzz words' with great "associational richness". This viewpoint has not been given serious consideration in the literature. The skeptics about long range planning do not necessarily oppose it. Most simply have unresolved doubts about the process. These doubts concern its cost, complexity, removal from reality and inflexibility. A brief discussion of the possible reasons for these doubts follows.

In terms of cost, long range planning often involves the hiring of professional and expensive staff who are not normally needed by the firm. In addition, operating managers

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[29]Richard M. Cyert and James G. March, A Behavioral Theory of the Firm (Englewood Cliffs, N.J.: Prentice-Hall Inc.), 1968.

must devote valuable time, energy, and emotional commitment to the non-productive tasks of, teaching, filling in forms, making projections and writing reports. It is questionable whether these costs can be justified.

Preparation of a comprehensive plan may be too mammoth a task. Every business firm is an almost infinitely complex system. Attempts to reduce this essence to a plan are difficult and involve many oversimplifications and omissions. Sophisticated computer models, forecasting techniques and operating research methods are complex in themselves. Armed with these, it still may not be possible to reflect the real situation. In preparing plans, much is left out and many assumptions are made. Both the product and the process may be so artificial that they are meaningless.

Long range planning may be too far removed from reality to be useful. In addition to the implicit assumptions involved and the use of often poorly informed staff, it is feared managers may use planning as an escapist "cop-out". Serious planning may be done only when an extremely adverse or risky situation confronts the firm. Planning could become management's psychological defense mechanism to displace and to sublimate the anxiety of risky and unfavourable situations. It may be better to face up to a problem and accept the natural risks involved rather than to attempt to analyze it away.

Planning may also be impractical in view of the dynamic environment of firms. Planning often assumes the status

quo. As a result, plans may cause firms to become inflexible and incapable of adapting effectively to an ever-changing environment. Few managers, and even fewer business scholars, openly express these positions. To do so would attack an almost virtuous conventional wisdom. The risk of being labelled "bad" or "incompetent" is not worth the perceived benefits. Instead, this position is discussed informally.

In summary, the literature on long range planning makes an almost overwhelming case for its importance. However, serious considerations of planning should also give reasonable attention to the possible opposing position. Long range planning is controversial. It is highly touted in journals, books, and seminars. At the same time, some business practitioners still have reservations about its value.

These reservations are based on the following possibilities:

1) Formalized long range planning is expensive and may not lead to better economic performance.
2) Long range planning tends to be intensified in face of adversity and thus may be a "cop-out".
3) Practical planning is impossible to perform because of its complexity.
4) Planning makes the firm inflexible and unable to adapt to changing environments.
5) Planning may not be natural.

Long Range Planning as Part of the Total Economic System

The above discussions of the process of planning were from the perspective of the individual firm. Another perspective views planning as part of the total political, economic and social system. The best known commentator on economic society is Professor John Kenneth Galbraith. In his classics, "The Affluent Society"[30] and "The New Industrial State",[31] and his most recently published "Economics and the Public Purpose",[32] Galbraith describes and theorizes a general and comprehensive model of economic society. He discusses the public sector, the private sector, and the public at large. In his discussion of the private sector, which he labels as the Industrial System, he comments on planning conducted by firms. He suggests that planning is the main instrument firms employ to escape from the constraints of the environment and to effect control over their marketplace. In many respects, his observations disagree with the theories described above.

Galbraith's concept of planning does not disagree materially from the definition of strategy formulation or formal long range planning. He defines planning in this manner:

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[30]John K. Galbraith, The Affluent Society (Toronto: The New York American Library of Canada Ltd.), 1967.

[31]John K. Galbraith, The New Industrial State (Toronto: The New American Library of Canada Ltd.), 1967.

[32]John K. Galbraith, Economics and the Public Purpose (Boston: Houghton Mifflin Company), 1973.

> "As viewed by the industrial firm, planning consists in foreseeing the actions required between the initiation of production and its completion and preparing for the accomplishment of these actions. And it consists also of foreseeing and having a design for meeting any unscheduled developments, favorable or otherwise, that may occur along the way."[33]

Galbraith believes planning in today's large corporation is essential. He states:

> "The large commitment of capital and organization well in advance of result requires that there be foresight and also that all feasible steps be taken to ensure that what is foreseen will transpire."[34]

Galbraith advances six specific reasons for the increasing importance of planning. His stated reasons are:

1) "An increasing span of time separates the beginning from the completion of any task ..."

2) "There is an increase in the capital that is committed to production aside from that occasioned by increased output ..."

3) "With increasing technology the commitment of time and money tends to be made ever more inflexibly to the performance of a particular task ..."

4) "Technology requires specialized manpower ..."

5) "The inevitable counterpart of specialization is organization. This is what brings the work of specialists to a coherent result ..."

6) "From the time and capital that must be committed, the inflexibility of this commitment, the needs of large organizations and the problems of market performance and under conditions of advanced technology, comes the

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[33] John K. Galbraith, The New Industrial State (Toronto: The New American Library of Canada Ltd.), 1967, p. 36.

[34] Ibid., p. 16.

> necessity for planning. Tasks must be performed so that they are right not for the present but for that time in the future when, companion and related work having also been done, the whole job is completed ... thus the need for planning.... The need for planning arises from the long period of time that elapses during the production process, the high investment that is involved and the inflexible commitment of that investment to the particular task."[35]

Planning is of such importance to firms in the industrial system that Galbraith contends it is the main variable for distinguishing among them. He suggests that a sharp division exists among the firms in the industrial system on the basis of planning. He divides the industrial system into two categories - the market system and the planning system. He describes this distinction as follows:

> "This distinction which may be thought of as separating the twelve million small firms from the one thousand giants, underlies the broad division of the economy here employed. It distinguishes what is henceforth called the market system from what is called the planning system."[36]

> "The difference between the planning and the market systems does not lie in the desire to escape from the constraints of the market and to effect control over the economic environment. It is in the instruments by which these are accomplished and the success with which they are attended."[37]

Galbraith states that management in the planning system uses planning as one of the major instruments to preserve its autonomy. This planning tends to be comprehensive,

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[35] Ibid., pp. 25-31.

[36] John K. Galbraith, Economics and the Public Purpose (Boston: Houghton Mifflin Co., 1973), p. 44.

[37] Ibid., p. 49.

product planning, price and market strategies, procurement planning, etc. Planning is employed by the firm's technostructure to acquire and maintain power. He observes that firms in the planning system will do more planning, be of a larger size, and grow at slower rates.

Galbraith suggests the distinction between the market system and the planning system is not a simple, dichotomous, 'in or out' situation. Instead, within the planning system, a virtual continuum exists. He states:

> "The firms in the planning system ... - are by no means homogeneous. At one extreme are relatively small corporations where organization is still elementary - ... At the other extreme are General Motors ... As one proceeds from the smaller corporations to the giants, the role of any single individual diminishes, the authority of organization increases. Among the very large corporations of some age - those I shall refer to as the mature corporations - the power of organization is plenary."[38]

If, as Galbraith implies, a continuum exists in the planning system, it should be distinguishable on a number of variables. He suggests a few of these. Galbraith observes: planning increases with firm size, growth declines as planning increases, and growth variability decreases as planning increases.

In his writings he states that long range planning increases with firm size. For example:

> "It is clear, first of all, that industrial planning is in unabashed alliance with size."[39]

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[38] Ibid., p. 83.

> "The most obvious requirement of effective planning is large size. This, we have seen, allows the firm to accept market uncertainty where it cannot be eliminated; to eliminate markets on which otherwise it would be excessively dependent; to control other markets in which it buys and sells; and it is very nearly indispensable for participation in that part of the economy, characterized by exacting technology and comprehensive planning, where the only buyer is the Federal Government. That corporations accomodate well to this need for size has scarcely to be stressed. They can, and have, become very large."[40]

Galbraith also implicitly suggests a relationship between the practice of planning and growth. According to Galbraith, planning is the major technique that firms employ to achieve their ambitions. But, he states, this motivation is not to maximize profits. Instead, Galbraith maintains that management, - he refers to it as the 'technostructure', - is primarily interested in preserving its autonomy from creditors and shareholders. To do this, firms must achieve only a certain minimum level of earnings. No perceived need exists to maximize profits and therefore it is not done. He states:

> "If revenues are above some minimum - they need not be at their maximum for no one will know what that is - creditors cannot intervene and stockholders cannot be aroused."[41]

> "Maximization of income for the technostructure is neither needed nor sought."[42]

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[39] John K. Galbraith, The New Industrial State (Toronto: The New American Library of Canada Ltd.), 1967, p. 42.

[40] Ibid., p. 85.

[41] Ibid., p. 93.

[42] Ibid., p. 148.

> "The mature corporation, as we have seen, is not compelled to maximize its profits and does not do so."[43]

Galbraith further justifies this position by referring to the relationship of firm size to profitability. Other writers[44] and economists suggest that larger firms do not grow as rapidly as do smaller firms. This has been tentatively explained in terms of declining economies of scale or an unavailability of adequate supply of managerial talent relative to size. Galbraith challenges this position. Instead, he maintains that larger firms are better able to maximize profits. They do not, he asserts, because management is not motivated to do so. He explains: managers with the aid of planning reduce risk by trading off profit maximization for security and the opportunity for personal need satisfaction. He expresses this position as follows:

> "Should it be that as the firm becomes larger, it is better able to control its costs, its technology, its prices, the responses of its consumers or the government (were all these a dependent variable associated with size), the scale at which profits are maximized could obviously increase with the increasing size of the firm. To increase size and associated control over costs, technological processes, prices, demand and the state could become, then, one way of maximizing profits. And, as will be presently be seen, profit maximization is not, in any case, the central goal of the technostructure. Above a certain profit threshold the members of the technostructure are better rewarded by growth itself."[45]

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[43] Ibid., p. 171.

[44] See for example, Edith T. Penrose, The Theory of the Growth of the Firm (Oxford: Basil Blackwell & Mott Ltd.), 1959.

From Galbraith's perspective, the individual firm as it increases in size will put increasing emphasis on planning to increase the security of management. In order to maintain security, planning is directed to a number of specific ends. The first of these is to ensure an acceptable level of earnings.

> "With low earnings or losses it becomes vulnerable to outside influence and loses its autonomy. But above a certain level more earnings add little or nothing to its security therein ... This casts light, in turn, on the assumption that the mature corporation will seek to maximize its profits. By the most elementary calculation of self-interest, the technostructure is compelled to put prevention of loss ahead of maximum return. Loss can destroy the technostructure high revenues accrue to others. If as will often happen, the maximization of revenues invites increased risk of loss, then the technostructure, as a matter of elementary interest, should forgo it.
>
> The need for protecting a minimum level of return will have, in turn, an important effect on industrial planning. While it will be desirable to achieve planned results, it will be even more important to avoid unplanned disasters. The first is pleasing; the second can be mortal."[46]

Once this goal has been protected the individual firm can direct itself to other goals. Among these, of course, is growth. Galbraith states:

> "A rate of earnings that allows, over and above investment needs, for progressive rise in the dividend rate will also regularly be a goal of the technostructure. This return must not be achieved by prices which would prejudice growth. Nothing better suggests the primacy of growth as a goal

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[45] John K. Galbraith, Economics and the Public Purpose (Boston: Joughton Mifflin Company, 1973), p. 83.

[46] John K. Galbraith, The New Industrial State (Toronto: The New American Library of Canada Ltd., 1967), p. 179.

> than the vehemence with which this would be dismissed as unsound business practice. The risks taken for such higher return, it is axiomatic, must not jeopardize the basic level of earnings."[47]

Galbraith's position with respect to profit maximization and growth appears almost contradictory. He makes it clear that larger firms with the aid of their planning do not maximize profits. Instead they strive to preserve their managerial autonomy and protect a basic level of earnings. At the same time he contends that growth is a primary goal. But larger profits is a main method of achieving growth. Firms which do not maximize profits will be less able to maximize growth. A reasonable interpretation of this apparent contradiction is that while growth is a major goal of large firms, a trade-off is made with it when profits are not maximized. Large firms will use planning to achieve growth but since they are not primarily interested in maximizing profits they will tend to grow slower than firms which are maximizing profitability. Those firms which do not plan may be expected to grow at faster rates than firms which do plan. Also firms which do plan will be expected to show greater growth in sales and total resources than they will in profit growth.

In summary, Galbraith's views on planning, based on his observation of the industrial system, differ with those who discuss planning from the viewpoint of the individual firm. Galbraith suggests the following relationships to planning

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[47] Ibid., p. 186.

in the industrial system:

1) Planning increases with firm size;
2) Firms that plan more will grow slower than firms that plan less; and
3) The growth of firms that plan more will be less variable than that experienced by firms that plan less.

These suggested relationships are similar to the investigations made in this research study.

Summary

This chapter presented a review of the literature on long range planning. Particular emphasis was put on the conceptual framework underlying the theory of long range planning, the differing viewpoints on planning, and associations between planning and corporate variables. The corporate variables given major consideration were firm size and firm growth. The review indicated little published research concerning associations with long range planning. The chapter discussed: the pro-long range planning viewpoint, the prescriptive writings on long range planning, empirical testing, reservations about planning, and long range planning as part of the total economic system.

Chapter 3

RESEARCH METHODOLOGY
LONG RANGE PLANNING PROCESS, FIRM SIZE AND FIRM GROWTH EXPECTANCIES

This research study investigated the relationship between each of management's expectations of future firm growth, and firm size to the process of long range planning. The research objective was to determine if the process of long range planning generally differed by firm size and by management's expectations of future firm growth. It was believed that awareness of the nature of such differences, if they existed, would provide a basis for improving the practice of long range planning. Research data was obtained through a personal interview with a top manager in each of forty firms. The sample firms were chosen from a cross section of slow growth and high growth industries. From each firm, information was obtained on common sub-process inputs to the planning process, firm size, and firm growth expectancies. The findings of the research would be of interest both to business practitioners and those who study the theory of planning.

This chapter presents the research methodology of the study. An overview of the research design is described first, followed by discussions of: the interview guideline, industry and company selection, the personal interviews, methods of categorizing the planning process elements, distribution of data, and analytical procedures.

An Overview of the Research Design

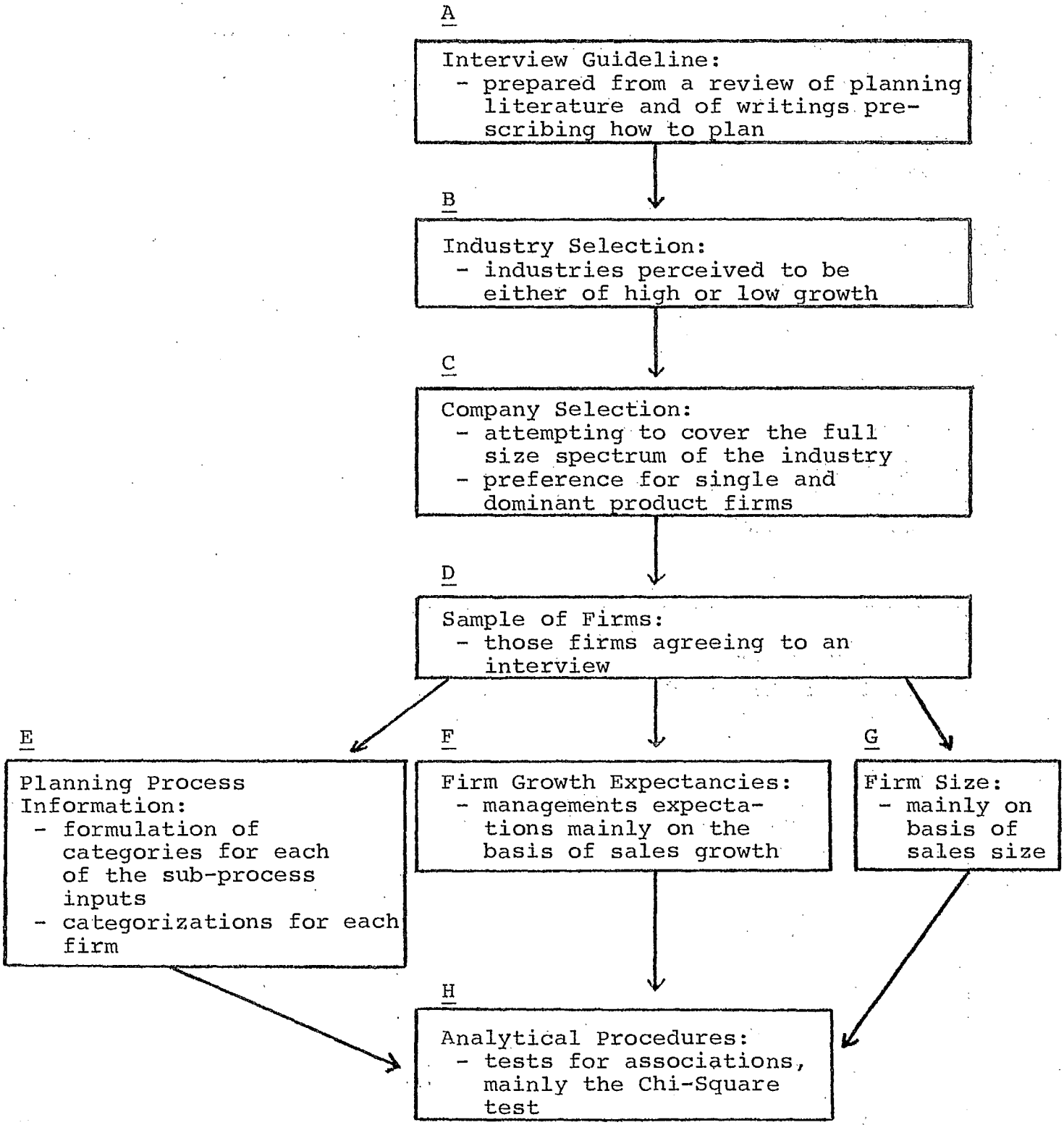
The research design consisted of eight steps. An outline of the research methodology is shown in Chart III-1 which follows. The first step in the study was the preparation of an interview guideline based upon a review of the planning literature, (A). High and low growth industries were then chosen, (B). From these lists companies were selected and approached, (C). A sample of forty interviewed firms was obtained, (D). From these interviews information was obtained on each sample firm's; size, growth expectancies, and long range planning process, (F) and (G). Categories were then formulated for each of the long range planning process elements, (E). Comparisons were made among: management's expectancies of firm growth (F), the planning process elements, (E), and firm size, (G). Statistical procedures were applied these comparisons to determine if associations existed, (H). Each of these steps and its obstacles are discussed in this chapter.

The Interview Guideline

An interview guideline was designed and used as a reference on each of the personal interviews. This guideline was prepared prior to the formal interviews. After the experience of the first few interviews it was modified slightly. The guideline provided a measure of consistency among the interviews and between the two interviewers. A copy of the interview guideline is attached as Appendix V.

CHART III-1

An Overview of the Research Methodology



The guideline was divided into sections. The major sections were: industry and company background, internal data and control processes, forecasting, formal planning systems, and supplementary information. In each of these sections inquiries were made of general information pertaining to growth and planning and of specific information concerning sub-process inputs to the planning system of the firms.

In the industry and company section attention was directed to management's expectations of future firm growth. This was approached from different perspectives. For each firm the average percentage growth rate over the past five years and the anticipated future growth rate for each of industry and company sales were obtained. Management's attitudes towards both industry and company performance and future growth expectancies were also obtained. These were scored on a three point scale. The interviewee was also asked to indicate his industry's growth stage. Industry growth stage was defined relative to gross national product growth rates.

The internal data and control section was primarily interested in the processes employed by the firm for maintaining and controlling day to day operations. Traditional management information systems used for these purposes were discussed and assessed. These included the firm's operating statements, and its annual profit plan or budget.

The forecasting section, considered the methods used to assess future company and industry growth and management operations. Inquiries were made of traditional management information systems used for these purposes and for any unique to the firm. Specific discussion was directed to: the one year market and sales forecast, the greater than one year market and sales forecast, the financial forecast, the production facilities forecast, the personnel forecast, and the non-accounting staff employed by the firm.

The formal planning systems section was primarily interested in the formal long range plan prepared by the firm. Consideration was given to its existence, format, process of preparation and whether it contained quantifiable objectives. Strategy with conditional alternatives was also taken into consideration.

The supplementary section probed other areas to provide clarification of the above systems and to discovery events and variables which may have significantly altered the planning systems in the past few years. These included: the strength and weaknesses of the firm and its competitors, the ownership of the company, the autonomy allowed and received, the environmental monitoring process -- both formal and informal, the research orientation of the firm, the diversification attitude of the firm, and the major decisions which the firm anticipated it would have to take in the next few years. Usually these discussions increased our understanding of the firm's planning processes.

Industry and Company Selection

The selection of sample firms attempted to obtain a wide cross section of firm growth expectancies. This was done by concentrating on industries perceived to be of either high or low growth. It was believed that with a wide distribution of growth expectancies the possible planning processes differences associated with firm growth expectancies would be uncovered, if they existed.

Selection of sample firms also considered firm structure. To capture a fairly comprehensive profile of the planning processes in sample firms within the expected allotted time of an interview, an attempt was made to select industries with less complicated firm structures. Simpler firm structures are found in single or dominant product firms. Products were broadly defined in terms of the traditional relationships the firm has with its technology and customers. Firms with a high proportion of related and unrelated products tend to have very complicated organization structures and managerial practices.[1] These firms could be expected to have more complicated long range planning processes. Industries were consequently chosen where the firms tend to be predominately single or dominate

[1]For further explanation of these management principles see for example, Chandler, A.D., Strategy and Structure, M.I.T. Press 1962, and Wrigley, L., Divisional Autonomy and Diversification, unpublished DBA dissertation, Harvard Business School, 1970.

product.

In Canada there were a number of industries composed mainly of single product firms. A number of these industries also projected either slow or high growth. Within each of these industries an attempt was made to contact all of the major firms. The industries chosen were; wine, sports equipment, carpets, yachts, packaging, meat packing, business machines, beer and distillers. The number of sample firms in each of these industries is shown in the distribution of data section which follows in this chapter. The specific sample companies are shown in Appendix VI.

The Personal Interviews

The personal interview approach was chosen to obtain the required planning process information over the more common mail survey questionnaire approach. While a survey mail questionnaire approach offerred cost savings, it appeared to be particularly inappropriate in the circumstances. The prospects of a high non-response rate and the fear that returned questionnaires would have been completed by inadequately informed subordinates ruled out this approach.

The need to obtain planning information from the perspective of the chief executive officer confirmed the desirability of personal interviews. An assessment of each firm's actual planning process could only be obtained by interviewing top managers. Interviews with corporate staff planners were likely to result in theoretical descriptions of the firm's planning systems. The two research interviewers

were well received. Our experience with the interviews was that reasonable insights were given about each firm's planning process. A list of the companies interviewed and the interviewee's name and title is attached as Appendix VI. Many top managers stated during the interviews they could not have given the requested information by mail.

Our approach to the interviews was as follows. The Secretary of each company was contacted by telephone. He was asked to arrange an interview with the President or if necessary an alternate actively involved in the major resource allocation decision-making process of the firm. A request was made for approximately one and one-half hours of time. A follow-up letter confirming and explaining our needs was mailed. The interviews were the maximum time that could be reasonably obtained. It proved adequate to break down the natural communication barriers and discuss the planning process. To ensure frankness a promise of confidentially with respect to details within each firm was made.

Increased openness was achieved by playing down requests for confidential financial information and concentrated on the planning process. Many of the firms were private companies and aggressive requests for unpublished financial information were bound to limit the responses to the planning probes. Requests for financial data concentrated on sales growth and performance attitudes.

Methods of Categorizing the Planning Process Elements

Investigation of associations between management's expectations of future growth and planning required a method for categorizing each of the planning sub-processes. Review of the planning literature did not uncover any such method. Categories were therefore developed for this study. The categories were devised after the interviewing had been completed and prior to any analysis. They were not influenced by the subsequent analysis. The specific planning elements chosen for categorization were management information inputs most commonly used by the interviewed firms. The planning elements that were categorized are:

- the nature of the operating statements employed,
- the nature of the annual profit plan,
- the type of staff specialists employed,
- the nature of the one year market and sales forecast,
- the nature of the greater than one year, market and sales forecast,
- the nature of the financial forecast,
- the nature of the production forecast,
- the nature of the personnel forecast, and
- the nature of the formal long range plan.

These elements may not present a fully comprehensive profile of the planning process within each firm. They are, however, indicative of the actual formal strategic planning process in the firms. Because of the explorative nature of the study, we have not attempted to justify the particular

elements chosen and the categories developed for them. This task has been left for future research work on planning.

For each of the planning elements, categories varying from two to five were developed. The number of categories for each element was determined by the nature of the element and the operational ability to discriminate between the varying levels of sophistication observed. For each of the chosen planning elements the categorization scheme was based on particular criteria. A brief description of the criteria used in each planning element follows. More complete descriptions are shown in Appendices VII.

The categories for the planning element operating statements were based primarily upon the nature of the breakdowns in the statements and the time scope employed. Secondary consideration was given to the length of time it took to obtain the statements, by whom they were prepared, their accuracy and their intended purpose. A description of these categories appears in Appendix VII-1.

The categories for the planning element annual profit plan were based primarily on the nature and source of the information used in their preparation. Secondary consideration was given to the breakdowns employed, the time scope involved and the reasons for preparing them. A description of these categories appears as Appendix VII-2.

Four categories of staff specialists available inside the firm were created. The four categories were operating staff, environment monitoring staff, forecasting specialists,

and planning specialists. Operational staff was defined as specialists whose purpose was to help line managers with day to day operational problems. An exclusion was made of accounting staff. Environment monitors were defined as specialists whose purpose was to scan the firm's environment for potential specific and general opportunities and problems. Forecasting specialists were defined as staff people whose task was to project the future nature of variables affecting the firm. Some examples were market forecasters, economists, etc. Planning specialists were defined as staff whose task was to aid and/or prepare long range plans.

The categories for both the market and sales forecasts for one year and the market and sales forecasts for greater than one year were based primarily on the nature of the information inputs. Secondary consideration was given to their detail and time scope. Description of these categories appears as Appendix VII-3 and VII-4.

The categories for each of the financial, production, and personnel forecasts were based primarily on the nature of the forecast, the information inputs and the reasons for its preparation. Descriptions of these categories appear as Appendix VII-5, VII-6, and VII-7. The categories developed for the formal long range plan itself were based primarily on the comprehensiveness of the plan's content. A description of these categories appears as Appendix VII-8.

Distribution of Data

Due to the limited sample size, it was necessary to merge some of the above categories during the analysis. This contraction resulted in some loss of information in favour of statistical meaningfulness. The remaining smaller number of categories, however, still permitted discrimination among the firms. A summary of the distribution of the 40 sample firms among these contracted categories follows.

Distribution of Sample Companies

	No. of Companies	% of Sample
Wine Processors	4	10.0
Sports Equipment Manufacturing	5	12.5
Carpet Manufacturing	4	10.0
Yacht Manufacturing	4	10.0
Packaging Companies	4	10.0
Meat Packers	4	10.0
Business Machine Companies	10	25.0
Beer Processors	2	5.0
Distillers	3	7.5
	40	100.0%

Distribution of Companies By Sales Size

	No. of Companies	% of Sample
Under $15 million	14	35.0%
Over $15 million and under $71 million	12	30.0%
Over $71 million	14	35.0%
	40	100.0%

Distribution of Companies By Asset Size

	No. of Companies	% of Sample
Under $20 million	10	50.0%
Over $20 million	10	50.0%
	20	100.0%

Distribution of Companies By Employee Size

	No. of Companies	% of Companies
Under 1000	14	60.9%
Over 1000	9	39.1%
	23	100.0%

Distribution of Past Industry Sales Growth

	No. of Companies	% of Companies
Under 13%	15	53.6%
Over 13%	13	46.4%
	26	100.0%

Distribution of Expected Future Industry Sales Growth

	No. of Companies	% of Companies
Under 13%	17	54.8%
Over 13%	14	45.2%
	31	100.0%

Distribution of Growth Stage

	No. of Companies	% of Companies
Slow to Mature	13	33.3%
High	26	66.7%
	39	100.0%

Distribution By Attitudes to Future Industry Prospects

	No. of Companies	% of Companies
Problems to Fair	8	24.2%
Good	12	36.4%
Excellent	13	39.4%
	33	100.0%

Distribution By Attitudes to Past Performance

	No. of Companies	% of Companies
Problems to Fair	8	21.1%
Good	17	44.7%
Excellent	13	34.2%
	38	100.0%

Distribution By Attitudes to Future Performance

	No. of Companies	% of Companies
Problems to Fair	5	13.9%
Good	16	44.4%
Excellent	15	41.7%
	36	100.0%

Distribution By Past Company Sales Growth

	No. of Companies	% of Companies
Under 11%	14	36.8%
Over 11% and under 18%	12	31.6%
Over 18%	12	31.6%
	38	100.0%

Distribution By Expected Future Company Sales Growth

	No. of Companies	% of Companies
Under 11%	15	38.4%
Over 11% and under 20%	12	30.8%
Over 20%	12	30.8%
	39	100.0%

Distribution of Operating Statement

	No. of Companies	% of Companies
Minimal	12	15%
Moderate	10	25%
Comprehensive	18	60%
	40	100%

Distribution of Annual Profit Plan

	No. of Companies	% of Companies
Minimal	15	37.5%
Moderate	9	22.5%
Comprehensive	16	40.0%
	40	100.0%

Distribution of Market and Sales Forecasts Greater Than One-Year

	No. of Companies	% of Companies
Minimal	15	37.5%
Moderate	14	35.0%
Sophisticated	11	27.5%
	40	100.0%

Distribution of Market and Sales Forecasts Greater Than One-Year

	No. of Companies	% of Companies
Minimal	20	50.0%
Moderate	10	25.0%
Sophisticated	10	25.0%
	40	100.0%

Distribution of Forecast Categories

	No. of Companies	% of Companies
Financial Minimal	11	27.5%
Moderate	12	30.0%
Sophisticated	17	42.5%
	40	100.0%
Production Facilities		
Minimal	19	47.5%
Moderate	12	30.0%
Sophisticated	9	22.5%
	40	100.0%
Personnel Requirements		
Minimal	23	57.5%
Moderate	7	17.5%
Comprehensive	10	25.0%
	40	100.0%

Distribution of Formal Long Range Plans

	No. of Companies	% of Companies
None	20	50.0%
Low	9	22.5%
Medium to High	11	27.5%
	40	100.0%

Analytical Procedures

To determine if there were associations between each of firm size and management's expectations of future growth to the planning process common statistical techniques were employed. In the analysis the Chi-Square test was applied to the categories of firm size, of firm growth, and of the planning process elements. This test is an appropriate statistical technique for testing whether significant differences exist between observed categorial responses and what would be expected if no differences existed among the categories. There is a convention in application of this statistical test. This convention states the test should not be used when more than 20% of the expected frequences in any cell are less than five (Cochran, 1954). Because of the small sample size this convention was occasionally violated marginally in the analysis. This violation when it occurred had only minimal effect and did not affect the general thrust of the analysis and its conclusions. Simple ratios and proportions were also used in the analysis.

Summary

This chapter has described the nature of the research methodology of a study based on personal interviews investigating associations between each of firm size and firm growth expectancies to the practice of long range planning. The chapter presented: an overview of the research design, the interview guideline, industry and company selection, the personal interviews, methods of categorizing the planning process elements, distribution of data, and analytical procedures.

Chapter 4

ANALYSIS OF FINDINGS
LONG RANGE PLANNING PROCESS:
FIRM SIZE AND EXPECTATIONS OF FUTURE FIRM GROWTH

This chapter summarizes the analysis and findings of the research described in the previous chapter. Relationships between the long range planning process and each of firm size and firm growth expectancies were assessed. The data used in this study was obtained by interviewing top managers in a sample of 40 firms. Analysis of this data indicated the following tentative findings:

- a positive association existed between long range planning, both in terms of the number of planning sub-processes and their comprehensiveness, and firm size.
- a negative association existed between long range planning, both in terms of the number of planning sub-processes and their comprehensiveness, and expectations of future firm growth.
- the long range planning process appeared to be an evolutionary process whose development was closely linked to the firm cycle in terms of size and growth.
- in the differing firm cycles of size and growth particular planning processes received more managerial emphasis.

The discussion follows under the headings of: comparison of firm size with the planning sub-processes; firm size and emphasis on the individual planning sub-processes; comparison of management's expectations of future firm growth with the planning sub-processes; firm growth and emphasis on the individual planning sub-processes; comparison of firm growth expectancies with firm size; the interaction

of growth expectancies, firm size and the long range planning process; and the summary of findings. The chapter concludes with a discussion of the findings.

Comparison of Firm Size with the Planning Sub-processes

This section presents, in detail, the comparison of firm sales size to each of the eight planning sub-processes and to the formal long range plan. Firm size was also measured on the basis of asset size and employees size. But since information on these two latter size measurements was obtained for only a portion of the sample, the analysis with these variables was not as statistically reliable. These analyses did support, however, the results obtained in the comparisons with sales size. For these reasons, the comparisons with each of asset size and employees size are not presented in this report. Whenever these particular comparisons did not support the sales size comparison with the planning sub-process, notation of the exception is made. The eight planning sub-processes and the formal long range plan are described in Chapter 3 and Appendix VII of this report.

A summary of these nine comparisons is presented in this chapter at the beginning of the section immediately following this section. The reader who is not interested in the detailed comparisons may prefer to proceed directly to that section.

Comparison of sales size with the type of operating statements employed by the firms follows:

Operating Statements	Firm Sales Size		
	Small N=14	Medium N=12	Large N=14
Minimal	57%	25%	7%
Moderate	36	33	7
Comprehensive	7	42	86

Chi-Square statistical significance .00.

There was a strong positive association between firm sale size and the comprehensiveness of the operating statements. Larger firms had more comprehensive operating statements. 86% of the large firms had comprehensive operating statements compared to 42% and 7% for the medium and small size firms. Only 14% of large firms had minimal or moderate operating statements compared to 58% and 93% for the medium and small size firms. This finding indicated:

- As firms increase in size the sophistication of the operating statements increased.

Comparison of sales size with the annual profit plan showed:

Annual Profit Plan	Firm Sales Size		
	Small N=14	Medium N=12	Large N=14
Minimal	71%	25%	14%
Moderate	29	25	14
Comprehensive	0	50	72

The above table indicated a strong association between firm size and the comprehensiveness of the annual profit plans. 71% of the small firms had annual profit plans in the minimal category. In the medium size category, 50% of the firms had comprehensive annual profit plans. In the large size firms the proportion of comprehensive annual profit plans increased to 72%. These results indicated:

- As firms increase in size the sophistication of the annual profit plans increased.

Comparison of firm sales size with whether or not specific types of staff specialists existed within the firm was as follows:

Existence of Staff Specialists by Type of Staff	Firm Sales Size		
	Small N=14	Medium N=12	Large N=14
Operating	7%	33%	71%
Environment	7	0	43
Prognosis	7	8	36
Planning	0	8	57

Large firms had more staff specialists in each of the four staff categories than did medium and small size firms. In each of the four staff categories a significant proportion of the large firms indicated the existence of these staff in their organization. The medium size firms had a significant proportion of staff only in the operating staff category. Small firms seldom had any staff specialists. These findings indicated:

- As firms increase in size the incidence of operating staff specialists increased.

- Large size firms had more "other" types of staff specialists than medium and small size firms.

Comparison of sales size with the market and sales forecasts for one year showed:

One Year Market and Sales Forecasts	Firm Sales Size		
	Small N=14	Medium N=12	Large N=14
Minimal	71%	33%	7%
Moderate	22	42	43
Sophisticated	7	25	50

Chi-Square statistical significance .00.

A strong positive association between firm size and the degree of sophistication in the one year market and sales forecasts was demonstrated. Large size firms placed 50% in the sophisticated category, compared to 25% and 7% for the medium and small size firms. Medium size firms had higher proportions in both the sophisticated and moderate categories than did small size firms. This finding indicated:

- As firms increase in size, the sophistication of the one year market and sales forecasts increased.

Comparison of sales size with the market and sales forecasts for greater than one year resulted in the following:

Greater Than One Year Market and Sales Forecasts	Firm Sales Size Small N=14	Medium N=12	Large N=14
Minimal	79%	42%	29%
Moderate	14	33	29
Sophisticated	7	25	42

Chi-Square statistical significance .08.

A strong positive association existed between firm size and the sophistication in the 'greater than one year' market and sales forecast. 71% of the large size firms had sophisticated and moderate forecasting procedures as compared to 58% and 21% for the medium and small size firms. This finding indicated:

- As firms increase in size the sophistication of the 'greater than one year' market and sales forecasts increased.

Comparison of sales size with the financial forecasts yielded the following:

Financial Forecasts	Firm Sales Size Small N=14	Medium N=12	Large N=14
Minimal	50%	17%	14%
Moderate	36	33	22
Sophisticated	14	50	64

Chi-Square statistical significance .06.

A strong positive association existed between firm size and the sophistication in the financial forecasts. Small size firms had 50% in the minimal category, compared to 17% for medium size firms, and 14% for large size firms. Medium

size firms had 50% in the sophisticated category, compared to 64% for large firms, and only 14% for small firms. This finding indicated:

- As firms increase in size the sophistication of the financial forecast increased.

Comparison of sales size with the production facilities requirements forecast the distribution appeared as follows:

Production Facilities Forecasts	Firm Sales Size		
	Small N=14	Medium N=12	Large N=14
Minimal	64%	42%	36%
Moderate	22	33	36
Sophisticated	14	25	28

Chi-Square statistical test - not significant.

These findings showed small firms were less likely to have more sophisticated production facilities forecasts than medium and large size firms. 14% of the small sales firms had sophisticated production facilities forecasts, compared to 25% for the medium size, and 28% for the large size firms. There was little difference, however, in the proportions shown for the medium size and large size firms; although the large firms had marginally higher proportions in the moderate and sophisticated categories. Differences cannot be inferred from these findings between the medium and large size firms. This finding indicated:

- There may be no relationship between sales size and the level of development of the production facilities forecasts.

Comparison of the sales size with the personnel forecasts produced the following results:

Personnel Forecasts	Firm Sales Size		
	Small N=14	Medium N=12	Large N=14
Minimal	64%	58%	50%
Moderate	14	42	0
Sophisticated	22	0	50

Chi-Square statistical significance .08.

The practice of preparing personnel requirement forecasts was not widespread. It appears that the propensity to prepare tends to increase with firm size. 64% of the small firms did not prepare or prepared a bare minimum forecast, compared to 58% for the medium size firms and 50% for the large size firms. 36% of the small firms prepared moderate or sophisticated forecasts, compared to 42% for the medium size firms. 50% of the large firms prepared sophisticated forecasts. Large firms split evenly between the two extremes of either barely preparing a forecast or preparing a relatively sophisticated forecast. None of them prepared a moderately sophisticated forecast. These findings would appear to indicate:

- Large size firms had more sophisticated personnel forecasts than small size firms.

Comparison of sales size with the existence of formal long range plans derived the following:

Formal Long Range Plans	Firm Sales Size		
	Small N=14	Medium N=12	Large N=14
No Formal Plan	86%	33%	28%
A Partial Plan	7	42	22
A Complete Plan	7	25	50

Chi-Square statistical significance .01.

There was a strong positive association between firm size and the existence of and comprehensiveness of the formal long range plan. Large sales size firms tended to have more highly developed formal long range plans than smaller sales size firms. 86% of the small firms had no formal long range plan. Whereas for medium size firms, 42% had partial formal long range plans; and for large size firms, 50% had complete formal long range plans. These findings indicate that:

- As firms increase in size the formality of their long range plan increased.

The two other variables used as support variables for the measurement of firm size; asset and employees size, produced similar comparisons. Information was obtained on asset size for only 20 of the 40 sample firms and on employees size for only 23 of the 40 sample firms. Examination of the comparisons of these two size variables with each of the nine planning variables showed the same general patterns and directions. For clarity of presentation these comparisons are not shown in this report.

In summary, there existed a strong positive association between firm size and the formal long range planning process. Comparing each of the chosen eight planning sub-processes and the formal long range plan with firm sales size indicated the existence of this relationship. Larger firms had more highly developed planning sub-processes and a more formal long range plan than smaller firms. On this basis, it appears larger firms practiced more formal long range planning than smaller firms.

Firm Size and Emphasis on the Individual Planning Sub-processes

This section presents the analysis investigating how the planning sub-processes and the formal long range plans have differing emphasis in the three firm size categories. The following table summarizes the comparisons presented in the previous section.

In the above table different planning sub-processes were emphasized in the three different firm size categories. Clear distributions were evident between small and medium size firms, whereas only minimal differences existed between the medium and large size firms. To isolate these differences, attention was directed to the comprehensive and moderate categories for each of the eight planning process elements. For discussion purposes arbitrary cut-off limits were set. If greater than 50% of the firms in a particular size category were in the comprehensive category of a planning process element, then that size category was considered to put High priority on that planning sub-process.

SUMMARY OF THE COMPARISONS OF FIRM SIZE
TO THE PLANNING PROCESS ELEMENTS

Planning Process Elements	Firm Sales Size Small-%s	Medium-%s	Large-%s
Operating Statements:			
- Minimal	57	25	7
- Moderate	36	33	7
- Comprehensive	7	42	86
Annual Profit Plan:			
- Minimal	71	25	14
- Moderate	29	25	14
- Comprehensive	0	50	72
One Year Market and Sales Forecast:			
- Minimal	71	33	7
- Moderate	22	42	43
- Sophisticated	7	25	50
Greater Than One Year Market and Sales Forecast:			
- Minimal	79	42	29
- Moderate	14	33	29
- Sophisticated	7	25	42
Financial Forecast:			
- Minimal	50	17	14
- Moderate	36	33	22
- Sophisticated	14	50	64
Production Forecast:			
- Minimal	64	42	36
- Moderate	22	33	36
- Sophisticated	14	25	28
Personnel Forecast:			
- Minimal	64	58	50
- Moderate	14	42	0
- Sophisticated	22	0	50
Formal Long Range Plans:			
- No Formal Plan	86	33	28
- A Partial Plan	7	42	22
- A Complete Plan	7	25	50

If the percentage was between 25% and 50% then the size category was considered to put Medium Priority on the process. If the percentage for the moderate category was greater than 25% then the particular size category was considered to put Some Priority on the process.

In the large firm size category High Priority emphasis was put on:

operating statements,
annual profit plan, and
financial forecasts.

Medium Priority emphasis was put on:

one year market and sales forecasts,
greater than one year market and sales forecasts,
production forecasts,
personnel forecasts, and
formal long range plans.

All of the eight planning process elements received either High or Medium Priority emphasis in the large size firms.

The medium size firm showed somewhat different results. None of the planning process elements received High Priority emphasis. Medium Priority emphasis was put on:

operating statements,
annual profit plan, and
financial forecasts.

Some Priority was put on:

one year market and sales forecasts,
greater than one year market and sales forecasts,
production forecasts,
personnel forecasts, and
formal long range plans.

While the degree of emphasis differed from that of the large size firms the pattern was similar. In each size category, most emphasis was placed on the operating statements, the annual profit plans and the financial forecasts.

In the small firm size category none of the planning process elements received High or Medium Priority emphasis. Some Priority emphasis, however, existed on the three of the eight planning process elements. These were:

operating statements,
annual profit plan, and
financial forecasts.

Again, the pattern seemed similar to that found in the medium and large size categories. This pattern indicated that planning builds in an evolutionary manner. Attention appears to be directed to the operating statements, annual profit plans and financial forecasts. Subsequent to developing some competence with these, emphasis appears to follow on the other planning process elements.

In an attempt to investigate how this emphasis developed, the following analysis was conducted. This analysis attempted to assess whether logical changes in both the degree of sophistication and input emphasis existed as firms grew from small to medium to large size. Of course, this involved assumptions that a longitudinal growth process occurred, and that it was acceptable to attempt a comparison with data that measured different firms of different sizes and not the same firms whose size and planning processes were measured over time. Nevertheless the analysis did produce reasonable results.

In this analysis, the moderate and the comprehensive categories of each of the eight planning process elements were considered. Ratios, for each of the planning process

elements were computed. These ratios were the proportions, in each of these two categories, for the medium size firms over the small size firms. Similar computations were made for the large over the medium size firms. In a fashion, this simulated the growth from small to medium size and from medium to large size. The results were as follows:

PLANNING PROCESS ELEMENTS,
RATIOS OF THE PROPORTIONS IN THE MODERATE
AND COMPREHENSIVE CATEGORIES,
MEDIUM OVER SMALL SIZE FIRMS

	Medium Over Small Size	
Planning Process Elements	Moderate	Comprehensive
Operating Statements	.92	6.00
Annual Profit Plans	.86	Large
One Year Market and Sales Forecasts	1.91	3.60
Greater Than One Year Market and Sales Forecasts	2.36	3.60
Financial Forecasts	.92	3.57
Production Forecasts	1.50	1.79
Personnel Forecasts	3.00	Small
Formal Long Range Plans	6.00	3.57

The ratios of the medium over small size firms indicated the proportions in the comprehensive and moderate categories, for each of the planning process elements, increased dramatically in the transition from small to medium size firms. For the comprehensive category the largest ratios were in the operating statements and the annual profit plan. This was interpreted to mean as small size firms grew to medium size, substantial emphasis was placed on improving these planning elements.

It would also appear that the transition from small to medium size involves the institution of comprehensive formal long range planning. This interpretation is based on the ratios shown on the 'formal long range plans' and the other planning process elements. In the moderate and comprehensive categories for formal long range plans the ratios were 6 and 3.57 respectively. This indicated substantial first efforts to initiate and produce a formal long range plan. The ratios of 3.6 in the comprehensive category for each of: the one year market and sales forecast, the greater than one year market and sales forecast, and the financial forecasts; were consistent with the initial preparation of a comprehensive formal long range plan. All of these sub-process inputs are necessary for a formal long range plan. All of them existed to minimal degree in the small size firms. It would appear that emphasis substantially increased on them in order to facilitate preparation of a formal long range plan.

In the transition from medium to large size, all of the planning process elements increased in sophistication. In the following table under the columns 'Large over Medium Size', each of the ratios for the planning process elements, under the comprehensive category, were greater than 1.

PLANNING PROCESS ELEMENTS,
RATIOS OF THE PROPORTIONS IN THE MODERATE
AND COMPREHENSIVE CATEGORIES,
LARGE OVER MEDIUM SIZE FIRMS

Planning Process Elements	Large Over Medium Size	
	Moderate	Comprehensive
Operating Statements	.21	2.05
Annual Profit Plans	.56	1.44
One Year Market and Sales Forecasts	1.02	2.00
Greater Than One Year Market and Sales Forecasts	.88	1.68
Financial Forecasts	.67	1.28
Production Forecasts	1.09	1.16
Personnel Forecasts	Small	Large
Formal Long Range Plans	.52	2.00

All of the planning process elements received emphasis, but, none increased substantially. The transition from medium to large size was not as dramatic in terms of planning as the small to medium size transition. The ratios show all the planning process elements receiving increased emphasis. Addition of moderate and comprehensive category ratios indicates that more emphasis falls on the two market and sales forecasts planning elements and the formal long range plan.

Comparison of Management's Expectations of Future Firm Growth with the Planning Sub-processes

This section presents, in detail, the comparisons of expectations of future firm growth to each of the planning sub-processes and to the formal long range plan. The format and the analytical procedures are similar to those presented in a previous section of this chapter concerning firm size and the planning sub-processes. Growth was measured in a

number of ways. These included: past industry sales growth; future industry sales growth; industry growth stage; management's attitude to future industry prospects; management's attitude to past company performance; management's attitude to future company prospects; past company sales growth; and estimated future company sales growth. Management's expectations of future company sales growth was considered the major measure. Its analysis is presented in detail with this section. A brief discussion of the results obtained in the analysis using these other growth measures follows the detailed comparisons. A summary of these comparisons is presented at the beginning of the section of this chapter immediately following this section. Readers who may not be interested in the details of the individual comparison may prefer to proceed directly to that section.

Comparison of management's expectations of future company sales growth with the type of operating statements follows:

Operating Statements	Growth Expectancies - Sales		
	Low N=15	Medium N=12	High N=12
Minimal	13%	25%	58%
Moderate	20	50	8
Comprehensive	67	25	34

Chi-Square statistical significance .02.

There was a strong negative association between sales growth expectancies and the comprehensiveness of the operating

statements. As the growth expectations rose, the comprehensiveness of the operating statements declined. For example, 67% of the companies with low growth expectancies, versus 25% of the medium and 34% of the high growth expectancy companies, had comprehensive operating statements. 50% of the medium growth expectancy companies had moderately comprehensive operating statements. 58% of the high growth expectancy had minimal operating statements. This finding indicated:

- As firm growth expectancies decline the sophistication of their operating statements increased.

Comparison of management's expectations future company sales growth with the annual profit plan yielded the following results.

Annual Profit Plan	Growth Expectancies - Sales		
	Low N=15	Medium N=12	High N=12
Minimal	20%	33%	67%
Moderate	27	25	16
Comprehensive	53	42	17

In this table 53% of the low growth firms had comprehensive annual profit plans. This compared to 42% and 17% for the medium and high growth companies. 67% of the high growth had minimal operating, compared to 33% and 20% for the medium and low growth firms. The differences between the high growth firms and each of the medium and low growth categories were pronounced. There was a less pronounced but similar difference between the medium and low growth cate-

gories. These results indicated:

- As firm growth expectancies decline, the sophistication of the annual profit plan increased.

Comparison of management's expectations of future company sales growth with whether specific types of staff specialists existed within the firm was as follows:

Existence of Staff Personnel by Type of Staff	Growth Expectancies - Sales		
	Low N=15	Medium N=12	High N=12
Operating	53%	50%	67%
Environment	40	0	8
Prognosis	47	0	0
Planning	33	15	8

With the exception of operating staff personnel, low growth expectancy firms had more staff specialists available than moderate or high growth expectancy firms. Operating staff specialists were found to exist in one-half to two-thirds of all of; low, medium, and high growth firms. In each of the categories of environment staff, prognosis staff and planning staff, these staff specialists existed to the extent of approximately 40% in the low growth firms. In the medium and high growth expectancy firms these three types of staff specialists were almost non-existent. These findings indicated:

- Firms with high or medium growth expectancies had less environment monitoring, forecasting, and planning staff specialists than firms with low growth expectancies.
- The existence of operating staff did not vary with firm growth expectancies.

The results of a comparison of management's expectations of future company sales growth with the one year market and sales forecasts were as follows:

One Year Market and Sales Forecast	Growth Expectancies - Sales Low N=15	Medium N=12	High N=12
Minimal	20%	42%	59%
Moderate	27	42	33
Sophisticated	53	16	8

Chi-Square statistical significance .07.

The sophistication of the one year market and sales forecast was negatively associated with the growth expectancies of the firms. 53% of the low growth firms had comprehensive one year market and sales forecast, whereas only less than 20% of the medium and the high growth firms were comprehensive. The high growth firms had 59% in the minimal category compared to declining proportions for the medium and low growth firms. The high growth firms had lower proportions in each of the sophisticated and moderate categories than do the medium growth firms. These findings indicated that:

- As firm growth expectancies decline, the sophistication of the one year market and sales forecast increased.

Comparison of management's expectations of future company sales growth with greater than one year market and sales forecasts produced the following:

Greater Than One Year Market and Sales Forecast	Growth Expectancies - Sales		
	Low N=15	Medium N=12	High N=12
Minimal	40%	42%	75%
Moderate	13	50	8
Sophisticated	47	8	17

Chi-Square statistical significance .02.

A negative association existed between the sophistication of the greater than one year market and sales forecast and the growth expectancies of the firm. Higher growth expectancy firms tended to have less sophisticated, greater than one year, market and sales forecasts than lower growth expectancy firms. 75% of the high growth firms had minimal greater than one year forecasts compared to approximately only 40% in each of the medium and low growth firm categories. Large differences between the medium and low growth firms occurred in the moderate and sophisticated categories. Medium growth firms had 50% moderate while low growth firms had only 13% moderate. Offsetting this, medium growth firms had only 8% sophisticated while low growth firms had 47%. The difference between the high growth and medium growth firms occurred in the minimal and moderate categories. High growth firms had 75% minimal and only 8% moderate whereas medium growth firms had only 42% minimal and 50% moderate. These findings indicated:

- As firm growth expectancies decline, the sophistication of the greater than one year market and sales forecasts increased.

Comparison of management's expectations of future company sales growth with financial forecasts provided the following results:

Financial Forecasts	Growth Expectancies - Sales		
	Low N=15	Medium N=12	High N=12
Minimal	20%	17%	50%
Moderate	33	50	8
Sophisticated	47	33	42

Chi-Square statistical significance .15.

Some negative association between firm growth expectancies and the sophistication in the financial forecasts appeared. As growth expectancies rose, the sophistication declined. 50% of the high growth firms had financial forecasts in the minimal category, 50% of the medium growth firms were in the moderate category and 47% of the low growth firms were in the sophisticated category. There were two apparent inconsistencies in the findings. The low growth firms had a marginally higher proportion in the minimal category than the medium growth firms. This was more than offset by the proportions in the moderate category. The second inconsistency was the relatively high proportion, 42%, of the high growth firms in the sophisticated category. A substantial portion of the high growth firms were preparing sophisticated financial forecasts. Financial forecasts were important to each category of firm. In general, these findings indicated:

- As firm growth expectancies decline the sophistication of the financial forecasts increased; but a large portion of high growth expectancies firms have sophisticated financial forecasts.

In a comparison of management's expectations of future company sales growth with production facilities forecasts, the results were as follows:

Production Facilities Forecast	Growth Expectancies - Sales Low N=15	Medium N=12	High N=12
Minimal	33%	58%	58%
Moderate	34	33	25
Comprehensive	33	9	17

Chi-Square statistical test not significant.

A strong association between future growth expectancies and the type of production facilities forecast did not exist. Low growth firms were equally spread over the three categories of production facilities forecasts. There was, however, some difference between the low growth firms and both the medium and the high growth expectancy firms. Low growth firms had one-third in the minimal category whereas medium and high growth firms each had 58% in this category. The findings indicated:

- Firms with low growth expectancies had more highly developed production facilities forecasts than firms with medium or high growth expectancies; although differences were not great.

Comparison of management's expectations of future company sales with the personnel forecasts yeilded the following results:

Personnel Forecasts	Growth Expectancies - Sales		
	Low N=15	Medium N=12	High N=12
Minimal	53%	50%	67%
Moderate	0	33	25
Comprehensive	47	17	8

Chi-Square statistical significance .05.

These findings suggested negative association between firm growth expectancies and the sophistication of personnel forecasts. 47% of the low growth firms had comprehensive personnel forecasts compared to only 17% for the medium growth firms and only 8% for the high growth firms. There was, however, an unusual split in the low growth firms which made it difficult to compare them with the medium and high growth firms. Low growth firms were split almost evenly between minimal and comprehensive personnel forecasts. None fell in the moderate category. This bimodal split was difficult to interpret. Comparison of the moderate growth and high growth proportions in both moderate and comprehensive personnel forecasts categories. These findings indicated:

- Firms with slow growth expectancies had more comprehensive personnel forecasts than firms with medium or high growth expectancies.

A comparison of management's expectations future company sales growth expectancies with the formal long range plan produced the following:

Formal Long Range Plans	Growth Expectancies - Sales Low N=15	Medium N=12	High N=12
None or minimal	40%	58%	58%
Partial	7	33	25
Comprehensive	53	9	17

Chi-Square statistical significance .07.

Firms with high growth expectancies had less well developed formal long range plans than did firms with low growth expectancies. Over half of the low growth firms had comprehensive formal long range plans, whereas less than one-fifth of either the medium or high growth firms fell into this category. In contrast 58% of both the medium and high growth firms did not have or had a minimal formal long range plan versus 40% for the low growth firms. These findings indicated:

- Firms with high or medium growth expectancies had a lower tendency to develop a formal long range plan than firms with low growth expectancies.

Similar analyses were conducted for each of the other growth measures using data obtained in the interviews. Most of these followed the same general patterns shown in the comparison of management's expectations of future company sales growth with the planning sub-process. Some did not. In no case, however, there any significant indication of a pattern that worked in the opposite direction. A brief discussion of each of these growth measures follows.

The growth stage of the firm's industry or industries demonstrated the same pattern equally well, or superior to, management's expectations of future company sales growth. Growth stage information was obtained for 39 of the sample firms. For each of the defined planning process elements, it was shown that firms in slow and mature industries had processes which were more highly developed than those for firms in industries perceived by management to be in a high growth stage.

As would naturally be expected, estimated future industry sales growth rates generally showed patterns similar to those obtained with the growth stage variable. Firms that estimated future industry sales would grow at annual rates less than 13%, generally had planning processes which were more highly developed than firms which estimated that their industry would grow at faster rates. There were two exceptions. This pattern was not found in the comparison of future industry sales growth with the greater than one year market and sales forecasts, and with the financial forecasts. In balance, however, it appeared that firms with high industry growth expectations had less well developed planning processes.

The growth variable past industry sales growth was obtained for 28 firms in the sample. Comparing low versus high industry sales growth firms with the individual planning process elements again showed the same general pattern of association. Firms whose management estimated that past

industry sales growth was below 13% generally had planning processes which were more highly developed than firms that estimated their industries' sales had grown at faster rates in the past few years.

The growth variable, past company sales growth, was obtained for 38 of the sample firms. In comparing low, medium, and high past company sales growth categories with the individual planning sub-processes, no significant associative patterns were found. This finding was interesting. While there appeared to be a definite negative association between the development of the planning process and growth expectancies, no association appeared to exist with past growth experiences. This would appear to indicate that business planning is associated with future anticipations and not with past experience.

In addition to specific measures of growth, focus was placed on management's attitudes to past performance and future prospects. Three attitude categories were created; problems to fair, good, and excellent. Readings were obtained for 38 of the 40 sample firms, on management's attitude to past company economic performance; for 33 of the sample firms, on management's attitude to future industry prospects; and for 36 of the sample firms, on management's attitude to future company prospects. Comparison of each of these attitudes to each of the planning process elements showed no distinctive associations. Management's attitude to past company economic performance showed no associations

with any of the planning process elements. This was consistent with the findings on past company sales growth described above. It did appear that firms in the middle attitude category, good, had more highly developed planning sub-processes than either firms in the fair to problems or the excellent attitude categories. The future industry and company prospects measures showed negative associations with some of the planning process elements. These associations, however, were not consistently found with all of the planning process elements. These results were not conclusive.

In summary, some substantial negative association was found between future firm growth expectancies and the development of each of the long range planning sub-processes and the formal long range plans. Firms with lower growth expectancies tended to plan more than firms with higher growth expectancies. Whereas past company sales growth and management's attitude to past growth did not yield associations with the long range planning process, substantial negative associations were found with future company sales growth expectancies, industry growth stage, and future industry sales growth expectancies.

Firm Growth and Emphasis on the Individual Planning Sub-processes

This section presents analysis investigating how emphasis on the planning sub-processes and the formal long range plans differ in the three firm growth categories. The following table summarizes the comparisons presented in the immediately preceding section of this chapter.

SUMMARY OF THE COMPARISONS OF MANAGEMENT'S EXPECTATIONS OF FUTURE FIRM GROWTH TO THE PLANNING PROCESS ELEMENTS

Planning Process Elements	Firm Sales Growth		
	Low	Medium	High
Operating Statements:			
- Minimal	13	25	58
- Moderate	20	50	8
- Comprehensive	67	25	34
Annual Profit Plan:			
- Minimal	20	33	67
- Moderate	27	25	16
- Comprehensive	53	42	17
One Year Market and Sales Forecast:			
- Minimal	20	42	59
- Moderate	27	42	33
- Sophisticated	53	16	8
Greater Than One Year Market and Sales Forecast:			
- Minimal	40	42	75
- Moderate	13	50	8
- Sophisticated	47	8	17
Financial Forecast:			
- Minimal	20	17	50
- Moderate	33	50	8
- Sophisticated	47	33	42
Production Forecast:			
- Minimal	33	58	58
- Moderate	34	33	25
- Sophisticated	33	9	17
Personnel Forecast:			
- Minimal	53	50	67
- Moderate	0	33	25
- Sophisticated	47	17	8
Formal Long Range Plans:			
- No Formal Plan	40	58	58
- A Partial Plan	7	33	25
- A Complete Plan	53	9	17

The nature of the analysis and the format are similar to that described in a previous section of this chapter -- Firm Size and Emphasis on Individual Planning Sub-processes. The analysis directs attention to the moderate and comprehensive categories of the eight planning elements. Within each of the Low Growth, Medium Growth and High Growth groupings of firms, priorities were determined for the planning elements. Arbitrary cut-off limits were set to indicate priorities. Within each of the three groupings of firm growth priorities were assessed for each of the planning process elements. The priorities were set as follows:

High Priority	-	greater than 50% of the planning element in the comprehensive category.
Medium Priority	-	greater than 25% and up to 50% of the planning element in the comprehensive category.
Some Priority	-	greater than 25% of the planning element in the moderate category.

Using these priorities, the emphasis put on each on the planning elements was assessed in each of the three growth categories.

In the Low Growth firm category High Priority emphasis was put on:

operating statements,
annual profit plan,
one year market and sales forecasts, and
the formal long range plans.

Emphasis of Medium Priority was placed on

greater than one year market and sales forecasts,
financial forecasts,
production forecasts, and
personnel forecasts.

For low growth firms all of the planning process elements were of either High or Medium Priority. Low growth firms tended to generally practice comprehensive planning.

In the Medium Growth firm category none of the planning process elements were in the High Priority category. Medium Priority was emphasized on:

annual profit plans, and
financial forecasts.

Some Priority emphasis was indicated on:

operating statements,
one year market and sales forecasts,
greater than one year market and sales forecasts,
production forecasts,
personnel forecasts, and
formal long range plans.

All of the eight sub-processes received either Medium or Some Priority emphasis. Annual profit plans and financial forecasts appeared to receive more emphasis.

In the High Growth firm category, none of the planning process elements were found to be of High Priority emphasis. Medium Priority emphasis was put on:

operating statements, and
financial forecasts.

Some Priority was emphasized on:

one year market and sales forecasts.

High and Medium Growth firms both emphasized financial forecasts. High growth firms put little emphasis on the other planning process elements.

In addition to investigating which planning sub-processes were most emphasized in each of the three growth

categories, an assessment was attempted of how this emphasis changed as firms evolved from high to medium growth and from medium to low growth. This assessment was similar to the previously described consideration of the transition from small to medium to large firm size. As such, it includes the same assumptions that the data represents the longitudinal evolution of firms over time. The table summarizing this assessment follows.

In this table, the numbers represent ratios for the medium over the high growth firms and the low over the medium growth firms for the proportions in each of the moderate and comprehensive categories of each planning process element. The table follows.

RATIOS OF THE PLANNING PROCESS ELEMENTS, PROPORTIONS IN THE MODERATE AND COMPREHENSIVE CATEGORIES, MEDIUM OVER HIGH GROWTH FIRMS

Planning Process Elements	Medium Over High Growth	
	Moderate	Comprehensive
Operating Statements	6.25	.74
Annual Profit Plans	1.56	2.47
One Year Market and Sales Forecasts	1.27	2.00
Greater Than One Year Market and Sales Forecasts	6.25	.47
Financial Forecasts	6.25	.79
Production Forecasts	1.32	.53
Personnel Forecasts	1.32	2.12
Formal Long Range Plan	1.32	.53

The medium over high growth ratios indicated that as firms evolved from high to medium growth, the largest planning changes occurred in the moderate category. The ratios of

6.25 indicated major improvements in: the operating statements, the greater than one year market and sales forecasts, and the financial forecasts. Under the comprehensive category, increased sophistication was indicated on: the annual profit plan, the one year market and sales forecasts, and the personnel forecasts.

In the transition from low to medium growth, as seen in the following table, the ratios indicated major charges under the comprehensive category.

RATIOS OF THE PLANNING PROCESS ELEMENTS, PROPORTIONS IN THE MODERATE AND COMPREHENSIVE CATEGORIES, LOW OVER MEDIUM GROWTH FIRMS

Planning Process Elements	Low Over Medium Growth	
	Moderate	Comprehensive
Operating Statements	.40	2.68
Annual Profit Plans	1.08	1.26
One Year Market and Sales Forecasts	.64	3.31
Greater Than One Year Market and Sales Forecasts	.26	5.88
Financial Forecasts	.66	1.42
Production Forecasts	1.03	3.67
Personnel Forecasts	Small	2.76
Formal Long Range Plan	.21	5.89

Substantially increased emphasis was put on: the formal long range plan, and the greater than one year market and sales forecasts. Increased emphasis was also evidenced on: the production forecasts, the one year market and sales forecasts, the personnel forecasts, and the operating statements.

Comparison of Firm Growth Expectancies with Firm Size

The above described comparisons of the long range planning process first with firm size, and then with management's expectations of future firm growth, raised the suspicion of a negative relationship between firm size and firm growth. This suspicion is consistent with the negative relationship found between firm size and actual subsequent firm growth described in Chapter 6 of this report. To test this suspicion, comparisons were made between each of the three measures of firm size and each of the eight measures of growth and managerial attitudes to performance. On 19 of these 24 possible comparisons, negative associations were found between firm size and growth at appreciably high statistical significance levels using the Chi-Square test. This negative association was found in all the comparisons using sales as the firm size measure. With assets as the measure of firm size, relationships were not found in the comparisons with management's attitude to future company prospects and past company sales growth. When employees were used as the firm size measure, associations were not found in the comparisons with management's attitude to past company performance and past company sales growth. The nonexistence of associations in these five of the 24 comparisons probably means the number of sample firms with measures of asset and employee size was not large enough to indicate the actual underlying negative association. In general, the findings indicated, however, a strong negative

association between firm size and growth rates. Larger firms did not expect to grow as rapidly as smaller firms.

The Interaction of Growth Expectancies, Firm Size and the Long Range Planning Process

To clarify the manner in which firm size and firm growth expectancies interacted in their associations with long range planning, an analytical technique was sought. Concern lay in that the relationship of firm size to firm growth expectancies may have been spuriously causing the relationships of each of these to planning. The number of available statistical procedures was substantially limited by the nominal classification of the research data. While this type of issue has received much attention, most of the analyses has mainly utilized intervally scaled variables and, in particular, the multiple regression technique. This technique was not appropriate here, due to the nature of the data gathered in this study. A relatively new analytical approach entitled Multivariate Nominal Scale Analysis has been chosen. A technical description is attached as Appendix VIII.

This analysis technique was developed and first published by the University of Michigan in 1972. It is a technique designed for conceptually oriented social science research where variables are measured in categories. It places emphasis on the magnitude of relationships rather than the statistical significance of those relationships. It is designed to allow researchers to discover patterns and

associations between variables with a view to understanding a social phenomenon and to building theories to explain and to predict. Like all mathematical techniques, it has substantial assumptions. It did appear, however, to be well suited for this particular research purpose.

This technique attempts to improve one's prediction ability of a dependent variable. It assumes that without additional information the best prediction of the particular category of a dependent variable is the one that usually occurs the most, i.e. the mode. The challenge then is to improve this ability to classify, when aided by the additional information of the independent variables.

In this research project, the average proportion correctly classified, as determined by the most common category for each of the long range planning process variables was 46%. One would be correct an average of 46% of the time in predicting into which category, i.e., minimal, moderate or comprehensive, each of the long range planning sub-processes and the formal long range plan fit for any firm. By considering the relationship of each of the eight planning measures with the independent variable future company sales growth expectancies, the average proportion that could be correctly classified increased to 55%. Stated in another way -- by knowing a particular firm's expectations of future company sales growth, the ability to classify the type of long range planning sub-processes and the formal long range plan it had increased by nine percentage

points. When the relationship of each of these planning sub-process and the formal long range plan with the independent variable firm sales size was considered, the average proportion that could be correctly classified increased from 46% to 57%. When both expectations of future company sales growth and firm sales size were considered together, the average proportion of a firm's long range planning process categories that could be correctly classified increased to 62%. These findings indicated each of the relationships with long range planning was important.

The MNA technique was applied to each of the nine planning elements considered in this study. The analyses indicated that each of firm sales and management's expectations of future sales growth had important associations with long range planning. An example of the means by which knowledge of a firm's size and management's expectations of future growth expectancies were used by this technique to increase the predictive power of classifying firms in the 'operating statements' categories is presented as part of Appendix VIII.

These findings generated from the MNA analyses indicated both management's expectations of future firm growth and firm size were equally important associations with the long range planning process in firms. Taken together, they increased predictability above the predictions of either of them singly. Thus, both firm size and firm growth expectancies were closely associated with a firm's long range

planning process. Firm size and firm growth expectancies were two important variables associated with the existence of and the development of the long range planning process.

Summary of Findings

This study tested for associations between the practice of long range strategic planning and each of firm size and firm growth expectancies. For this purpose, the long range strategic planning process was sub-divided into eight planning sub-processes. The relationship of each of these to firm size and to firm growth expectancies was assessed. The findings were general and specific in nature and should be of interest both to other planning researchers and to business practitioners.

The general findings pertained to associations between long range planning and each of firm size and firm growth, the evolutionary nature of the planning process, and the applicability of particular types of planning sub-processes to differing firm situations. The research indicated the following general findings:

1) A positive association existed between long range planning, both in terms of the number of planning sub-processes and their comprehensiveness, and firm size.

2) A negative association existed between long range planning, both in terms of the number of planning sub-processes and their comprehensiveness, and expectations of future firm growth.

3) The long range planning process appeared to be an evolutionary process whose development was closely linked to the firm cycle in terms of size and growth.

4) In the differing firm cycles of size and growth particular planning processes received more managerial emphasis.

The specific findings of the study are sub-sets of the above general findings. In terms of the association between firm size and planning the specific findings were:

1) As firm size increased, the sophistication of the operating statements increased.

2) As firm size increased, the sophistication of the annual profit plan increased.

3) As firm size increased, the incidence of operating staff specialists increased.

4) Large size firms had more 'other' types of staff specialists than medium and small size firms.

5) As firm size increased, the sophistication of the one year market and sales forecasts increased.

6) As firm size increased, the sophistication of the greater than one year market and sales forecasts increased.

7) As firm size increased, the sophistication of the financial forecasts increased.

8) Large size firms had more sophisticated production facilities forecasts than small size firms.

9) Large size firms had more sophisticated personnel forecasts than small size firms.

10) As firm size increased, the formality of their long range plan increased.

In terms of the association between management's expectations of future firm growth and planning the specific findings were:

1) As firm growth expectancies declined, the sophistication of the operating statements increased.

2) As firm growth expectancies declined, the sophistication of the annual profit plan increased.

3) The existence of operating staff specialists in firms did not vary by firm growth expectancies.

4) Firms with high or medium growth expectancies had less 'other' types of staff specialists than firms with low growth expectancies.

5) As firm growth expectancies declined, the sophistication of the one year market and sales forecasts increased.

6) As firm growth expectancies declined, the sophistication of the greater than one year market and sales forecasts increased.

7) As firm growth expectancies declined, the sophistication of the financial forecasts increased. Nevertheless, a large portion of high growth expectancy firms did have sophisticated financial forecasts.

8) Firms with high or medium growth expectancies had less sophisticated production facilities forecasts than firms with low growth expectancies but the differences were small.

9) Firms with low growth expectancies had more comprehensive personnel forecasts than firms with medium or high growth expectancies.

10) Firms with high or medium growth expectancies had a lower tendency to develop formal long range plans than firms with low growth expectancies.

A check was made to determine which of firm size or firm growth expectancies was more closely related to long range planning. It appeared both were equally important. When the two were considered together, predictions of the comprehensiveness of the long range planning processes were better than those based on either size or growth individually. Both firm size and firm growth expectancies were two variables associated with the practice of long range planning. As firms increased in size, the amount of long range planning increased. In addition, as firm growth

expectancies declined, the amount of long range planning increased.

The findings strongly indicated long range planning was an evolutionary process inside firms. Smaller firms and firms with high growth expectancies did not practice comprehensive planning. For these firms only certain particular planning sub-processes were emphasized to any significant extent. Other planning sub-processes were completely ignored or given only a bare minimum of attention. Firms of medium size and medium growth expectancies showed more emphasis both on the number of planning sub-processes and their sophistication. These firms could not be considered to generally practice what might be labelled as all-encompassing comprehensive long range planning. In large firms and firms with low growth expectancies, the number and the degree of sophistication of the particular planning sub-processes indicated these firms put substantial emphasis on comprehensive formal long range planning.

The results also indicated which of the planning sub-processes were emphasized in each of the firm size and firm growth categories. Small size firms emphasized operating statements, annual profit plans and financial forecasts. None of the other planning sub-processes received any significant emphasis. Medium size firms also heavily emphasized those planning sub-processes. In addition, they put some minimal emphasis on all of the other planning sub-processes. Large size firms appeared to put some significant emphasis on all of the planning sub-processes.

Firms with high future growth expectancies emphasized operating statements, financial forecasts, and one year market and sales forecasts. None of the other planning sub-processes received significant emphasis. Firms with medium growth expectancies emphasized the same planning sub-processes as high growth firms. They also put significant emphasis on annual profit plans. The other planning sub-processes received some attention. In firms with low growth expectancies all of the planning sub-processes received significant emphasis.

The research data also provided some tentative indications of which planning sub-processes increased in importance in the transitions from small to medium to large size and from high to medium to low future growth expectancies. In the transition from small to medium size, substantial emphasis was put on improving the operating statements, the annual profit plans and the financial forecasts. Significant emphasis was put on instituting market and sales forecasts and a formal long range plan. Comprehensive planning appears to be introduced in this transition. In the transition from medium to large size, all of the planning sub-processes receive increased emphasis. In this transition, comprehensive planning appears to become firmly established.

In the transition from high to medium growth, the existing planning sub-processes dramatically improved in sophistication. These were the operating statements, the

financial forecasts, and the one year market and sales forecasts. The annual profit plan, the longer term market and sales forecasts also received attention. The transition from medium to low growth expectancies showed substantial emphasis on the formal long range plan and the long term market and sales forecasts.

Discussion of Findings

The first two general findings, described above, indicated the existence of two fundamental relationships with the practice of long range strategic planning. Long range planning appeared to be positively associated with firm size and negatively associated with firm growth. Mention of the existence of these relationships was not uncovered in any of the literature directly pertaining to how planning should be conducted. Such relationships are significant. They may suggest that both the nature of the planning model and the intensity of management's planning efforts do and should differ. Most prescriptive writings on long range planning advocate complete practices of one all-encompassing comprehensive model of long range planning. Smaller firms do, and possibly should, plan in a different manner and with less intensity than larger firms. Similarly firms with low growth do, and possibly should, plan with a more comprehensive model and with more intensity than firms with higher growth. Further research and theoretical development are required to confirm whether or not these relationships exist and into how the planning model should

differ by firm size and firm growth. It may be that entirely different planning models are desirable for the varying situations of firm size and firm growth.

The last two of the above described general findings provide some first indications of how the planning models and the managerial efforts devoted to planning should differ. Small firms and firms with high future growth expectancies had planning models oriented to monitoring current operations and to considering the future mainly to the extent of only one year. It may be entirely inappropriate to suggest that firms in these situations practice comprehensive longer term planning. Small firms and those with high growth expectancies appeared to be completely different, in terms of planning, than medium size firms with medium growth expectancies, and large firms with low growth expectancies.

Large firms and firms with low growth expectancies appeared to practice all-encompassing long range planning. For them, the contemporary planning model appeared to be applicable. These firms would appear to require the services of professional staff specialists to facilitate their planning efforts. Medium size firms and firms with medium growth expectancies appeared to be between the small and the large firms, in terms of planning. While this firm did not practice comprehensive planning, they did appear to be moving towards that direction. The intensity of the efforts devoted to planning appeared to be dramatically less than

the larger firms and the firms with low growth expectancies. The medium firms appeared to be adaptive in their use of comprehensive planning. They appeared to have a long term orientation but only practiced selected parts of the model and with limited intensity.

It appeared that as firms evolve through the above size and growth categories that the planning systems of the firms undergo substantial changes. These transitions were difficult to detect. Small firms and high growth expectancy firms evolving to medium size and medium growth appeared to intensify their efforts on the planning they were previously conducting. They also attempt to generally introduce more comprehensive planning systems. Firms moving from medium size to large size and from medium growth to lower growth appeared to reinforce the introduction of comprehensive planning and generally intensify their planning efforts.

Further research is required into how planning differs in various firm situations and into how the planning process changes as firms evolve.

Chapter 5

RESEARCH METHODOLOGY LONG RANGE PLANNING, FIRM SIZE AND SUBSEQUENT FIRM GROWTH

This chapter presents the methodological considerations of the study concerned with associations among long range planning, firm size, and subsequent firm growth. This particular study is explorative and theoretical in nature. It is primarily directed to academicians interested in developing the theory of the firm while it may be of secondary interest to businessmen and consultants. An overview of the research design is exhibited first, followed by discussions of: the research sample, measurements of long range planning, measurements of firm size, measurements of firm growth, and the data distribution. This is followed by a description of the analytical procedures applied to the data.

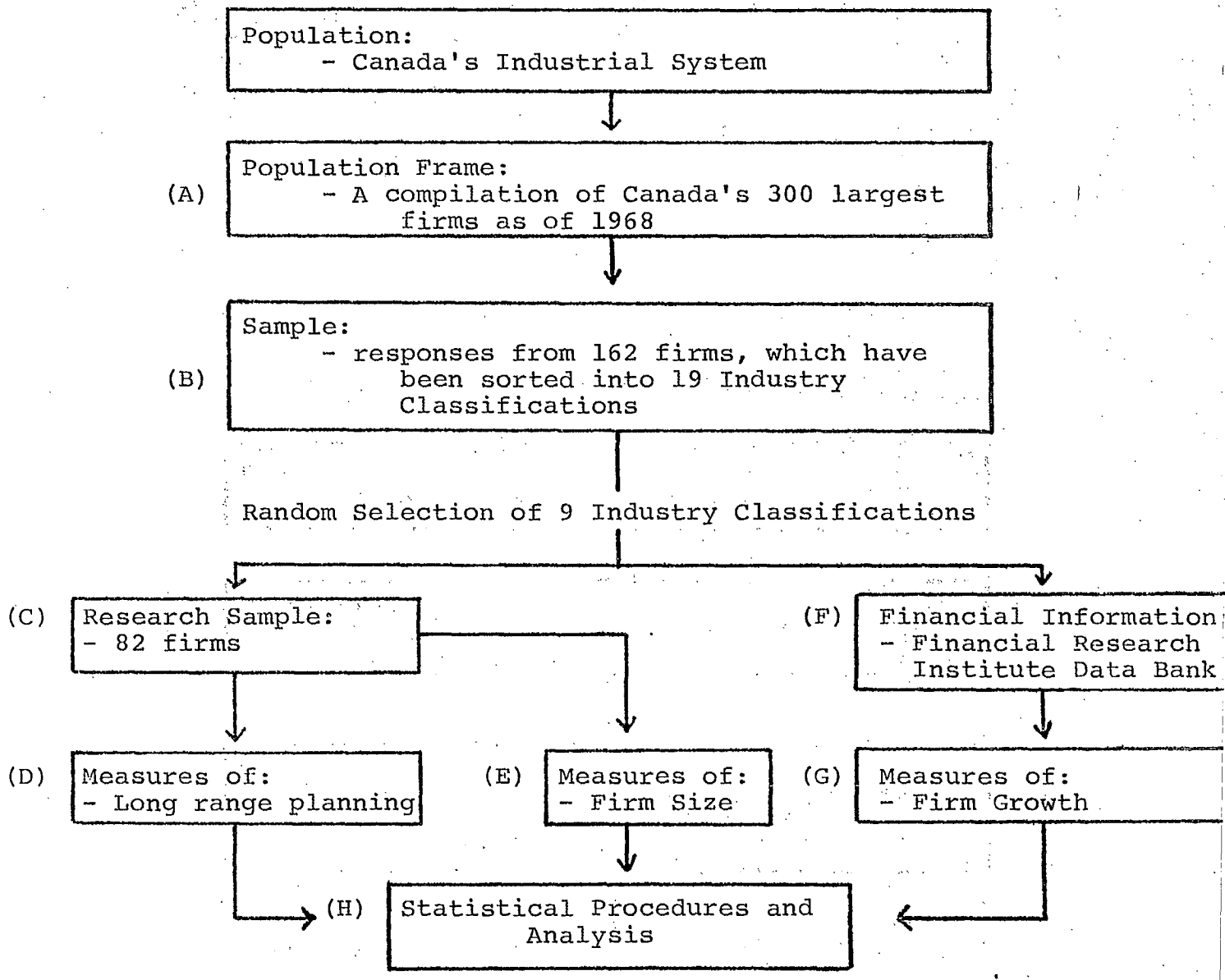
An Overview of the Research Design

The basic design of this research study was straightforward, in that it attempted to discover whether there were relationships among the practice of long range planning, firm size, and firm growth. An outline of the research methodology is shown in Chart V-1 which follows.

The research design, upon a previous survey of long range planning practices in Canada's 300 largest firms which was conducted in 1968 (A). That study achieved a response rate of 54% (B). From this data bank of long range planning

CHART V-1

An Overview of the Research Methodology



questionnaires, a random sample of 82 firms was selected (C). For each of the sample firms, an assessment and ranking of the formal long range planning practices as of 1968 was made from information obtained in the questionnaires (D). Information indicating each firm's size was obtained from these questionnaires (E). From the Financial Research Institute's computer data bank of company financial information (F), information was obtained on each firm's growth in the period 1968 to 1971 (G). Tests for associations and differences (H), were performed between the assessment of long range planning practices (D), the measures of firm size (G), the measures of subsequent firm growth (G). A more complete description of each of these steps and the obstacles encountered follows.

The Research Sample

As mentioned above, the sample for this research study was that of a previous survey of long range planning practices conducted in a 1968 study, entitled "A Survey of Long Range Planning in Canadian Industry."[1] It was prepared by Braithewaite, Malcolm, Nicholl and Pretty under the direction of Professor D.H. Thain at the School of Business Administration of the University of Western Ontario. This study mailed questionnaires to chief executive officers in each of the 300 largest firms in Canada. The original

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[1] J.L. Braithewaite, et. al., "A Survey of Long Range Planning in Canadian Industry" unpublished, The University of Western Ontario, 1969. The questionnaire employed in this report is based upon a 1963 study directed by Professor Thain.

questionnaire responses had been carefully kept intact for future research purposes.

Close scrutiny of these questionnaires indicated they were exceptionally comprehensive. A copy of this questionnaire is attached as Appendix I. In most cases, the questionnaires were completed by a top, if not the top, official of the company. A list of the companies responding, with the respondent's title, is attached as Appendix II. The questionnaire consisted of 60 questions covering an in-depth probing of the individual firm's business planning process and its financial status up to 1968. Comparison of this questionnaire with research surveys of long range planning practices done in the United States indicated this one was substantially more complete. In discussions with business managers the impression was gained that this questionnaire represented the absolute maximum demand level for information by mail that could be put on executives. The Braithewaite et. al. study relied heavily on the prestige of the University of Western Ontario School of Business Administration and on a personal letter from its Dean.

The Braithewaite et. al. study defined the population frame as a listing of the 300 largest firms in Canada which was compiled for this purpose from the Financial Post Survey of Mines, 1968, the Financial Post Survey of Industrials, 1968, and the Financial Post Top 100 by Sales, 1968. From this defined population of 300 firms, responses were received from 54% of the firms, covering 19 industry classifications

A sample of 9 complete industry classifications was randomly chosen to yield a research sample of 82 companies. From these 82 firms, 31 were removed because 1971 their financial information was not yet available in the Financial Research Institute computer date bank of corporation financial information. Another 8 firms were removed because a scrutiny of their questionnaires indicated they had not been completed or that they had virtually no long range planning. These deletions, reduced the sample size for this prototype research study to 43 firms.

Consideration was given to the potential biases of this resulting sample prior to the research analysis. Sampling bias could have occurred in any of the following areas:

- the choice of the population frame - the top 300 firms in Canada,
- the non-response bias,
- the selection of the 9 industry classifications,
- the loss of sample firms for which financial information could not be obtained or that had not adequately completed the questionnaire.

A brief description of the consideration given to each of these biases follows.

The choice of the population frame presented no significant bias. This list represented the most complete compilation of large firms operating in Canada as of 1968. The significance of the non-response bias also appeared to be very small. The 54% response rate was exceptionally high

for mail surveys, particularly when the comprehensiveness of the questionnaire was considered. Low concern was indicated for bias caused by the selection of the nine industry classifications. Random choice allowed each industry category to have equal probability of selection. There is no reason to believe the industries chosen were not representative of the total. With respect to the discarded incomplete questionnaires, no substantial bias appeared to exist. Inclusion of those suspect questionnaires as low planners may have induced a more significant bias due to the real possibility that they were not filled in conscientiously.

For those firms discarded because of the impossibility of obtaining any financial information, their inclusion would not have allowed any comparisons. This potential bias was perceived as significant because of the 31 firms involved. Because of the cut-off requirement and time pressure such information was not sought. This research analysis is limited by this possible potential bias. Inclusion of these firms may or may not have produced different analytical results.

Measurements of Long Range Planning

One of the major obstacles encountered in this research study was assessing and measuring formal long range planning in the sample firms. Relative rankings as a method of measurement of long range planning was chosen over more common, dichotomous methods. Other research studies have

used dichotomous methods which distinguish between planners and non-planners or between formal planners and informal planners. It was felt that such methods do not represent the actual variations in the degree of long range planning effort as practiced in large enterprises. As mentioned in Chapter 2, other research studies indicate that most firms practice long range planning. The survey research which provided the long range planning data base for this study shows that 86% of the firms conducted some long range planning. Examination of these questionnaires showed the extent of the long range planning practiced varied substantially. This proportion compared favourably with the 85% and the 95% reported in the Cleland and Polishuk studies previously mentioned in Chapter 2 of this report. In order to give adequate consideration to these important variations, a ranking method was deemed essential.

It would have been desirable to create a measurement system which would have distinguished between the sample firms not only on the basis of whether one firm practised more long range planning than another, but which also would have permitted an expression of how large the differences were between any two firms. Such measurement systems are usually referred to as interval level measurements. At the outset, it was recognized that construction of such a measurement system for long range planning would be very difficult, if not impossible; but also probably very misleading. Instead, design of the measuring system for long

range planning in the sample firms focused on methods which enabled distinction merely on the basis of 'greater than' or 'less than'. Such measurement systems are usually referred to as ordinal or ranking scales of measurement.

It was possible to develop ranking methods which allowed simple relative 'greater than' or 'less than' distinctions of the long range planning efforts among the firms. Such ranking methods, by necessity, were based upon the planning elements surveyed in the 1968 questionnaire. The elements included in the questionnaire concerned the standardized procedures employed in formulating the long-range plan and the nature of the resulting long range plan. Ten planning characteristics were surveyed. They were as follows:

1) The existence of a corporate strategy that is written,

2) The existence of a corporate strategy through which the company plans to achieve its goals and/or objectives,

3) The existence of written goals and objectives,

4) The existence of long range forecasts which are revised on a regular basis for any three of: market, sales, production facilities, funds, or personnel,

5) The existence of objectives which are specified in quantitative terms,

6) The existence of an annual review of the long-range plans themselves,

7) The existence of standard practices for conducting the long range planning effort,

8) The existence of standard practices for formally reviewing and updating long range plans,

9) The existence of an annual review of long range planning procedures and methods,

10) The existence of a full time planning staff.

For the purposes of the research questionnaire, key terms were defined as follows:

- Company goals are broad, qualitative statements which provide basic guidelines for the company's activities.

- Company objectives are quantitative statements generally falling within the broad framework of the company's goals.

- Strategy is a set of top management decisions that commits the organization and its resources to a sequence of major moves designed to accomplish agreed upon goals and/or objectives. These moves are conditional, depending upon the firm's future environment. A specific date should be set for each of these future moves.

- Long Range Planning is, primarily, formulating company goals and objectives and establishing a strategy for accomplishing these goals and objectives.

- Standard practices are written procedures outlining a planned approach to long range planning activities.

A copy of these definitions was included with each mailed questionnaire.

Two basic approaches were used in establishing these rankings. Adopting more than one method was elected in order to increase the objectivity and discriminating power of the rankings. Each method acted as a check on the other. The first approach was based upon judgmental criteria of what constitutes a comprehensive long range plan. The basis for the second approach was a survey polling of relatively well-informed individuals. This two-fold approach provided

an inherent check for consistency of each method of ranking and also provided the opportunity for the construction of ranking methods which were discriminatory.

The objective criteria method of ranking created three categories of long range planning based upon what was perceived as comprehensive long range planning. These criteria may be summarized as is shown on the following Chart V-2.

"High Planners" were defined as firms which indicated they had a written strategy, written goals and written objectives, with the objectives existing in a quantified form. It was reasonable to suggest that a firm possessing these attributes has analysed its own strengths and weaknesses, analyzed its environment, determined its own present prognosis, generated alternatives and chosen a specific series of action moves. These firms have devoted substantial effort to long range planning.

"Medium Planners" were defined as firms which had made some effort to project where they were going; and had some idea of the action moves they would make to influence their success. These firms had made forecasts or prognoses of important elements of their business and had developed a strategy to cope with their anticipated future. Their strategy need not have been written.

"Low Planners" were defined as firms which had made an effort at long range planning but had yet to develop even an unwritten corporate strategy. Their efforts at long range planning were indicated by the eight long range planning characteristics which did not pertain to corporate strategy.

CHART V-2

Criteria for Distinguishing Between
"High Planners", "Medium Planners", and "Low Planners"

Planning Category	Long Range Planning Characteristics
"High Planners"	These firms were identified by: 1) an expression that they did formal long range planning, and 2) a written corporate strategy, and 3) written goals and objectives, and 4) objectives which were in a quantified form, and 5) an existence of long range forecasts for at least three important dimensions of the business. These firms may or may not have had: 1) an annual review of their long range plans, 2) standard practices for conducting long range planning, 3) standard practices for reviewing and updating their plans, 4) an annual review of the planning procedures and methods, and 5) a full time planning staff.
"Medium Planners"	These firms did not qualify as "High Planners" but did show: 1) an expression that they did formal long range planning, and 2) existence of long range forecasts for at least three important dimensions of the business, and 3) existence of a strategy, but not necessarily written. These firms did not have: 1) a written corporate strategy, and 2) written goals and objectives, and 3) quantified objectives. These firms may or may not have had: 1) an annual review of their long range plans,

2) standard practices for conducting long range planning,
3) standard practices for reviewing and updating their plans,
4) an annual review of the planning procedures and methods, and
5) a full time planning staff.

"Low Planners"

These firms did not qualify as "High "Planners" or "Medium Planners" but they did indicate:

1) an expression that they did formal long range planning, and
2) the existence of at least one of the other long range planning characteristics.

These firms did not have:

1) a strategy

The polling approach established long range planning rankings by surveying the opinions of informed individuals. This was done in two ways. One may be described as an additive approach; and the other as a multiplicative approach. The additive ranking method was determined by examining the relative weightings given for each of the ten long range planning characteristics. Each of the respondents was asked to give each long range planning characteristic a numerical value. The total of the ten characteristics was to equal a score of twenty-five. For ranking purposes, the value of each of the individual long range planning characteristics was determined by averaging the estimates prepared by a combined total of twenty-five doctoral students and faculty who were chosen as polling respondents at the School of Business Administration of the University of Western Ontario. A summary of the results obtained in this polling survey is attached as Appendix III. Long range planning scores were then prepared for each of the firms included in the sample by an application and summation of these average values to the long range planning characteristics which existed in each firm. The maximum long range planning score obtained by any one firm in this sample was 25 and the minimum score proved to be two. These scores were then used to rank the sample firms in the order of their long range planning effort. While this additive ranking index was more objective and discriminating than the judgment ranking method, recognition was given to the limitations

of additive methods. Additive approaches do not give adequate consideration to the interdependency of, and possible synergy between, the various components.

In order to overcome this possible deficiency, a multiplicative ranking method was developed. Approximately 40 graduating honours business students were presented with 26 combinations of the ten long range planning characteristics and asked to give each combination a score from 0 to 100. These particular combinations were chosen to ensure coverage of a large portion of the firms in the sample. To control for consistency, two of the 26 combinations were identical. Those students who did not give these identical combinations a long range planning score within five points of each other had all of their long range planning scores discarded. As a result, the long range planning scores for each of the twenty-five different combinations were determined as the average score given by the remaining twenty students. A summary of the results obtained in this polling survey is attached as Appendix IV.

Firms in the sample which exhibited one of the 25 combinations were then given a long range planning score equal to the average for the combination determined by the polling survey. The maximum long range planning score which any one firm obtained in this sample was 100 and the minimum score was five. These scores were then used to rank the sample firms in order of their long range planning efforts. This method was both the most sophisticated and the most

discriminating of the three measures. In many respects it proved almost as powerful as interval levels of measurement.

All three ranking methods were used in this research study. The sample firms were ranked by each of the three different methods. Statistical tests were then conducted to determine whether or not the resultant long range planning rankings were statistically similar. The three ranking methods were retained throughout the analysis in order that their objectivity could be continually checked. A comparison of the distributions obtained by the three scoring methods are shown, in Table V-1.

TABLE V-1

Comparison of the Three Long Range Planning Measurements on the Basis of Groupings

Planning Categories (with additive and multiplicative planning scores indicated within brackets)	Judgment	Additive Polling	Multiplicative Polling
N =	43	39	32
Low Planners	25.6%		
(less than 14)		25.6%	
(less than 68)			34.4%
Medium Planners	39.5		
(14 to 21)		41.1	
(68 to 92)			40.6
High Planners	34.9		
(21 to 25)		33.3	
(92 to 100)			25.0
	100.0%	100.0%	100.0%

In order to further check for consistency between the three different long range planning indices, Spearman Rank Correlation coefficients were computed. In each of the three possible combinations the degree of association was very high. The associations are shown in Table V-2.

TABLE V-2

Comparison of the Three Long Range Planning Measures on the Basis of Correlation Coefficients

Long Range Planning Measures Compared	Spearman Correlation Coefficient	Statistical Significance
Judgment to Additive	.88	.001
Judgment to Multiplicative	.81	.001
Additive to Multiplicative	.97	.001

The tight associations and high statistical significance levels clearly indicated that each of the three different long range planning indices were each measuring the same thing in a similar manner. The higher association between the additive and the multiplicative long range planning measures reflected the substantially greater discriminating power of both these two measures.

The above methods of measuring long range planning may seem elementary and crude. Empirical testing research in the field of long range planning is presently in the early development stage. This level of development of both the theory and the research required the use of tentative taxonomies. Advancements in this body of knowledge will likely

be made only if pre-empted by attempts to use tentative measurement methodologies. The usefulness of these tentative taxonomies can be determined only after research utilizing them has been conducted.[2]

Measurements of Firm Size

Firm size was measured on three dimensions; assets, sales, and number of employees. These three size measures were extracted from the 1968 questionnaires. Each is a common financial measure of firm size. Instead of selecting one firm size measure, three measures were used to increase the likelihood that the check for a planning association was with firm size rather than a particular financial variable.

When the firm size measures were extracted from the questionnaires, they were tabulated into five categories. The nature of these groupings are shown in the data distribution section which follows. During the subsequent analysis, it was evident this category tabulation was not the best way of recording the firm size measures. It would have been better to obtain actual firm size measures. Actual size measures would have been more discriminating. These category size measures did, however, retain substantial analytical information. This use of categories is recognized in the evaluation of the analysis and the conclusions.

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[2]For a discussion of the use of tentative taxonomies see for example, C.J. Burke, "Measurement Scales and Statistical Models", in Marx, M.H., ed., Theories in Contemporary Psychology (New York, The Macmillan Co.), 1963, p. 149.

In addition to the measures of firm size, two other firm measures were extracted from the survey questionnaires. These were: each respondent's attitude to a rating of his firm's success over the past five years, and the rate of return (net profits after tax as a per cent of net worth) over the past five years. Each of these measures had five categories. These are shown in a following section - data distribution.

Measurements of Firm Growth

Firm growth was measured across five dimensions: assets, sales, income, earnings per share, and common stock market value. The choice of these particular measures was made to give a fairly comprehensive perspective of each firm's growth during the period 1968 to 1971. Each of the five measures are familiar, easily understandable measures which are often used to describe any firm's present status and progress. Their relevant definitions were based on historical accounting information extracted from published financial statements. The facilities of the Financial Research Institute were employed to obtain much of this financial information. Aided by the Canadian Institute of Chartered Accountants, certain adjustments were made to this data bank of published figures to make them more appropriate and consistent. The relevant definitions employed were as follows:

Assets

Represents total assets as reported by the company subject to adjustment for accumulated depreciation if it is

not deducted from gross plant by the company on the asset side.

Sales

Includes:

1. Sales, net of: trade discounts, sales and excise taxes, returns and allowances

2. Gross revenue from which net income is derived

3. Exchange adjustments from the conversion of foreign sales into Canadian dollars.

Income

Consists of pretax income less income taxes on a deferred tax basis and less minority interest.
Note: Extraordinary items are excluded from net income.

Employees

Represents the number of full-time employees employed by the company at its fiscal year-end.

Market Value of Common Stock

Represents the average of the stock's high price during the fiscal year and the stock's low price during the fiscal year times the number of shares outstanding which represents the number of common shares used to calculate per share income account values. Usually this item will be the actual number of shares outstanding at the fiscal year-end. If the company has consistently reported net income per share on the basis of average shares, this item will be the average shares outstanding as reported by the company. If there is more than one class of stock which shares in the distribution of income, this item will include the number of common equivalent shares of that class. Proper adjustments are made for stock splits.

Data Distribution

This section summarizes the data.

Asset Size	Number	%
Under 25 million	5	11.6
$25-$50 million	3	7.0
$50-$100 million	5	11.6
$100-$250 million	9	20.9
Over $250 million	21	48.9
	43	100.0

Sales Size		
Under $20 million	4	9.5
20-50 million	5	11.9
50-100 million	5	11.9
100-300 million	16	38.1
Over 300 million	12	28.6
	42	100.0
Number of Employees		
Under 1000	9	21.9
1-5 thousand	15	36.6
5-10 thousand	10	24.4
10-25 thousand	5	12.2
Over 25 thousand	2	4.9
	41	100.0
Average Rate of Return (Net Profits after tax as a percent of net profit)		
Up to 6% including losses	4	9.8
6-10%	16	39.0
10-20%	19	46.3
20-30%	2	4.9
	41	100.0
Self-Rating of the Company's Success over the Past 5 Years		
Not very successful	1	2.3
Moderately successful	22	51.2
Very successful	16	37.2
Outstandingly successful	4	9.3
	43	100.0

Ranges of Subsequent Firm Growth	
Sales growth	92% to 214%
Income growth	39% to 366%
EPS growth	27% to 366%
Asset growth	95% to 246%
Market value of common stock growth	45% to 446%

Analytical Procedures

To accomplish the research objective of determining whether there were associations among long range planning, and firm size, and firm growth, correlation statistical

techniques were employed.[3] Correlation tests are statistical procedures for testing for the existence of both an association in some population and for measuring the degree of association between the two variables.

The most common and widely applied correlation procedure is the Pearson product-moment correlation. This parametric statistical procedure requires scores which represent measurement in at least an equal-interval scale. It also assumes that the scores are from a bivariate, normal population. Since the measurement of long range planning was of ordinal measurement: i.e., the values are numeric and could be arranged in increasing or decreasing order, although these rankings did not explain the distances between the rankings, it was considered more appropriate to use a non-parametric correlation procedure. These procedures make no assumptions about the shape of the population from which the scores are drawn and are capable of handling measurements which may be ranked. The particular test chosen was the Spearman rank correlation coefficient which was the earliest developed rank correlation technique and still remains the best known.[4] For the benefit of those people who may be

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[3]For further discussion of this statistical test, see any basic statistics book. For example, Mason, R.D., Statistical Techniques in Business and Economics, Richard D. Irwin, Inc., Homewood, Illinois.

[4]For further explanation of this non-parametric procedure see, for example, Siegel S., Non-parametric Statistics for the Behavioural Sciences, McGraw-Hill, 1956.

unfamiliar with the non-parametric statistical procedures, Pearson correlations were also computed and are presented in addition to the Spearman Rank correlations.

In addition to correlation procedures, partial correlation procedures were conducted. Partial correlation provides a single measure of association describing the relationship between two variables while adjusting for the effects of one or more additional variables. In essence, partial correlation enables removal of the effect of the control variables from the relationship between the independent and dependent variables.

The calculations in this research analysis were performed primarily with the aid of a system of computer programs known as the "Statistical Package for the Social Sciences (SPSS)"[5] at the Computing Centre at the University of Western Ontario. The SPSS system is the most comprehensive set of programs presently available for social science research. It is in extensive use as a major research tool in a large number of respected academic institutions in the United States and Canada. High confidence is universally given to the validity of its programs.

Summary

This chapter has described the nature of the research methodology of this study. The study was explorative in

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[5]N.H. Nie, D.H. Bent, C.H. Hull, Statistical Package for the Social Sciences, McGraw-Hill, New York, 1970.

nature. As such, it suffers from substantial limitations. The study is most useful to those interested in developing the theory of planning. An overview of the research design was presented, followed by: description of the research sample, the measurements of long range planning, the measurements of firm size, measurements of firm growth, the data distribution and the statistical procedures employed in the analysis.

Chapter 6

ANALYSIS OF FINDINGS LONG RANGE PLANNING, FIRM SIZE AND SUBSEQUENT FIRM GROWTH

This chapter summarizes the analysis of the research study described in the previous chapter. While the explorative nature of the research and the research design requires that all findings be considered tentative, the findings do appear to be significant to those interested primarily in the theory of planning. The analysis indicated:

- the practice of long range planning increased with firm size,
- long range planning was practiced to a greater extent by firms which subsequently experienced slower growth than it was in firms which experienced more rapid subsequent growth,
- both firm size and subsequent growth were important variables related to the practice of long range planning, and
- larger firms grew at slower rates than medium size firms.

Discussion follows under the headings of: comparison of firm size and long range planning, comparison of attitude to successfulness and long range planning, comparison of long range planning and average rate of return, comparison of long range planning and subsequent firm growth, comparison

of firm size and subsequent firm growth, the interaction of growth, size and long range planning, summary of findings, and discussion of findings.

Comparison of Firm Size and Long Range Planning

This section describes the tests for a relationship between long range planning and firm size. The normative long range planning literature suggests no relationship should exist -- especially among relatively large firms. From the perspective of the total economic system, that literature suggests a positive relationship between planning and firm size. The findings of this analysis support the latter position.

Table VI-1, summarizes the statistical results of the comparison of firm size with long range planning. The firms included in this sample were drawn from a population frame representing the 300 largest in Canada. Therefore, all are relatively large firms. Within this population the analysis indicated a positive relationship between firm size and long range planning. Since the other tables presented in this chapter are similar to Table VI-1, this table is described in detail.

Two tests for association are indicated by the headings Spearman test and Pearson test. The Spearman correlation test is theoretically more appropriate as it has been specifically designed for ordinal measurements. The more common Pearson test assumes interval measures. Since the multiplicative planning measure closely approximates an

Table VI-1

COMPARISON OF LONG RANGE PLANNING AND FIRM SIZE

Long Range Planning Measure	Firm Size Measure		
	Asset	Sales	Employees
Spearman Test:			
Multiplicative Planning Measure			
- Coefficient	.18	.29	.59
- Significance	.16	.06	.00
Additive Planning Measure			
- Coefficient	.22	.41	.46
- Significant level	.09	.01	.00
Judgement Planning Measure			
- Coefficient	.11	.25	.26
- Significance level	.24	.06	.05
Pearson Test:			
Multiplicative Planning Measure			
- Coefficient	.24	.33	.60
- Significance	.10	.04	.00

interval measurement and because partial Pearson partial correlations are used in a later section of this chapter the results of both are presented. The Pearson and the Spearman correlation tests yielded similar results.

The Long Range Planning Measures heading is sub-divided into the three long range planning measures described in Chapter 5. The Firm Size Measure heading presents the three firm size measures, assets, sales and employees. For each combination of size and planning measures the correlation coefficient and the statistical significance level are shown.

The correlation coefficients of asset size with planning were low -- ranging from .11 to .22. They were all positive, however, providing evidence of an association between long range planning and asset size. These low coefficients were possibly caused by the unusual distribution of the sample firms on the basis of asset size. Reference is made to Chapter 5 which showed that 49% of the sample firms were in the largest asset size category. This distribution allowed for minimal discrimination on the basis of asset size. The ability to detect relationships between planning and asset size was therefore limited.

The comparison of sales size with planning yielded higher correlation coefficients -- ranging from .25 to .41. These associations indicated firms with larger sales size practiced more long range planning. The distribution of the sample firms amongst the five sales size categories, as

shown in Chapter 5, are heavily weighted in the largest two size categories. This sample distribution, while more even than the asset size distribution, also, makes the detection of any true underlying association difficult.

The association between employees size and planning was both stronger and more statistically significant. The correlation coefficients ranged from .26 on the least discriminating judgement planning measure to .59 on the most discriminating multiplicative planning measure. Statistical significance levels of .05 and .00 were exceptionally high. Chapter 5 showed the sample firms were more evenly distributed amongst the five employees size categories, than they were for assets or sales size. For this reason employees size may have been the best measure of firm size in this sample. The analysis indicated larger firms practiced more long range planning than smaller firms.

Examination of the three size variables together indicated a positive relationship between long range planning and firm size. While the results were not either consistently high on degree of association or on statistical significance they indicated a relationship. Because both the population and particularly the sample were heavily weighted with larger firms it is probable that a full range of firm sizes would show a stronger relationship. Employees size had the widest distribution of the three size variables in this sample. It was, therefore, the most likely size measurement to indicate the existence of a relationship.

The high association between planning and employees size indicated a statistically significant strong relationship between firm size and long range planning.

Comparison of Attitude to Successfulness and Long Range Planning

The normative literature in Chapter 2 suggests that no association exists between planning and self-perception of successfulness. The anti-planning viewpoint implies that a negative relationship may exist. The Najjar study provides some empirical evidence to indicate the existence of a negative relationship. The findings of this study indicated a negative relationship.

Table VI-2 presents the analysis of the association between each respondent's self rating of his firm's successfulness and planning. The degree of associations were not high -- ranging from -.14 to -.27. All three comparisons, however, were negatively related. High significance levels of .05 were found on two of the comparisons. These findings, combined with Najjar's findings, increases suspicion that long range planning is practiced more in firms not satisfied with their performance.

Comparison of Long Range Planning and Average Rate of Return

Table VI-2 also presents the analysis of the comparison between long range planning and the firm's average rate of return over the past five years. The results indicated no relationship existed. The degree of association ranged from .10 to .17. The comparison using the multiplicative planning measure was negative. The low associations, the

Table VI-2

COMPARISON OF LONG RANGE PLANNING AND
SELF-RATING OF FIRM'S SUCCESS AND AVERAGE RATE OF RETURN

Long Range Planning Measure	Self-Rating of Firm's Success	Average Rate of Return 5 - Years
Spearman Test:		
Multiplicative Planning Measure		
- Coefficient	-.14	-.15
- Significance	.23	.22
Additive Planning Measure		
- Coefficient	-.27	.10
Significant level	.05	.28
Judgement Planning Measure		
- Coefficient	-.26	.17
- Significance level	.05	.14

mixture of positive and negative associations, and relatively low significance levels, indicated no relationship.

Comparison of Long Range Planning and Subsequent Firm Growth

This section describes the analyses of the test for association between long range planning and subsequent firm growth. The normative literature on long range planning states that firms with more long range planning perform better. Thus, firms with more planning may be expected to grow more rapidly. The anti-planners suggest long range planning is practiced in face of adversity. From that it may be inferred that firms which plan more will grow slower. Galbraith's total industrial system perspective suggests that firms plan to contain and grow less rapidly. The findings of this study indicated planning is associated with slower subsequent growth. This may not mean that long range planning leads to slower growth. However, long range planning was more evident in firms which experienced slower subsequent growth. It may be that firms confronted with lower growth expectancies do more planning. It may also be that firms which plan more accept lower growth for greater security.

Table VI-3 summarizes the statistical results of the comparison between subsequent growth and long range planning. The multiplicative planning measure yielded the highest correlation coefficients and statistical significance levels. Because the multiplicative planning measure discriminated the most, it was most capable of uncovering

Table VI-3

COMPARISON OF LONG RANGE PLANNING AND SUBSEQUENT FIRM GROWTH

Long Range Planning Measures	Subsequent Growth Measures				
	Asset Growth	Sales Growth	Income Growth	Earnings Per Share Growth	Market Value Growth
Spearman Test:					
Multiplicative Planning Measure					
- Coefficient	-.39	-.35	-.13	-.16	-.23
- Significance level	.01	.02	.26	.19	.11
Additive Planning Measure					
- Coefficient	-.16	-.01	-.01	-.08	-.21
- Significance level	.17	.47	.49	.33	.10
Judgement Planning Measure					
- Coefficient	-.29	-.02	.08	-.03	-.34
- Significance level	.03	.45	.32	.43	.01
Pearson Test:					
Multiplicative Planning Measure					
- Coefficient	-.36	-.41	-.35	-.34	-.34
- Significance level	.02	.01	.03	.03	.03

associations. The other two planning measures corroborated the direction.

All the associations between each of the five growth measures and planning were negative. Asset growth highlighted this relationship. The correlation coefficient was -.39 at the .01 statistical significance level. The two less discriminating planning measures corroborated this negative relationship. Sales growth exhibited the next highest relationship of -.35 at the .02 statistical significance level. The two less discriminating planning measures corroborated this association. Income growth, earnings per share growth and common stock market value growth, all exhibited negative correlation coefficients with planning. While the correlation coefficients and the significance levels varied widely the consistency of the direction suggested a negative relationship between long range planning and subsequent growth.

It was unreasonable to interpret these findings to mean long range planning leads to poorer economic performance. Instead, it may be that long range planning is a product of perceived future adversity. Firms faced with the prospects of declining growth rates may substantially intensify their efforts at long range planning. If actual subsequent growth is treated as proxy for management's growth expectancies these findings then corroborate the finding that firms with lower growth expectancies practice more long range planning. Chapters 3 and 4 of this report have addressed this issue.

Comparison of Firm Size and Subsequent Firm Growth

The relationship between firm size and growth was considered. This relationship is of interest to economists and scholars of business. Traditional economic theory suggests firms reach an optimal size after which diseconomies of size arise. When this occurs larger firms grow at slower rates than smaller firms.

Other theories agree this phenomenon exists. Penrose in, The Theory of the Growth of the Firm,[1] hypothesized medium size firms grow at faster rates than large size firms. She did not agree with the diseconomies of scale concept. Penrose suggests, instead, that medium size firms grow faster than larger firms because the proportion of managerial services available for expansion decreases as firms become larger. Galbraith states there is no fundamental reason for any diseconomies of size. In his view there is no limiting optimal size. Galbraith believes that larger firms grow less rapidly because they are not primiarly motivated by profit maximization. In his view larger firms practice planning to contain growth, reduce risk and preserve managerial autonomy.

Whatever the reasons, there is substantial belief that larger firms grow at slower rates than smaller firms. Review of the literature did not uncover any empirical

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[1]Edith T. Penrose, The Theory of Growth of the Firm (Oxford: Basil Blackwell & Mott, Ltd., 1959).

research supporting this position. The findings of this research study provides some support.

Table VI-4 summarizes the comparison of size and growth. A statistically significant negative relationship was found between firm size and subsequent growth. In all of the comparisons between size and growth the analysis yielded negative correlation coefficients at reasonably high statistical significance levels. The correlations coefficients ranged from -20 to -.37. Statistical significance ranged from .11 to .01. This empirical evidence indicated larger firms grew at slower rates than smaller firms.

The Interaction of Growth and Size and Long Range Planning

The previous sections showed that the analysis indicated:

1) long range planning increased with firm size,
2) long range planning decreased with firm subsequent growth, and
3) subsequent growth decreased with firm size.

It was possible that the associations between planning and size, and between planning and growth were spuriously caused by the relationship between size and growth. Comparison of the size of the coefficients on the various relationships did not indicate whether or not this was so. To clarify this possibility partial correlation tests were performed.

Because the partial correlation test is a parametric statistical procedure it was necessary to treat the long range planning measure and the firm size measures as interval

Table VI-4

COMPARISON OF FIRM SIZE AND SUBSEQUENT GROWTH

Size Measure	Subsequent Growth Measure				
	Sales Growth	Income Growth	Asset Growth	Earnings Per Share Growth	Market Value Growth
Assets					
- Coefficient	-.19	-.29	-.31	-.31	-.37
- statistical significance	.11	.04	.02	.03	.01
Employee					
- Coefficient	-.27	-.28	-.28	-.24	-.27
- statistical significance	.05	.05	.04	.07	.04
Sales					
- Coefficient	-.24	-.20	-.23	-.20	-.31
- statistical significance	.06	.11	.07	.11	.02

measures. Comparison of the results of the Spearman and Pearson correlation tests previously presented in Table VI-1 and VI-2 showed they yielded similar results. For this reason, there was high confidence that the measurements were sufficiently adequate to permit use of the partial correlation procedure.

Table VI-5 summarizes the results of this test. Comparison of the coefficients, between long range planning and firm size controlling for the effects of each of the growth measures, with those between planning and size obtained by the Pearson test previously presented on Table VI-1, showed that the associations between planning and firm size were not spurious. While controlling for growth consistently reduced the degree of association between planning and firm size the amount of the reduction was minimal. Employee size and sales size held up well when controlled for each of the five growth measures. Asset size also held up fairly well. Long range planning was positively associated with firm size when controlled for the effects of growth.

Table VI-6 summarizes the results of the comparison of long range planning to growth when the effects of size were controlled. Comparison of these coefficients with the Pearson test coefficients previously shown on Table VI-3 showed that controlling for size only marginally reduced the degree of association between planning and subsequent growth. Each of the five growth measurements held up

Table VI-5

COMPARISON OF LONG RANGE PLANNING AND FIRM SIZE
CONTROLLING FOR GROWTH

Growth Measure Controlled	Size Measure		
	Assets	Sales	Employees
Sales Growth			
- Coefficient	.17	.26	.55
- Significance	.20	.10	.00
Income Growth			
- Coefficient	.15	.28	.55
- Significance	.23	.08	.00
Asset Growth			
- Coefficient	.14	.27	.55
- Significance	.24	.09	.00
Earnings Per Share Growth			
- Coefficient	.15	.28	.56
- Significance	.24	.08	.00
Market Value Growth			
- Coefficient	.13	.25	.56
- Significance	.27	.11	.00

Table VI-6

COMPARISON OF LONG RANGE PLANNING AND GROWTH CONTROLLING FOR SIZE

Size Measure Controlled	Subsequent Growth Measure				
	Asset Growth	Sales Growth	Income Growth	Earnings Per Share Growth	Market Value Growth
Assets					
- Coefficient	-.31	-.39	-.30	-.29	-.27
- Significance	.06	.02	.06	.07	.08
Employees Size					
- Coefficient	-.25	-.33	-.24	-.25	-.22
- Significance	.11	.05	.12	.10	.13
Sales Size					
- Coefficient	-.31	-.36	-.31	-.30	-.26
- Significance	.06	.03	.06	.06	.10

particularly well when controlled for the effects of firm size. Long range planning appeared negatively related to growth when controlled for the effects of firm size.

In summary, the positive association found between long range planning and firm size and the negative association found between long range planning and subsequent firm growth appeared to be true relationships. They were not spuriously caused by the negative association found between firm size and subsequent growth.

Summary of Findings

The analysis of this research study indicated findings which, to the author's knowledge, have not been addressed in other empirical testing research. The explorative nature of the study and the resulting research design requires the findings be considered tentative. It is believed, however, that even as tentative findings they will be of significant interest to researchers interested in the developing theory of planning. The findings were:

1) long range planning increased with firm size.
2) firms with lower perceptions of their successfulness practiced more long range planning,
3) long range planning was practiced to a greater extent in firms which subsequently experienced slower growth,
4) both subsequent growth and firm size were important variables for indicating the amount of long range planning practiced, and

5) large size firms grew at slower rates than medium size firms.

Discussion of Findings

The author believes the tentative findings described in this chapter aid in clarifying the literature on long range strategic planning. The findings while tentative cast doubt on an implicit assumption held by authors writing from the point of view of the individual firm. In Chapter 2, The Literature on Long Range Planning, it was shown that both Argenti and Steiner tend to believe that planning should not vary by firm size. No empirical research was uncovered to test this position. The findings of this study indicate that a positive association exists between planning and firm size.

Chapter 2 also discussed Galbraith's position on planning as an observer of the total economic system. He states that a relationship exists between long range planning and firm size. His position, however, is based on personal observation, void of any apparent supportive empirical evidence. The findings of this study provide empirical evidence to support the position of an association between planning and firm size.

In Chapter 2 also showed many authors strongly advocating the practice of long range planning because they believe it improves business success. Only one empirical study was uncovered to support this belief. That study, the

Thune and House study,[2] found, on the basis of pair-matched 'formal planners' versus 'informal planners', that 'formal planners' significantly outperformed 'informal planners'. In contrast, the findings described in this chapter showed that firms which planned less grew more rapidly. These findings and the Thune and House findings may not, however, be incompatible. It is tempting to suggest that long range planning may lead to slower growth. This interpretation does not appear to be reasonable. Instead a more reasonable interpretation of the findings of this study is that planning is intensified in firms confronted with greater adversity. Thus when the population of firms is viewed in total, firms that plan more are observed to perform worse than firms which plan less. The observation implies a causal relationship between adversity and planning rather than one between planning and poorer performance.

This interpretation is consistent with the findings pertaining to the relationship between long range planning and managerial satisfaction with performance. Chapter 2 describes Najjar's[3] finding that firms which plan more expressed lower managerial satisfaction with profits and sales growth. Similar results were found in this study. A negative association was found between long range planning

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[2]S. Thune and R. House, "Where Long Range Planning Pays Off - Findings of a Survey of Formal, Informal Planners", Business Horizons (August, 1970), pp. 82-87.

[3]Mohamed A. Najjar, Planning in Small Manufacturing Companies: An Empirical Study (unpublished doctoral dissertation, Ann Arbor: University Microfilm Inc., 1966).

and a self rating of each firm's successfulness. Firms where managers are less satisfied with performance appear to practice more long range planning. It may be that an adverse growth environment confronting the firm leads to managerial dissatisfaction and in turn to more intense long range planning practices. Alternatively, it may be that increased planning leads to increased awareness and understanding which causes greater concern and dissatisfaction. Whatever the reasons, there does appear to be a link between adversity and planning.

The literature described in Chapter 2 concerning reservations about the practice of long range planning has two main aspects. The first concerns the usefulness of long range planning. The second concerns the inclination of top managers to plan. In terms of usefulness those with reservations believe that long range planning may be a waste of scarce management energy. They believe its practice may impair performance. This belief is inconsistent with the Thune and House findings. If that study is ignored, the tentative findings described in this chapter are, at minimum, consistent with the views of the reservationists.

In terms of management's inclination to plan, the findings of this study are consistent with the behavioural theories described in Chapter 2. Cyert and March contend that management is mainly reactive rather than proactive. They support their position by empirical case observations. The generally negative relationship between planning and

growth and between planning and self rating of successfulness, as described in this chapter, may indicate that long range planning is a form of managerial reaction. Currently planning is generally perceived, at least in theory, to be a proactive mode. Its practice may be instituted and intensified by management's reaction to adversity. Firms which are finding it difficult to perform well may react by intensifying their long range planning effort. This interpretation is consistent with the findings of this study.

Chapter 2 considered planning as part of the total economic system. The views of John Kenneth Galbraith were discussed. Galbraith's observations of why firms plan are relevant to the findings presented in this chapter. Galbraith suggests firms plan to preserve managerial autonomy rather than to improve economic performance. The reverse is suggested by those who advocate the practice of planning. The finding of a negative relationship between planning and growth presented in this chapter is consistent with Galbraith's contention. Galbraith contends that while growth is important, profit growth is not of paramount importance. The findings presented in this chapter lend support to Galbraith's previously untested observations that planning is not done mainly to achieve growth.

Chapter 7

SUMMARY AND CONCLUSIONS

This concluding chapter presents a summary of the research project. An outline of the topics covered is as follows: description of the study, conventional wisdom, research methodology, summary of major findings, interpretation of findings, suggestions for additional research, and implications for business practice.

Description of the Study

This research concerns the merits of strategic long range planning. Consultants, professional planners, and academics recommend long range planning as an essential technique of general management, in journal, books, and seminars. Others hold reservations about planning as an effective management technique. In their opinion, planning yields few, if any, positive results and may possibly have negative effects on the firm. The many problems of conventional wisdom describing long range planning presents little empirical research helpful in clarifying these differences.

Obtaining the definitive answer will always be impossible. Controlled scientific experiments cannot be conducted on this subject. No one will ever know for sure how well a firm practicing formal long range planning would have performed without it. Similarly, it cannot be known how firms without formal planning would have performed with it. Researchers have used various methods to overcome, or

at least minimize, this research problem. Understandably, these efforts have not been completely satisfactory. This project was subject to the same limitations.

This study approached the issue by considering the basic relationships of long range planning to firm size and to firm growth. Knowledge of these relationships provides a base for reasonable inferences about the controversial issues of long range planning. No empirical research was discovered in the literature addressing these relationships. The research findings of this study indicated the existence of certain basic relationships. Interpretation of these lead to increased understanding of the evolution of the long range planning process inside firms and provided insight into proper application. The overall conclusion was that long range planning is neither a cure-all nor a fad. Long range planning should be viewed as an expensive but important technique, which, when used discriminatingly can offer substantial benefits to managers.

Conventional Wisdom

The literature on long range planning is mainly normative. Most is written from the perspective of the manager in an individual firm. The empirically based research has mainly limited itself to surveying actual practices and to attempts to compare the performance of informal planners with formal planners. The literature strongly advocates long range planning. A brief summary of the conventional wisdom follows:

- long range planning is extensively practiced,
- firms conducting long range planning perform better than similar firms which do not,
- long range planning will improve any firm's performance,
- the basic long range planning process should be the same regardless of firm size or firm growth expectancies,
- long range planning should be practiced in a comprehensive all encompassing manner, and
- all competent top managers should engage in the practice of long range planning.

Notably absent from the long range planning literature is any emphasis on reservations or its limitations. Nevertheless, there exists a hard core of top business managers whose experience causes them to be skeptical of long range planning. They are concerned about its cost, its complexity, its tendency to be abstract and unreal, the danger that planning leads to inflexibility and lost opportunities, and how it can be integrated into the management and operating processes. These controversial issues will probably never be completely resolved.

Analysts have also considered the role of corporate planning in the total economic system. The best known of these writers is J.K. Galbraith. In his view, managers use planning as the main instrument to overcome corporate constraints, to master their environments, and thus to

increase their security. He assumes that planning is widely practiced and suggests or implies:

- planning increases with firm size,
- because of the implicit trade-off with risk, firms that plan more grow slower than firms that plan less,
- however, firms which plan more will be less likely to experience losses,
- the growth of firms that plan more will be less variable than that experienced by firms that plan less, and
- planning has been and is so effective in increasing the economic power of corporations that government should counteract this corporate control of the economy.

This study was built upon the existing conventional wisdom. While there are obvious conflicts in the points of view Galbraith's observations more directly describe possible relationships which may exist with long range planning. This study examines empirical data to determine the existence of some of these relationships.

Research Methodology

This project consists of two complementary but independent studies. Each checked the association of long range strategic planning to the firm's environment and to the nature of the firm. One study is based primarily on secondary data sources, while the other is based entirely on primary data.

The first study measured long range strategic planning from the responses to an extensive survey questionnaire conducted in 1968. A taxonomy was developed for categorizing firms on the basis of their long range planning efforts. Ranking methods were also developed to facilitate relative judgements of the degree of long range planning in each firm in a sample of 43 firms. Actual subsequent growth was measured up to 1971. Five common growth measures were used. These were asset growth, sales growth, income growth, earnings per share growth and common stock market value growth. Firm size was measured at 1968 in terms of assets, sales and employees. Statistical techniques were applied to these three types of measurements to check for associations.

The second study assessed the actual practice of long range strategic planning. Top executives were interviewed in a sample of 40 firms. These interviews explored each firm's formal planning process with emphasis on how they controlled, monitored, forecasted, and generated alternatives for their firm. Inquiries were also made about the nature of any formal long range plans. Specific questions were asked about the following inputs to the long range planning process:

- operating statements,
- annual profit plans,
- one year market and sales forecasts,
- greater than one year market and sales forecasts,
- financial forecasts,

- production facilities forecasts,
- personnel forecasts, and
- staff specialists.

Categories were developed which allowed classification of the sample firms in regard to each of these.

Growth was measured by asking each manager about his perception of his firm's growth prospects. Inquiries were made of each firm's expected future sales growth rate, past sales growth rate, industry growth stage on the product life cycle, attitudes to performance and other measures of growth prospects. Firm size was mainly measured by sales size. Statistical techniques were used to check these measurements for associations.

Summary of Major Findings

The findings of the two separate research studies comprising this project were consistent with each other. To the writer's knowledge, none of the planning literature has previously mentioned similar findings. Corroboration from two studies, where each differed on the basis of: the samples, the time frames, the information gathering techniques, and the methods of measuring the relevant variables; increases the likelihood that these sample based findings hold general validity. The findings relate to: the relationship of planning to each of firm size and firm growth, the nature of the planning process, and the development of the planning process. These findings were:

1) A positive association existed between long range planning and firm size.

This association was found in both studies. In the interview based research, both the number of planning sub-processes and their comprehensiveness were greater in larger size firms. In the research using secondary data, a positive correlation was found between planning and firm size. While the existence of this association may have intuitive appeal, this finding is significant because prior to this study no known empirical evidence had been gathered to support this proposition.

2) A negative association existed between long range planning and firm growth.

The two studies corroborated this finding. The interview based research found a negative association, both in terms of the number of planning sub-processes and their comprehensiveness, and management's expectations of future firm growth. Two sets of analytical results indicated this association in the research employing the secondary data. Negative correlations were found between planning and actual subsequent firm growth. Indications of negative correlation were also found between management's self-rating of his firm's successfulness and planning. It would appear there is an important relationship between a firm's growth environment and both the nature and intensity of its planning efforts. Firms confronted with adverse growth environments appear to practice more planning.

3) Long range planning as practiced did not appear to be comprehensive and all encompassing.

This finding was evidenced in both of the research studies. The interview based study showed the type of planning and the degree of comprehensiveness varied widely. Similar differences were found amongst the firms in the study based on the secondary data. Actual planning practices differed markedly from the normative prescriptive model of planning.

4) The planning process within firms appeared to be evolving in a manner consistent with the firm's growth in size and the firm's growth cycle.

The finding was an extension of the previous finding. Instead of finding the existence of one all encompassing planning model, different and changing models appeared to be in practice. The similar patterns found indicated the nature of a firm's planning model appeared to be determined by the firm's size and its growth rate. In the interview based study, similar practices were found in the small and high growth firms, the medium size and medium growth firms, and the large size and low growth firms. Correlations found in the secondary data study were consistent with this. Planning practices did not appear to resemble the normative planning models. Instead, suspicion was raised that different models existed depending on the firm's growth and size positions.

Interpretation of Findings

The research findings indicated that consensus of the conventional wisdom of most planning advocates is deficient. The integration of these findings into that conventional

wisdom should increase the usefulness of the theory to business managers, and aid others in its further development. Planning practice would probably be more effective if planning theory better reflected actual long range planning practices. This section attempts to integrate the findings of this study into the current theory of planning. Emphasis is placed on the evolution of the corporate long range planning process.

Planning theory strongly implies the long range planning process within a firm should not be affected by the nature of the firm and the nature of the firm's environment. The theory, instead, recommends implementation of an all encompassing planning process. The findings of this research appear to conflict with this position. The long range planning process varied by firm size and by firm growth. It, therefore, seems reasonable to infer the planning process within a firm evolves and develops in a natural manner in response to the changing nature of the firm and its environment. One all encompassing model does not appear suitable for all firms.

The prescriptive writings advocating the practice of long range planning imply its practice is introduced as one comprehensive program at some arbitrary point in time in a firm's history. These writings imply the practice of long range planning is a new managerial phenomenon, at least for a substantial portion of the firms in the industrial system.

The findings of this research study may suggest the practice of long range planning is an evolutionary process

within firms. Not only is long range planning extensively practiced in Canada's industrial system; but the nature of the process appears to vary with the natural growth and development of firms. As firms grow and evolve, the practice of long range planning appears to parallel this development by taking on more importance and by becoming more sophisticated. Planning is, therefore, a natural and common managerial process employed by firms.

This study showed a positive association between firm size and planning and negative associations between planning and each of: actual subsequent firm growth and expectations of future firm growth. These findings suggest the following inferences. As firms grow from smaller to larger size, the level of long range planning increases substantially. Increasing size is accompanied by a decline in the firm's rate of growth. It is possible to infer that further development and use of the long range planning process causes a decline in the firm's growth rate. It is more likely, however, that declining growth rates, or prospects of them, cause further development and use of the long range planning process. An important link between growth and long range planning, nevertheless, does appear to exist. Low growth prospects may be a major reason for improving the long range planning process. Increased long range planning may partially overcome the lower growth prospects and may provide the firm with greater growth stability and security.

One may speculate that management employs the process of long range planning as one of its major instruments in adapting to the changing nature of: the firm's internal resources; the firm's environment; and, the aspiration levels of management. Adverse changes in these variables act as natural impetus for improving the firm's long range planning process. A tentative description of how this process may evolve is advanced. The planning process evolution is closely linked to changes in firm size and growth expectancies.

With increased firm size, the parts of the long range planning process that aid the firm in monitoring and controlling its internal operations would naturally develop first. Increasing size brings complexity which is difficult to control and monitor. Long range planning contains subprocesses which help managers control current operations. These forces managerial analysis of weaknesses and strengths, anticipation of problems and opportunities, and the setting of target objectives which act as guide posts for performance evaluation. Improved communication and increased feelings of team spirit and cooperation are also achieved. At the same time, this planning imposes substantial costs in terms of valuable management time and energy. These costs limit the extent of the long range planning and the rate of its development within the firm. As the firm continues to expand, these costs become smaller relative to the potential operating benefits. The long range planning process, therefore, continues to evolve with increased size.

As firm size increases, problems of maintaining past growth rates occur. Larger firms grow slower than smaller firms. In reaction, their managers seek out new, often entirely different, growth opportunities. The increasing trend towards diversification of North American business enterprises reflects this phenomenon. The prospects of lower growth act as impetus on the development of the planning process. Management's growth aspiration levels are largely determined by past growth experiences and information about the growth rates of other companies in the same industry. The firm's increasing size and position in its markets renders it difficult to maintain these past growth rates. When it becomes evident future growth forecasts will not meet these aspiration levels, a gap develops between expected and desired growth. Substantial managerial efforts are devoted to eliminating this growth expectancy gap. The practice of long range planning becomes a natural vehicle for attacking this gap. Recognition of the possibility of not achieving these aspired growth rates causes further development of the dimensions of the long range planning process concerned with the firm's present and future environment. Management attempts to confirm whether the feared decline in anticipated growth rates is probable. At this point, efforts are devoted to finding new growth opportunities and to identifying the controllable variables in the environment.

When the problems of controlling the complexities of large size and of achieving aspired growth rates are mainly overcome another problem arises. Growth must be controlled to minimize risk exposure and to ensure managerial autonomy. Management strives to build a track record showing a consistent growth pattern rather than one showing wide variations in growth relative to other firms. Further development of the long range planning process is stressed to control and time this future growth. This requires the complete implementation of a comprehensive formal planning system. When, and if, this is achieved the importance of the long range planning process declines. The formal planning system remains intact and operative within the firm at this point of evolution. Less emphasis and attention are given to the process by top management. Much of the planning responsibility is delegated to staff specialists not directly connected with the decision making process of the firm. When a new event emerges and threatens the firm, top management re-emphasizes and again becomes seriously involved in the formal planning process.

The evidence obtained in this research study is consistent with the above brief tentative description of how the planning process may develop inside firms. The associations, between planning and each of firm size and firm growth, the two studies comprising this research project, were clearly consistent. The varying emphasis put on the particular planning sub-processes, as indicated by the interview based study, were also consistent.

In the earliest stages of evolution, firms of small and those of high growth expectancies, the emphasis was as follows. Small firms emphasized operating statements, annual profit plans, and financial forecasts. High growth firms emphasized operating statements, financial forecasts, and one year market and sales forecasts. High growth firm's lower priority on annual profit plans appeared to indicate less concern and need for controlling operations. They appeared, instead, concerned with some short-term monitoring of their environment.

The transition to the next stage, medium size and medium growth expectancies, showed increased emphasis on the above planning sub-processes and significant but moderate introductions of all the other planning sub-processes. The medium size and medium growth firms emphasized all the planning sub-processes surveyed but only with a minimal degree of emphasis on most of them. Large size and low growth firms appeared to practice fairly comprehensive planning.

The above description of the theory of planning has a number of key elements. Among these is the belief that long range planning is a natural managerial phenomenon where emphasis on the various parts of the total process varies with the particular circumstances of the firm. As a total process, it develops in an evolutionary although irregular manner. A most crucial point is to recognize major improvements and changes of emphasis in the process are motivated

by adversity. These negative conditions can be internal operating problems, environmental constraints on growth, or a threat of investor dissatisfaction with the irregularities of the firm's growth pattern.

Suggestions for Additional Research

In the field of general management, there is an indisputable need for additional research on the subject of strategic planning. The knowledge in this field has increased and is growing to the point where emphasis should be placed on testing propositions by the use of empirical data bases. This research study has utilized two empirical data bases in an attempt to contribute further statistical knowledge to the subject area. The importance and complexity of strategic planning demand further research be conducted. It is maintained that the findings of this research study provide some basis for directing and improving further empirical research on the subject.

The long range planning taxonomies developed for this research study offer the potential of facilitating further empirical data-based research. While this three category hierarchy of planning was developed as a simple means of discriminating among the long range planning efforts of the secondary data based study, it does appear to be more generalizable. It provides an acceptable basis for measuring and distinguishing between various levels of long range planning. Use of the taxonomy in this research study indicated it was operational on the two variables tested. This

taxonomy, and any further refinements of it, will be substantially more powerful than the more common dichotomous methods of comparing formal versus informal planners. This taxonomy should prove to be a valuable research tool for those persons investigating the subject of strategic planning. The taxonomies developed for the individual planning sub-processes, in the interview based study, have potential for describing the nature and development of the planning process inside firms.

An important area for further studies in strategic planning is non-profit, purposive organizations. With an ever-increasing proportion of Gross National Product being consumed in the public sector, it is essential to understand both the extent and the nature of the strategic planning process present in the institutions and organizations entrusted with responsibility for these resources. Here is an important area where management principles are applied and a natural area for general management study. To contrast strategic planning in these organizations with both the normative theories and with what is known of strategic planning practices in the private sector is recommended. The potential benefits of studies in this area appear very high.

One of the first planning research issues to attract attention was the question of whether strategic planning paid off. Those involved in strategic planning have believed, as a tenet of faith, that strategic planning was

worthwhile. A few recent research studies have provided evidence to support this belief. The issue of whether long range planning pays off may not, however, be important. Firms do plan and the incidence of such planning is very high. If, as it appears, the practice of long range planning is a naturally evolutionary process which develops with the growth of firms, the question of its value may merely be academic. The answer to the question could be used only to speed up or to slow down the rate of development of the strategic planning process within firms. It is doubtful that it would concern itself with whether its practice would exist.

For those people interested in bringing research evidence to bear on this issue, this research study offers some important clues. The planning taxonomy would obviously be more valuable than the more arbitrary dichotomous methods which are currently in use. In addition, the process of selecting pair-matched firms should give consideration to the growth expectancies of the individual firms. It would appear that growth expectancies plays a major role in the evolution of a firm's long range planning process.

While the level of knowledge about strategic planning is sufficiently advanced such that further case research studies may be unwarranted, there are a number of specific areas in which research of this types would be desirable. One such area concerns the longitudinal study of the development of the process of strategic planning within firms.

It would be desirable to study, over a sufficiently long time period, the evolution of the planning process within a number of firms. The process of planning is not static. By capturing the evolution of the planning process and the reasons for its major changes, it may be possible to gather valuable insights into the process of planning, management, and the workings of the industrial system as a whole.

Further work is required on the theory of planning. The present conventional wisdom advocates one all-encompassing planning model for all firm situations. Actual planning practice appears to vary by firm size and firm growth. Consideration should be given to generating planning models more appropriate to differing firm situations. Efforts should also be directed to how the planning process evolves within firms. Long range planning is not normally instituted at one point in time. Instead, it appears to gradually develop in response to a firm's changing conditions. Knowledge of this development would provide a basis for guiding firms building their long range planning systems.

Further research should be conducted into how long range planning varies by the types of diversification adopted by firms. It would be worthwhile knowing whether firms which have diversified away from their traditional core skills plan more or less than firms which have diversified within or close to their traditional core skills.

Implications for Business Practice

To the business manager the fundamental issue is: -- does long range planning pay off? The answer appears to be both a clear yes and a clear no depending on the circumstances. A positive pay-off depends upon the particular situation the firm and the kind of long range process it adopts. A proper fit between the emphasis put on various parts of the planning process, and the nature of the firm and its environment must be obtained to achieve optimal benefits from long range planning. A normative, comprehensive formal long range planning process is not appropriate in many cases. The process must fit the circumstances of the firm.

Determination of the nature and the emphasis to be put on the various planning sub-processes should consider actual practices of similar firms as well as normative prescriptive writings. Small firms with attractive growth opportunities were found to practice little long range planning. This lack of planning may be very costly. Loss of unperceived opportunities and an inability to obtain a proper mix of resource inputs at a critical time could be examples. These firms may find, at various times, they do not have sufficient funds, marketing abilities, supplies, production capacity, knowledge or managerial talent to take advantage of attractive opportunities. The cost of initiating and improving a planning process, measured in terms the opportunity cost of management time, may be very high. The fact

that so few small firms practiced comprehensive planning may indicate the benefits do not outweigh the costs. Implementation of a comprehensive long range planning process may be inappropriate to high growth small firms. Such a system may violate and upset the natural evolution of the planning process within the firm.

Even in these firms, however, some planning was definitely required. These firms indicated a need for less formal approaches to planning. Less systematic methods of sizing-up, and predicting the future were found. Emphasis was placed on identifying a few critical variables and monitoring them. The evidence from this research study indicates that most often this pertained to the funds requirements of the firm. Little emphasis was devoted to generating new alternatives. The evidence strongly indicated that small and high growth firms should emphasize at least the following planning sub-processes: financial forecasts, operating statements and annual profit plans.

Managers of firms with attractive but tapering growth prospects should expect and prepare for major changes in the development of their long range planning practices. In addition to re-affirming emphasis on financial forecasts, operating statements, and annual profit plans, the evidence indicated that these firms begin to put some significant emphasis on instituting a comprehensive planning system at minimal levels of sophistication. One would expect managerial energies to naturally concentrate on parts of the

planning process concerned with the environment, future markets and sales forecasts. In firm situations where internal operating problems threaten performance, it can be expected the parts of the process providing methods of controlling and monitoring will be bolstered.

For larger firms with low growth prospects comprehensive formal planning appears required. In most cases, the major motivation for improving the long range planning process will be to close the growth expectancy gap. If emphasis is put on inappropriate parts of the planning process, dysfunctional planning could occur. If planning sub-processes which look exclusively inside the firm are emphasized, scarce management time and energy could be wasted. The use of the planning system to generate often impractical operational fine tunings may provide management with an escape outlet for not confronting environmental problems.

Facing problems and taking risks may be avoided in the name of planning. Planning can, however, often generate new profitable opportunities if properly applied. In these situations, planning processes emphasizing new environments must be developed. New product and market planning and R & D or acquisitions staff additions will be considered. Often, a high level re-examination of the firm's basic mission in terms of relationships with its markets, technologies, and products is required.

Summary

The most important implication for business managers from this research is that the process of long range planning varies by both the nature of the firm and of its environment. Just as firms evolve in terms of size and growth, a firm's long range planning process evolves. Attempts to implement one comprehensive all encompassing planning process in all situations is probably not desirable and would often encounter substantial natural resistance. Design of a firm's long range planning process should recognize the realities of prevailing practice and be designed for the particular circumstances. Only when the long range planning process of a firm is compatible with its own particular situation will the effort expended be adequately rewarded. This necessitates top management intimately involved in the practice and development of their firm's planning systems. Managers should monitor the development over time of the long range planning process within their firm to ensure the emphasis placed on the various sub-processes inherent in the total process is compatible with the particular circumstances of their firm.

APPENDIX I

LONG RANGE PLANNING QUESTIONNAIRE - 1968

The University of Western Ontario, London, Canada

School of Business Administration

- STRICTLY CONFIDENTIAL -

No information of any kind will be divulged
that would indicate or identify the company concerned

LONG RANGE PLANNING QUESTIONNAIRE INSTRUCTIONS

1. Please carefully follow all capitalized instructions throughout the questionnaire. In no case will any respondent answer all questions. The instructions throughout the questionnaire will tell you which questions to do.

2. Please answer the classification data at the end of the questionnaire in all cases.

3. Please enclose a head office organization chart with the completed questionnaire, if possible. If the company has written goals and/or objectives, we would appreciate it if you could enclose a copy of same, as requested in question 22.

4. Please mail the completed questionnaire to the following return address:

UNIVERSITY OF WESTERN ONTARIO,
c/o DR. D. H. THAIN,
SCHOOL OF BUSINESS ADMINISTRATION,
LONDON, ONTARIO.

DEFINITION OF TERMS

For the purposes of this questionnaire the following terms will be defined as follows:

Company goals are broad qualitative statements which provide basic guidelines for the company's activities.

Company objectives are quantitative statements generally falling within the broad framework of the company goals.

Strategy is a set of top management decisions that commit the organization and its resources to a sequence of major moves designed to accomplish agreed upon goals and/or objectives. These moves are conditional, depending upon the firm's environment in the future. A specific date should be set for each of these future moves.

Long Range Planning is primarily formulating company goals and objectives and establishing a strategy for accomplishing these goals and objectives.

Standard practices are written procedures outlining a planned approach to long range planning activities.

THE UNIVERSITY OF WESTERN ONTARIO SCHOOL OF BUSINESS ADMINISTRATION

LONG RANGE PLANNING QUESTIONNAIRE

1. Check which of the following markets are served by your company, and indicate the percentage breakdown of total company sales in each market.

Consumer	( )	_____ %
Industrial or Commercial	( )	_____ %
Military (or other government)	( )	_____ %
Export	( )	_____ %

2. Does your company do any long range planning? (For more than one year ahead)

Yes ( )

No ( )

IF NO, PLEASE PROCEED TO QUESTION 37

3. Does your company have standard practices (i.e. agreed upon methods) for conducting your long range planning effort at present?

Yes ( )

No ( )

IF NO, PLEASE PROCEED TO QUESTION 5

4. How long has your company had standard practices for long range planning?

1 year or less	( )	4 years	( )
2 years	( )	5 years or more	( )
3 years	( )		

PLEASE PROCEED TO QUESTION 6

5. If your company does not have standard practices for conducting long range planning, what methods does your company employ for doing its long range planning?

_____

_____

_____

_____

6. For each of (a), (b), (c) and (d), which statement best describes where most of the long range planning work-load is performed in your company.

(a) Line management ( )
Staff management ( )

(b) Top management ( )
Middle management ( )
Lower management ( )

(c) By committee(s) ( )
By individual(s) ( )

(d) Centralized ( )
Decentralized ( )

7. Are there subsidiary companies, branch plants, or field divisions in your Canadian corporate organization?

Yes ( )

No ( )

IF NO, PLEASE PROCEED TO QUESTION 9

8. How many of these subsidiary companies, branch plants, or field divisions conduct their own long range planning programs?

None of them do ( )
Some of them do ( )
Most of them do ( )
All of them do ( )

9. Does your company have a person whose sole responsibility is the development and co-ordination of long range plans for the company as a whole?

Yes ( ) What is his title? _____

No ( ) What is his salary range? _____

IF YES, PLEASE PROCEED TO QUESTION 11

10. If you do not have a person whose sole responsibility is the development and co-ordination of long range company plans, what person(s) is(are) primarily responsible for your long range planning efforts?

Title _____

11. To whom does this person(s) report?

Title _____

12. Does this person(s) have a full time planning staff?

Yes ( ) If yes, how many? _____

No ( )

13. Does he get continuous assistance from certain other people in the company?

Yes ( )

No ( )

IF NO, PLEASE PROCEED TO QUESTION 15

14. Please fill in the titles of those who assist him and state what assistance he gets from each.

Titles of those assisting him	Description of assistance given
_____	_____
_____	_____
_____	_____
_____	_____

15. Does your company have a management or executive committee which is involved in the planning efforts of the company?

Yes ( )

No ( )

IF NO, PLEASE PROCEED TO QUESTION 19

16. Who regularly comprises this committee? (Please list titles)

_____

_____

_____

_____

17. Generally speaking, how often does this committee meet to discuss long range planning?

Every week	( )	Every 3-6 months	( )
Every 2 weeks	( )	6 months to 1 year	( )
Every month	( )	Less than once per year	( )
Every 1-3 months	( )	Other, please specify	_____

18. What kind of assistance does the planning committee provide the chief planner or the person primarily responsible for the long range planning effort?

_____

_____

_____

_____

IMPORTANT INSTRUCTIONS

IN ANSWERING QUESTIONS 19 TO 36, PLEASE REFER TO PAGE (i) FOR DEFINITION OF COMPANY GOALS, OBJECTIVES AND STRATEGY

19. Does your company distinguish between goals and objectives?

Yes ( )

No ( )

20. Has the company defined any long range goals and/or objectives?

Yes ( )

No ( )

IF NO, PLEASE PROCEED TO QUESTION 24

21. To what extent are the company goals and objectives communicated throughout the organization?

Not beyond top management ( )
To middle management ( )
To lower or first-line management ( )

22. Are these goals and objectives written? (If YES, it would be appreciated if you could enclose a copy.)

Yes ( )

No ( )

23. Are the objectives specified in quantitative terms?

Yes ( )

No ( )

24. Does the company have a corporate strategy through which it plans to achieve its goals and/or objectives?

Yes ( )

No ( )

IF NO, PLEASE PROCEED TO QUESTION 36

25. Does the corporate strategy consist of a series of major moves?

Yes ( )

No ( )

If not, how would you best describe it?

_____

_____

Is this strategy written?

Yes ( )

No ( )

26. To what extent do you develop and assess alternatives in deciding upon a strategy?

Always ( )
Usually ( )
Sometimes ( )
Seldom ( )
Never ( )

27. In formulating objectives and strategy how would you rate the importance of each of the following?

CHECK ONE BOX ON EACH LINE	Very Important	Important	Little Importance
Forecast of future economic conditions			
Forecast of future competitive conditions			
Forecast of political conditions			
Forecast of the rate of technological change			
Forecast of future funds needed			
Forecast of future sales			
Forecast of future market opportunities			
Forecast of future personnel needs			
Forecast of future profits			
Forecast of production facilities needed			

28. How do the following areas rate in importance in sizing up the company's situation in setting objectives and strategy?

CHECK ONE BOX ON EACH LINE	Very Important	Important	Little Importance
Advertising			
Distribution system			
Financial strength			
Measurement of operating results			
Management resources			
Management rewards related to performance			
Organization structure			
Pricing			
Product line			
Production costs and capacity			
Research and development ability			
Return on investment			
Technical operating capabilities			

29. Please check which (one or more) of the following long range forecasts (done for more than one year ahead) are revised on a regular basis as part of your long range planning program.

Forecast of rate of technological change	( )
Forecast of political conditions	( )
Forecast of future markets	( )
Forecast of future sales	( )
Forecast of future economic conditions	( )
Forecast of future industry conditions	( )
Forecast of production facilities needed	( )
Forecast of future profits	( )
Forecast of future funds needed	( )
Forecast of future personnel needs	( )

30. Please check which of the following long range plans of action or strategy are formulated as part of your long range planning program.

Plans for future marketing strategy	( )
Plans for new product development and research	( )
Plans for developing new production facilities	( )
Plans for acquiring future sources of funds	( )
Plans for acquiring future personnel needed	( )
Plans for new diversification opportunities	( )

31. Please check which of the following reviews are done annually as part of your long range planning program.

Review of planning procedures and methods ( )
Review of long range plans themselves ( )

32. Has the company standard practices for formally reviewing and updating long range plans?

Yes ( )

No ( )

33. Who set or formulated the long range company objectives and strategy? (Please state titles of persons or groups.)

_____

_____

_____

_____

34. Please check which of the following activities are engaged in by the long range planning group.

Developing company goals and objectives ( )

Educating and encouraging operating managers and others throughout the company to recognize the value of planning and to plan effectively. ( )

Developing planning procedures and standards to be followed by divisions or departments. ( )

Integrating sales and other forecasts made by divisions or departments. ( )

Monitoring and assessing external changes in technology and the business environment. ( )

Evaluating the progress of company development relative to established goals. ( )

Developing strategies through which the company can achieve its goals and objectives. ( )

Identifying industry, or economic areas, in which the company can most effectively participate relative to its capabilities. ( )

Evaluating competitive threats. ( )

Balancing divisional goals with company-wide goals. ( )

Developing methods for evaluating planning performance. ( )

35. Does your company have a breakdown or an estimation at present of the annual costs of its long range planning program?

Yes ( ) Rough estimate of these annual costs at present. $ _____

No ( )

PLEASE PROCEED TO QUESTION 37

36. Briefly state the company's major reason(s) for not formulating objectives and/or strategy.

_____

_____

IMPORTANT INSTRUCTIONS

IF YOUR COMPANY HAS STANDARD PRACTICES (PLANNED APPROACH) FOR CONDUCTING YOUR LONG RANGE PLANNING EFFORT AT PRESENT, PLEASE PROCEED TO CLASSIFICATION DATA. (QUESTIONS 47 TO 61)

IF YOUR COMPANY DOES NOT HAVE STANDARD PRACTICES FOR CONDUCTING YOUR LONG RANGE PLANNING EFFORT AT PRESENT, CONTINUE.

37. Did your company ever have a long range planning program (using standard practices) in the past?

Yes ( )

No ( )

IF NO, PLEASE PROCEED TO QUESTION 41

38. What were the main reasons why it was discontinued?

_____

_____

_____

_____

39. Was this planning program specifically under the direction of:

The president or chief executive	( )
A permanent planning director	( )
A permanent planning director assisted by a staff	( )
A top executive - if so, specify his title _____	( )
Other, please specify title _____	( )

40. How long was this program in effect? (Approximately) _____

41. Are you thinking of setting up a long range planning program using standard practices?

Yes ( )

No ( )

42. If you were to set up a long range planning program in your company, using standard practices, what activities do you feel it should entail?

_____

_____

_____

_____

_____

43. How many people on a full time basis would you feel to be necessary for the accomplishment of these activities?

_____

44. Do you feel that the time and the money which you would have to invest in a long range planning program with standard practices would be worth the benefits of such a program to your company?

Yes ( )

No ( )

IF NO, PLEASE PROCEED TO QUESTION 46

45. What are the major reasons that you have for not engaging in such a long range planning program?

_____

_____

_____

_____

PLEASE PROCEED TO QUESTION 47

46. What are the major reasons for concluding that the benefits of a long range planning program with standard procedures would not be worth the costs involved in terms of time and money?

_____

_____

_____

TO BE COMPLETED BY ALL RESPONDENTS

COMPANY CLASSIFICATION DATA

Company Name: _____

(Optional - if you do not wish to disclose the name of your company, omit this question)

47. What industry (or industries) is your company in? _____

48. Approximately what are the company's total assets? (in dollars)

_____ Year _____ _____

49. Approximately what are the company's current annual sales? (in dollars)

_____ Year _____

50. Approximately how many employees do you have at present?

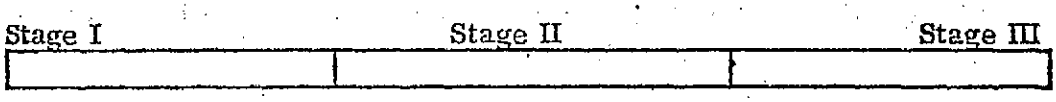
Full time _____ Part time _____ Date _____

51. Please check the appropriate average rate of return (net profits after tax as a per cent of net worth) of the company over the past five years.

Up to 6% ( )
6% - 10% ( )
10% - 20% ( )
20% - 30% ( )
Over 30% ( )

52. Please indicate which statement best describes the stage of development of your corporate organization?

Degree of complexity →



Stage I	Stage II	Stage III
One unit management with key decisions centered in one man.	One unit management group with functional specialized top managers	Decentralized divisions or operating units reporting to a central office.

PLEASE INDICATE A POINT ON THE ABOVE SCALE

53. Is the company a subsidiary or division of a parent, or holding company?

Yes ( )

No ( )

IF NO, PLEASE PROCEED TO QUESTION 55

54. (a) Is the parent or holding company:

British ( )
American ( )
Canadian ( )
Other, please specify nationality _____

(b) Is your own company free to plan its future operations?

Yes ( )
No ( )
Partially ( )

RESPONDENT CLASSIFICATION DATA

55. Name of Respondent: _____
(Optional - If you do not wish to disclose your name, omit this question)

56. Age of Respondent: _____

57. Education of Respondent:

Public School ( )

High School ( )

College:

Undergraduate ( ) Degree received if any _____
Graduate Studies ( ) Degree received if any _____

58. Present position of respondent in the company.

Title: _____

59. What do you consider the three most important criteria in evaluating the success of your company?

_____

_____

_____

60. How would you rate the success of your company over the past 5 years?

Outstandingly successful	( )
Very successful	( )
Moderately successful	( )
Not very successful	( )
Unsuccessful	( )

61. Is there any information pertaining to long range planning, that your company would be interested in obtaining from institutions such as Government, Business Schools or Industry Associations?

_____

_____

_____

_____

THANK YOU VERY MUCH FOR YOUR ASSISTANCE

We would appreciate any comments or elaborations you care to make on the following comment sheet.

COMMENT SHEET

APPENDIX II

CORPORATIONS AND POSITION OF RESPONDENT OF FIRM IN SAMPLE - 1968 DATA BASE

APPENDIX II

CORPORATIONS AND POSITION OF RESPONDENTS OF FIRMS INCLUDED IN SAMPLE - 1968 DATA BASE

Abitibi
- Vice President, Corporate Development

The Alberta Gas Trunk Line Company Limited
- Assistant Secretary

Alcan
- Planning Assistant to Executive Vice President - Finance

Algoma Steel
- Chairman and President

B.C. Forest Products
- Manager of Financial Planning

Bell Canada
- Assistant Vice-President (Planning)

British Columbia Telephone
- President and Chief Executive Officer

Canada Cement
- Assistant to the President

Calgary Power
- Executive Assistant - Finance

Canadian Tire Corporation
- President

Canron Ltd.
- Chairman and President

C.D.R.H. Limited
- President and Chief Executive Officer

Cominco
- Administrative Assistant

Consolodated Bathurst
- Planning Coordinator

Consumers Gas
- Assistant to the President

Distillers - Corporation - Seagrams
- Vice-President - Canadian Subsidiaries

Dominion Stores
- Director of Corporate Planning

Electrohome Limited
- Executive Assistant to the President

Gulf Oil
- Manager - Corporate Planning

Hawker Siddeley
- General Manager

Hiram Walker - Gooderham
- position not disclosed

Hudson's Bay Co.
- Assistant Controller

Husky Oil Canada Ltd.
- Manager Planning & Economics

Imperial Oil Limited
- Executive Vice-President

International Business Machines Company Limited
- position not disclosed

International Utilities
- Chairman of the Board and Chief Executive Officer

John Labatt
- Vice-President, Planning and Development

Lake Ontario Cement
- President

Laura Secord
- President

Leigh Instruments Limited
- Planning Assistant

MacMillan Bloedel
- position not disclosed

Molson Industries
- Vice-President, Corporate Planning

Northern and Central Gas Corporation
- Assistant to the President

Phillips Electronics Ltd.
- Assistant Treasurer

Rio Algom
- Executive Vice-President

Scott Paper
- Executive Vice-President

Shell Canada Limited
- Executive Vice-President

Standard Paving & Materials Ltd.
- Secretary-Treasurer

Stelco
- Vice-President, Planning, Engineering and Research

Texaco Canada Ltd.
- Manager Economics Dept.

Union Gas
- Vice-President - Finance and Treasurer

Weldwood of Canada
- Vice-President

Zellers Ltd.
- President and Chief Executive Officer

APPENDIX III

SUMMARY OF LONG RANGE PLANNING RATING SURVEY - ADDITIVE METHOD

APPENDIX III

SUMMARY OF LONG RANGE PLANNING RATING SURVEY - ADDITIVE METHOD

The ten LRP planning characteristics which the researchers used were as follows:

		Average Value
1)	The existence of an annual review of the long range plans themselves,	3
2)	The existence of a corporate strategy through which the company plans to achieve its goals and/or objectives,	4
3)	The existence of long range forecasts which are revised on a regular basis for any three of: markets, sales, production facilities, funds, personnel,	3
4)	The existence of standard practices for conducting the long range planning effort,	3
5)	The existence of written goals and objectives,	2
6)	The existence of objectives which are specified in quantitative terms,	2
7)	The existence of standard practices for formally reviewing and updating long range plans,	2
8)	The existence of a corporate strategy that is written,	2
9)	The existence of an annual review of long range planning procedures and methods,	2
10)	The existence of a full time planning staff.	2
		25

Note: The above ten LRP characteristics are presented in random sequence.

APPENDIX IV

LONG RANGE PLANNING RATING SURVEY - MULTIPLICATIVE METHOD

APPENDIX IV

LONG RANGE PLANNING RATING SURVEY - MULTIPLICATIVE METHOD

A number of researchers have gathered data on the long range planning effort of a large number of Canadian firms. These researchers would like your assistance in overcoming some problems. Attached are descriptions of the particular long range planning characteristics which existed in certain of their sample firms. They would like you to help them assess the relative intensity of the long range planning effort among the firms by giving each of the described firms a score between 0 and 100. A score sheet is attached for this purpose.

The ten LRP characteristics which the researchers used were as follows:

1) The existence of an annual review of the long range plans themselves,

2) The existence of a corporate strategy through which the company plans to achieve its goals and/or objectives,

3) The existence of long range forecasts which are revised on a regular basis for any three of: markets, sales, production facilities, funds, personnel,

4) The existence of standard practices for conducting the long range planning effort,

5) The existence of written goals and objectives,

6) The existence of objectives which are specified in quantitative terms,

7) The existence of standard practices for formally reviewing and updating long range plans,

8) The existence of a corporate strategy that is written,

9) The existence of an annual review of long range planning procedures and methods,

10) The existence of a full time planning staff.

For the purposes of this research the following terms were defined as follows:

- Company goals are broad qualitative statements which provide basic guidelines for the company's activities.
- Company objectives are quantitative statements generally falling within the broad framework of the company goals.
- Strategy is a set of top management decisions that commit the organization and its resources to a sequence of major moves designed to accomplish agreed upon goals and/or objectives. These moves are conditional, depending upon the firm's environment in the future. A specific date should be set for each of these future moves.
- Long Range Planning is primarily formulating company goals and objectives and establishing a strategy for accomplishing these goals and objectives.
- Standard practices are written procedures outlining a planned approach to long range planning activities.

For each of the following companies, evaluate and score the intensity of their LRP effort. For relative purposes, Company C1 has a score of 100. Each of the other firms should have a score relative to firm C1. The firms are ordered in series for tabulation purposes and not because of their LRP effort.

Long Range Planning Characteristics	Sample Companies			
	D4 D3 D2 D1	A12 A11 A10 A9 A8 A7 A6 A5 A4 A3 A2 A1	B2 B1	C8 C7 C6 C5 C4 C3 C2 C1
1) Annual Review	X X X X	X X X X X X X X X X X X	X X	X X X X X X X X
2) Strategy	X X X X	X X X X X X X X X X X X	X X	X X X X X X X X
3) Forecasts		X X X X X X X X X X X X	X X	X X X X X X X X
4) Standard LRP Practices	X X X	X X X X X X X	X X	X X X X X X X X
5) Written Goals	X X X	X X X X X X	X X	X X X X X X X X
6) Quantified Objectives	X X	X X X	X X	X X X X X X X
7) Standard Formal Review	X	X X X X X		X X X X X X X X
8) Written Strategy		X X X X X X		X X X X X
9) Annual Review of Procedures	X	X X	X	X X X X X
10) Planning Staff		X X X		X X X X X
Long Range Planning Rating				
Average Rating From Polling	46 53 43 40	77 63 57 49 86 63 58 66 61 52 48 41	73 67	85 84 91 83 89 83 92 100

APPENDIX V

LONG RANGE PLANNING
PERSONAL INTERVIEW GUIDELINE

DITC - LRP PROJECT PERSONAL INTERVIEW GUIDE

I. INDUSTRY/COMPANY BACKGROUND

NOTE: IT IS INTENDED THAT THE ANSWERS TO SOME OF THESE QUESTIONS WILL BE RESEARCHED IN ADVANCE AND THEN VERIFIED OR COMPLETED AS NECESSARY AT THE START OF THE INTERVIEW.

1. IN WHICH INDUSTRIES OR SEGMENTS OF INDUSTRIES DO YOU COMPETE?

NAME	%SALES	%ASSETS	RECENT (5 YR) GROWTH 0-10%	11-20%	21%+	MARKET POSITION #1	#2-3	#~~3-5~~ 4-5	#6-10
1.									
2.									
3.									
4.									
5.									

COMMENTS: _____

2. WHAT IS YOUR EXPECTATION OF THE GROWTH RATE OF (each one) INDUSTRY TO 1977? WHY? IS THIS EXCELLENT? GOOD? FAIR? PROBLEMS?

INDUSTRY	EXPECTED GROWTH RATE 0-10%	11-20%	21%+	COMMENTS (Attempt to obtain exact %) (Put in Exact Nos. if Given)
1.				
2.				
3.				
4.				
5.				

IN WHAT STAGE OF GROWTH ARE THE INDUSTRIES?

GROWTH (> GNP)
MATURE (= GNP)
[illegible] (< GNP)

3. WHO ARE YOUR MAJOR COMPETITORS IN THE (each one) INDUSTRY? ANY COMPANIES UNSUCCESSFUL? WHY?

INDUSTRY	COMPETITORS NAMED	WHY SUCCESSFUL/ THEIR STRENGTHS	WHY UNSUCCESSFUL/ THEIR WEAKNESSES
1			
2			
3			
4			
5			

4. WITH RESPECT TO (each strength or weakness), HOW DO YOU RATE YOUR COMPANY?

INDUSTRY	STRENGTH/WEAKNESS	COMMENTS
1.		
2.		
3.		
4.		
5.		

3. WHO ARE YOUR MAJOR COMPETITORS IN THE (each one) INDUSTRY? ANY COMPANIES UNSUCCESSFUL? WHY?

INDUSTRY	COMPETITORS NAMED	WHY SUCCESSFUL/ THEIR STRENGTHS	WHY UNSUCCESSFUL/ THEIR WEAKNESSES
1			
2			
3			
4			
5			

4. WITH RESPECT TO (each strength or weakness), HOW DO YOU RATE YOUR COMPANY?

INDUSTRY	STRENGTH/WEAKNESS	COMMENTS
1.		
2.		
3.		
4.		
5.		

(SEEKING CLARIFICATION)
THEN YOUR GROWTH RATE IN THE (each one) INDUSTRY HAS BEEN EXCELLENT? GOOD? FAIR? PROBLEM? WHY?

INDUSTRY	RECENT (5 YR) GROWTH 0-10%	11-20%	21%+	COMMENTS (PUT IN EXACT NOS. IF GIVEN)
1.				
2.				
3.				
4.				
5.				

6. WHAT IS YOUR EXPECTATION OF THE COMPANY'S GROWTH RATE OVER THE NEXT 5 YEARS IN THE (each one) INDUSTRY? WHY? (HIS ATTITUDE/EVALUATION)

INDUSTRY	EXPECTED GROWTH 0-10%	11-20%	21%+	COMMENTS
1				
2				
3				
4				
5				

7. WHAT IS THE NATURE OR STRUCTURE OF THE OWNERSHIP OF YOUR COMPANY?

	OWNER	NATIONALITY	%age	COMMENTS
1.				
2.				
3.				
4.				

8. IF APPROPRIATE, WHAT MAJOR BUDGETS OR REPORTS DO YOU PREPARE FOR THEM?

9 WHAT IS THE EXTENT OF HELP, OR DIRECTION AND GUIDANCE, (GUIDELINES, POLICIES) THAT YOU GET FROM (the parent) WITH RESPECT TO:

	COMMENTS (LOOK FOR DEGREE OF AUTONOMY)
1. SETTING OPERATING OBJECTIVES	
2. CAPITAL INVESTMENTS - type - geographic	
3. THE PRODUCTS THAT YOU MARKET - domestic - foreign	
4. THE MARKETS THAT YOU SERVE	
5. YOUR SUPPLIERS	
6. MGMT. PROMOTIONS AND ASSIGNMENTS	

10. DO YOU HAVE PROFIT CENTERS IN YOUR FIRM? (OPERATING DIVISIONS OR SUBSIDIARIES) DESCRIBE....

DIVISIONS	SUBSIDIARIES	COMMENTS

11. WHAT MAJOR BUDGETS OR REPORTS DO THEY PREPARE FOR ~~YOU~~ HEAD OFFICE?

WHAT IS THE EXTENT OF HELP, OR DIRECTION AND GUIDANCE (GUIDELINES, POLICIES) THAT YOU GIVE THEM WITH RESPECT TO:

COMMENTS

1. SETTING OPERATING OBJECTIVES

2. CAPITAL INVESTMENTS

3. THE PRODUCTS THAT THEY MARKET

4. THE MARKETS THAT THEY SERVE

5. THEIR SUPPLIERS

6. MANAGEMENT PROMOTIONS AND ASSIGN.

II. INTERNAL DATA

13. HOW OFTEN ARE PROFIT AND LOSS STATEMENTS PREPARED?

WHAT BREAKDOWNS?

WHERE PPD.?

HOW SOON?

DAILY/WEEKLY INFORMATION USED?

14. WOULD IT BE VALID TO ASSUME THAT YOU PREPARE AN ANNUAL PROFIT PLAN? (FINANCIAL FORECAST)

WHEN PREPARED?

WHO/WHERE?

BREAKDOWNS?

APPROVAL?

ARE THE ACTUAL RESULTS OF A PERIOD COMPARED PRIMARILY WITH THE CORRESPONDING PERIOD A YEAR AGO OR AGAINST THE PROFIT PLAN?

HOW OFTEN SUCH REVIEWS? _____

REVISIONS MADE? _____

WHO APPROVES? _____

16. CAN YOU RECALL ANY INSTANCE (NOT REWARDED?) IN THE PAST FEW YEARS WHERE A MANAGER HAS BEEN REWARDED OR PUNISHED PRIMARILY BECAUSE OF HIS PERFORMANCE RELATIVE TO THE PROFIT PLAN?

_____

_____

_____

17. IN GENERAL, HOW DOES MANAGEMENT REMUNERATION RELATE TO THE PROFIT PLAN AND ACTUAL RESULTS? (THE EXTENT AND WHAT BASES) (POLICIES)

_____

_____

_____

18. DO YOU HAVE ANY STAFF PEOPLE WHO INVESTIGATE AND REPORT ON THE OPPORTUNITIES AND PROBLEMS INTERNAL TO THE FIRM? EXAMPLES? (LINE MANAGEMENT'S ROLE...SPECIAL PROJECTS/ASSIGNMENTS)

_____

_____

_____

_____

19. HAVE THERE BEEN ANY IMPORTANT OR SIGNIFICANT CHANGES MADE RECENTLY TO THE NATURE OF:

	CHANGES MADE	RATIONALE
1. YOUR FINANCIAL STATEMENTS		

2. YOUR PROFIT PLANS

3. SPECIAL STAFF STUDIES

20. DO YOU ANTICIPATE ANY IMPORTANT OR SIGNIFICANT CHANGES (NEXT 2 YEARS)? WHY?

	CHANGES TO BE MADE	RATIONALE
1. YOUR FINANCIAL STATEMENTS		
2. YOUR PROFIT PLAN		
3. SPECIAL STAFF STUDIES		

THE ENVIRONMENT

21. HOW DO YOU WATCH FOR OR DETERMINE TRENDS OR CHANGES IN THE MARKETPLACE? (SIZE, SHARE, CUSTOMER BEHAVIOUR...)

WHO? _____

SOURCES? _____

REPORTS? _____

ANTICIPATORY? _____

22. HOW DO YOU KEEP UP WITH OR WATCH GOVERNMENT DEVELOPMENTS WHICH MAY BE IMPORTANT TO YOUR COMPANY?

WHO? _____

SOURCES? _____

REPORTS? _____

ANTICIPATORY? _____

23. HOW DO YOU WATCH AND ASSESS THE ECONOMIC SITUATION?

WHO? _____

SOURCES? _____

REPORTS? _____

ANTICIPATORY? _____

24. HOW DO YOU KEEP UP WITH OR WATCH FOR TECHNOLOGICAL CHANGES WHICH MAY BE IMPORTANT TO YOUR FIRM?

WHO? _____

SOURCES? _____

REPORTS? _____

ANTICIPATORY? _____

25. HOW DO YOU WATCH AND ASSESS YOUR COMPETITORS?

WHO? _____

SOURCES? _____

REPORTS? _____

ANTICPATORY? _____

26. IF APPROPRIATE, DO YOU BRING THESE VARIOUS ASSESSMENTS OF THE ENVIRONMENT TOGETHER?

_____

_____

_____

27. HAVE THERE BEEN ANY IMPORTANT OR SIGNIFICANT CHANGES MADE RECENTLY IN THE WAY(S) YOU KEEP UP WITH/WATCH/ASSESS:

	CHANGES MADE	REASONS
1. THE MARKETPLACE	_____	_____
	_____	_____

2. GOV'T DEVELOPMENTS

3. ECONOMIC SIT^{n}.

4. TECHNOLOGY

5. COMPETITION

28. DO YOU ANTICIPATE ANY IMPORTANT OR SIGNIFICANT CHANGES? WHY?

	CHANGES TO BE MADE	REASONS
1. THE MARKETPLACE		
2. GOV'T DEVELOPMENTS		
3. ECONOMIC SIT^{n}		
4. TECHNOLOGY		
5. COMPETITION		

IV. INTERNAL FORECASTING

29. (BY WHAT PROCESS) HOW DOES YOUR FIRM MAKE (PREPARE, FORMULATE) MARKET AND SALES PROJECTIONS OR FORECASTS?

PROCESS: WHO?

WHERE?

HOW LONG?

INFO. SOURCES?

REPORTS?

30. (HOW) DOES YOUR FIRM PROJECT OR FORECAST ITS ... NEEDS?

PROCESS	FINANCIAL	PROD^{n} FACILITIES	PERSONNEL
WHO?			
WHERE?			
HOW LONG?			

INFO. SOURCES? _____ _____ _____

REPORTS? _____ _____ _____

31. IF APPROPRIATE DO YOU BRING ALL OF THESE FORECASTS OR PROJECTIONS OF YOUR FIRM'S OPERATIONS TOGETHER? (CO-ORDINATION)

_____

_____

_____

_____

_____

32. HAVE THERE BEEN ANY IMPORTANT OR SIGNIFICANT CHANGES MADE RECENTLY TO THE WAY YOU GO ABOUT PREPARING:

	CHANGES MADE	RATIONALE
1. MKT. FORECAST	_____	_____
	_____	_____
2. FIN. FORECAST	_____	_____
	_____	_____
3. PROD^{n} FORECAST	_____	_____
	_____	_____
4. PERS. FORECAST	_____	_____
	_____	_____

33. DO YOU ANTICIPATE ANY IMPORTANT OR SIGNIFICANT CHANGES? WHY?

	CHANGES TO BE MADE	RATIONALE
1. MKT. FORECAST	_____	_____
2. FIN. FORECAST	_____	_____
3. PROD^{n} FORECAST	_____	_____
4. PERS. FORECAST	_____	_____

V RESEARCH ORIENTATION

34. HOW DOES YOUR FIRM LEARN ABOUT AND INVESTIGATE NEW PRODUCTS OR INNOVATIONS WHICH MAY BE ADDED TO YOUR PRODUCT LINE?

PROCESS	FORMALLY	INFORMALLY
WHO?		
WHERE?		
HOW?		
INFO. SOURCES?		
REPORTS?		
REVIEW/SCREEN?		
EXAMPLE?		

35. COULD YOU DESCRIBE ANY OTHER RESEARCH AND DEVELOPMENT EFFORTS OF YOUR FIRM?

PROCESS

WHO? _____

WHERE? _____

HOW? _____

_____

_____

(HAVE YOU RECENTLY INVESTIGATED)

36. DOES YOUR FIRM INVESTIGATE THE POSSIBILITY OF ENTERING ENTIRELY DIFFERENT BUSINESS FIELDS WHICH WOULD BE NEW TO YOUR COMPANY?

PROCESS

WHO? _____

HOW? _____

INFO. SOURCES? _____

REPORTS? _____

REVIEW? _____

EXAMPLES? _____

37. WHAT ARE THE IMPORTANT THINGS YOU LOOK AT IN EVALUATING PROSPECTIVE INVESTMENT OPPORTUNITIES?

38. IF NO DIVERSIFICATION PLANNING....

DO YOU PLAN TO MAKE NEW INVESTMENT INVESTIGATIONS IN THE NEAR FUTURE?

39. HAVE THERE BEEN ANY IMPORTANT OR SIGNIFICANT CHANGES RECENTLY IN THE WAY YOU GO ABOUT:

	CHANGES MADE	REASONS
1. NEW PRODUCT DEVT		
2. R AND D		
3. DIVERSIFICATION PLANNING		

40. DO YOU ANTICIPATE ANY IMPORTANT OR SIGNIFICANT CHANGES? WHY?

	CHANGES TO BE MADE	REASONS
1. NEW PROD. DEV'T		
2. R AND D		
3. DIVERS. PLANNING		

VI. FORMAL PLANNING SYSTEMS

. DO YOU PREPARE A PROFIT PLAN FOR GREATER THAN ONE YEAR AHEAD?

PROCESS

WHO? _____

WHERE? _____

HOW? _____

How often changed?

INFO.? _____

REVIEW? _____

APPROVE? _____

42. DOES IT DIFFER FROM YOUR ANNUAL PROFIT PLAN IN CONTENT, DETAIL, BREAKDOWNS?

_____

_____

_____

43. HOW IS MANAGEMENT REMUNERATION AND/OR PERFORMANCE MEASUREMENT TIED TO THIS PLAN?

_____

_____

_____

44. DOES YOUR FIRM HAVE A LONG-RANGE PLAN? COULD YOU DESCRIBE IN GENERAL ITS NATURE, SCOPE AND CONTENT:

CHECK FOR _____

Formal (written) _____

Comprehensiveness (# of functional areas) _____

Detail (action spelled out) _____

_____

Goals/Objectives

- written

- quantified

Strategy - a series of planned action moves

Procedures Laid down for planning

Reviewed

Plan communicated?

45. DO YOU HAVE A FULL-TIME PLANNING STAFF?

HOW MANY?

WHERE?

BACKGROUNDS?

DUTIES?

REPORT TO?

($, TIME, INVESTMENT)

46. WHAT IS THE APPROXIMATE COST OF THE LONG-RANGE PLANNING EFFORT

(OPINION, THE IMPORTANCE OF PLANNING RATED HI. MED. LO.)

47. HAVE THERE BEEN ANY IMPORTANT OR SIGNIFICANT CHANGES MADE RECENTLY TO THE:

	CHANGES MADE	REASONS
1. LONG-TERM PROFIT PLANS		
2. LONG-RANGE PLANNING		

48. DO YOU ANTICIPATE ANY IMPORTANT OR SIGNIFICANT CHANGES TO:

	CHANGES TO BE MADE	REASONS
1. LONG-TERM PROFIT PLANS		
2. LONG-RANGE PLANNING		

49. WHAT ARE THE MAJOR DECISIONS WHICH WILL BE FACED IN THE NEXT FEW YEARS?

APPENDIX VI

CORPORATIONS, RESPONDENT NAME AND POSITION - THE PERSONAL INTERVIEW BASED SAMPLE

Corporations and Individuals Participating in Study

A.B. Dick Company of Canada Ltd.
94 Brockport Drive
Rexdale
- Mr. T.P. Howe, President

Addressograph-Multigraph Co. Ltd.
42 Hollinger Road
Toronto
- Mr. K.L. Hamer, Vice-President

Andres Wines Ltd.
Winona, Ontario
- Mr. J.A. Boychuk, Vice-President-Marketing

Burlington Carpet Mills Canada Ltd.
45 Glidden
Bramalea
- Mr. Ian Boyd, Vice-President-Marketing

Burroughs Business Machines
801 York Mills Road
Toronto
- Mr. K. Dichow, Vice-President-Marketing

Canada Packers Limited
95 St. Clair West
Toronto
Mr. W.W. Lasby, Vice-President

C&C Yachts Limited
526 Regent
Niagara-on-the-Lake
- Mr. J.S. Gray, Secretary-Treasurer

CCM Limited
2015 Lawrence
Toronto
- Mr. Graham Eves, General Manager
- Mr. Bob Frances, Vice-President-Marketing

Chateau Cartier Wines Ltd.
112 Evans Rd.
Toronto
- Mr. J.H. Beatty, President

Chateau Gai Wines Limited
360 Bay St.
Toronto
- Mr. T.R. Comery, President

Consumers Glass Company Limited
701 Evans Ave.
Toronto
- Mr. P.R. Holland, Vice-President and Secretary

Continental Can Company of Canada Ltd.
790 Bay St.
Toronto
- Mr. Blair Douglas, Vice-President
- Mr. John Corley, Director of Marketing

Corby Distilleries Ltd.
1201 Sherbrooke
Montreal
- Mr. C.J. New, President

Cooper of Canada Limited
501 Alliance Ave.
Toronto
- Mr. Don Cooper, Vice-President

Crossley-Karastan Carpet Mills Ltd.
40 Constellation Rd.
Rexdale
- Mr. W.T. Winter, President

Crown Cork and Seal Company Limited
Toronto
- Mr. Paul Dunlop, Assistant to the President

Daignault Rolland Cie Ltée
2565 Rouen St.
Montreal
- Mr. Rene Daignault, President

Distillers-Corporation-Seagrams Ltd.
1430 Peel St.
Montreal
- Mr. L. Babitch, Vice-President of Finance and Administration

Dominion Glass Company Limited
1080 Beaver Hall Hill
Montreal
- Mr. E.A. Thompson, President

Essex Packers Limited
Brant & Hillyard Streets
Hamilton
- Mr. Mike Plawiuk, President

Gestetner (Canada) Limited
840 Don Mills Road
Toronto
- Mr. R.T. Hunt, President

Grampian Marine Ltd.
451 Woody
Oakville
- Mr. Bob Graham, President

Harding Carpets Limited
60 Yonge St.
Toronto
- Mr. A. Davidson, President

J.M. Schneider, Limited
321 Courtland Ave. E.
Kitchener
- Mr. F.P. Schneider, Chairman of the Board of Directors

John Labatt Limited
451 Ridout St.
London
- Mr. J.A. Mennie, Vice-President

Meagher's Distillers
56 Fundy
Montreal
- Mr. R. Lachapelle, President

Molson Industries Limited
2 International Blvd.
Toronto
- Mr. W.J. Gluck, Vice-President Corporate Development

Monroe The Calculator Co.
81 Advance Rd.
Toronto
- Mr. C.W. Speers, President

National Cash Register
222 Loxdowne
Toronto
- Mr. E.W. Plant, President

Olivetti Canada Ltd.
1390 Don Mills Road
Toronto
- Mr. G. Ponzi, Director of Marketing

Peerless Rug Limited
1 Place Bonaventure
Montreal
- Mr. B. Garber, President

SCM Canada Limited
29 Gervais Drive
Toronto
- Mr. G. Davidson, Vice-President and General Manager

Swift Canadian Co. Ltd.
2 Eva Road
Toronto
- Mr. Jim Putl, Director of Planning

Tanzer Industries
231 Route #2
Dorion
- Mr. A.E. Spencer, President

T.G. Bright & Co. Limited
Dorchester Road
Niagara Falls, Ontario
- Mr. H.C. Hatch, President

Title Sports Incorporated
3435 Metropolitan Blvd. E.,
Montreal
- Mr. A. Brown, President

Victor Comptometer
Cambridge,
- Mr. D.H. Prentice, President
- Mr. G. Rainbird, Director of Planning

Wellinger and Dunn Ltd.
350 Sorauren
Toronto
- Mr. Bob Ostrander, President
- Mr. Peter Stewart, Partner with Johnson, Stewart Bourne Brown & Co.

Whitby Boat Works Ltd.
570 Finley
Ajax
- Mr. Kurt Hansen, President

Xerox of Canada Limited
Toronto
- Mr. Peter Brophy, Treasurer

APPENDIX VII

METHODS OF CATEGORIZING PARTICULAR PLANNING SUB-PROCESSES

APPENDIX VII-1

Operating Statements

Basis	Categories		
	Minimal	Moderate	Comprehensive
Primary Criterion			
1) breakdown	non or minimal and/or limited to generic broad classifications	major segments of the business	very detailed and/or cross-run in a number of different ways
2) time scope	annually or semi-annually or quarterly	monthly	monthly
Clarifying Secondary Criteria			
3) time to obtain	months	2 weeks	1-2 weeks
4) prepared by	outsiders i.e. public accountants	internal staff	internal staff
5) accuracy	rough estimates	actual	actual
6) purpose	outsiders	management	management

APPENDIX VII-2

Annual Profit Plan

Basis	Categories Minimal	Moderate	Comprehensive
Primary Criterion			
1) information input	outsiders mainly and/or accountants only and/or top management and staff	plus, the aid of lower level line management	plus, the use of external information
Secondary Criteria			
2) breakdowns	none or minimal and/or limited to generic broad classifications and/or major segments of the business	very detailed	cross-run in a number of different ways
3) time scope	semi-annual yearly and/or quarterly and/or monthly	monthly	monthly
4) reasons for preparation	bankers & outsiders and/or financial and/or management	management	management

APPENDIX VII-3

Market & Sales Forecasting - One Year

Basis	Categories Minimal	Moderate	Sophisticated
Primary Criteria			
1) basis of information input	past trend and/ or internal information and general knowledge of top management	plus, lower level management's estimates	plus, some external staff generated input and/or reconcilation of top-down and bottom-up estimates
Secondary Criterion			
2) detail	little if any and/or broad	products, geographic	plus, another perspective i.e. customers or industry type
3) time scope	annually or semi-annually and/or quarterly	monthly	monthly

APPENDIX VII-4

Market and Sales Forecasts Greater Than One Year

	Categories		
	Minimal	Moderate	Sophisticated
Primary Criteria			
1) basis of information input	past trend	internal information and general knowledge of top management	plus, lower level management's estimates and/or top management with aid of staff generated externally based estimates or line input and/or reconcilation of top-down and bottom up estimates
Secondary Criterion			
2) detail	little if any	broad	products, geographic and/or plus, another perspective i.e. customers or industry type
3) time scope	2 years	2-3 years	3 years and/or 5 years and/or 5 years or more

APPENDIX VII-5

Financial Forecast

Basis	Categories		
	Minimal	Moderate	Sophisticated
Nature of the Forecast	non existed and/or one year prepared with approximate estimates and assumptions trended	one year in detail and/or more than two years with trended numbers only	one year in detail with more years extrapolat and/or in detail for more than on year

APPENDIX VII-6

Production Forecast

Basis	Categories		
	None	Moderate	Sophisticated
Nature and purpose of the forecast	non-existent	one year with emphasis on scheduling or capacity utilization and/or - reactive one shot project emphasis to new requirements. consideration is given to more than 1 year	3 year or greater estimates in written form

APPENDIX VII-7

Personnel Forecast

Basis	Categories		
	None	Moderate	Sophisticated
Primary Criteria			
Nature of the forecast	non-existent	at least informally part of the one year profit plan	annual evaluation of present and pending management personnel needs and/or written consideration of needs in the greater than 1 year profit plan or long range plan

APPENDIX VII-8

Formal Long Range Plan

Basis	Categories			
	0	Low	Medium to	High
Primary Criterion				
The nature of the plan	non-existent in any written form	the existence of: - a greater than 3 year number prognosis - aspiration levels	plus, the existence of: - a corporate strategy - goals and objectives or at least aspiration levels	plus, the existence of - a corporate strategy - written goals and objectives - quantified objectives, and - the strategy is in written form with contingencies

APPENDIX VIII

MULTIVARIATE NOMINAL SCALE ANALYSIS

APPENDIX VIII

(MNA)

MULTIVARIATE NOMINAL SCALE ANALYSIS

MNA is a new data analysis technique developed by Dr. Frank M. Andrews and Dr. Robert C. Messenger at the University of Michigan's Institute for Social Research (Andrews and Messenger, 1973). Essentially, it is an extension of the Multiple Classification Analysis (MCA) program (Andrews, Morgan and Sonquist,1969) that has been utilized in a number of marketing studies (Newman and Staelin 1971 and 1972; Peters, 1970). MCA accepts nominally scaled independent variables and assumes an intervally scaled dependent variable. MNA accepts both nominal independent and dependent variables, in the context of an additive model. The ability to predict a nominally-defined variable using nominally-defined independent variables constitutes a significant methodological advance in data analysis. In their classification schemes for multivariate data analysis methods, Sheth (1971) and Kinnear and Taylor (1971) noted the absence of any techniques to easily accomplish this type of analysis. Before MNA, a nominally-defined dependent variable had to be dichotomized and the analysis performed with MCA or dummy variable multiple regression (1971). If the dependent variable had more than two categories, it was possible to use dummy variable discriminant analysis (DVDA). However, MNA has significant input and output advantages over DVDA. For DVDA the user must create his own dummy independent variables for input. Further, the output from MNA is much more readable. Since many consumer behavior dependent and independent variables are at a nominal level, the need for a procedure like MNA is well established.

Because MNA is new, a detailed description of its procedures will be undertaken. Andrews and Messenger (1973) describe MNA as being based on the principle of repeated application of least squares dummy variable regression (Suits,1957). Specifically, the set of original predictor variables (X_1, X_2, ..., X_p) is transformed into a set of dummy predictor variables (x_1, x_2, ..., xc_1, ...x_r) by treating every nonempty code of each predictor as a new dummy variable and by assigning a value of 1 when the code appears and 0 when it does not appear.

The resulting data set of dummy predictors has one linear dependency for each set of dummy predictors associated with an original predictor. These yield a singular matrix which would prevent proper least squares estimation to be carried out. Therefore, the linear dependencies must be eliminated by omitting one dummy predictor from each set. This procedure yields a set of $r = c-p$ independent dummyized predictors, where c = the total number of categories in the independent variables and p = the number of predictors.

The dependent variable is also dummyized to form a set of G dummy dependent variables where G is the number of non-empty dependent variable codes. Then, the set of r dummyized predictors is applied successively to the complete set of G dummy dependent variables, using the criterion on minimizing the error sum of squares, which forms the least squares criterion, given by:

$$ESS_\ell = \Sigma w_k \quad (y_{k\ell} - y_{k\ell})^2 \quad (\ell = 1,2,\ldots G)$$

where ESS_ℓ = error sums of squares for the ℓth dummy dependent variable,

w_k = individual k's weight,

$y_{k\ell}$ = individual k's score on the ℓth dummy dependent variable,

$\hat{y}_{k\ell}$ = individual k's predicted score for the ℓth dummy dependent variable

and where

$$\hat{y}_{k\ell} = B_{\ell o} + B_{\ell 1} \; x_{k1} + B_{\ell 2} \; X_{k2} + \ldots + B_{\ell r} \; x_{kr} \quad (\ell = 1,2,\ldots G)$$

here,

x_{km} = the mth dummy predictor score for kth individual.

and B = the regression coefficients.

Partial derivatives of the ESS's with respect to the B coefficients are then calculated. These partials are then set to zero, yielding the G normal equation sets (Cooley and Lohnes, 1971).

In mathematical notation:

$$\begin{bmatrix} \frac{\partial ESS\ell}{\partial B_{\ell o}} \\ \frac{\partial ESS\ell}{\partial B_{\ell 1}} \\ \cdot \\ \cdot \\ \cdot \\ \frac{\partial ESS\ell}{\partial B_{\ell r}} \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ \cdot \\ \cdot \\ \cdot \\ 0 \end{bmatrix} \qquad \ell = (1,2,\ldots G)$$

yields the relevant normal equations.

Solution of these G equations gives the B values for the predictive equations and a set of forecasts of individual scores $\{\hat{y}_{k1}, \hat{y}_{k2}, \ldots, \hat{y}_{kG}\}$. This solution yields values expressed as deviations from the one dummy prediction that was omitted from each set. It is possible to present the predictive equations in a more easily understood form, while at the same time assigning values to the previously omitted codes. MNA does this by transforming the results to a form where coefficients are expressed as deviations from the mean of the ℓth dependent variable.

Here,

$$\hat{y}_\ell = \bar{y}_\ell + A_{\ell 1} x_1 + A_{\ell 2} x_2 + \ldots A_{\ell c} x_c \qquad (\ell = 1, 2, \ldots, G)$$

where $\bar{y}_\ell$ = the mean of the ℓth dependent variable

and $A_{\ell m}$ = mth transformed dummy predictor regression coefficient for ℓth dummy dependent variable.

The $A_{\ell m}$'s are expressed as deviations from the grand means $\{\bar{y}_1, \bar{y}_2, \ldots, \bar{y}_G\}$. This system yields forecasts that are identical to the previous system for all individuals and has coefficients attached to all categories of all independent variables.

Statistics Generated by MNA

MNA generates both bivariate and multivariate statistics. Two bivariate statistics are produced to measure the strength of the relationship between the dependent variable and each predictor. The first is the one-way analysis of variance eta-squared statistic which is calculated for each dummy dependent variable and then summarized into a generalized eta-squared. Eta-squared measures the explained variance of each code and the generalized eta-squared statistic measures the explained variance across all codes; i.e. the ratio of explained sums of squares to total sums of squares.[3]

A more useful bivariate statistic, the bivariate theta (Θ_Y), is a relatively new statistic formulated by Messenger (1971) to measure the strength of association with correct placement in the dependent variable code as the criterion. Theta is defined as the proportion of the sample correctly classed when using a prediction-to-the-mode strategy in each frequency distribution of each category of the predictor variable. For example, Table 1 presents a set of data from the cross-tabulation of a 3 code dependent variable Y, with a 3 code independent variable X_i. The numbers in the cells are the number of people in the sample assigned to the cells. If we knew nothing about the effect of X_i on Y, our best prediction concerning Y would be Y_2, the mode. That is, $\Theta_Y = 400/1000 = .40$ and we will have correctly classified subjects 40 percent of the time. Knowledge of X_i allows for improved classifications. Specifically, if we knew the subject is in X_1 the best guess is Y_1, if he is in X_2 the best guess is Y_2 and so on. Then,

$$\Theta_{Y/X_i} = (300 + 300 + 200)/1000$$

$$= .80$$

and we have correctly classified 80 percent of the subjects.

Messenger and Madell (1972) note that Θ_Y is really just a more intuitively appealing form of the Goodman and Kruskal Lambda statistic, λ_i, which is defined as the proportion of reduction in error given predictor X_i's codes:

$$\lambda_i = (\Theta_{Y/X_i} - \Theta_Y) / (1 - \Theta_Y)$$

$$= (.80 - .40)/(1 - .40)$$

$$= .40/.60$$

$$= .67$$

Thus, λ_i is a linear transformation of Θ_{Y/X_i}.

TABLE 1

An Illustration of Bivariate Theta

		Y			
		1	2	3	TOTAL
X_i	1	300	0	0	300
	2	50	300	50	400
	3	0	100	200	300
TOTAL		350	400	250	1000

The multivariate statistics generated by MNA parallel the bivariate statistics described above. These are the generalized multiple R^2 and the multivariate theta statistic. The latter statistic is defined as the proportion correctly classed using a decision rule of predicting each individual as being in that dependent variable category having the maximum forecast value for that individual and written as:

$$\Theta_{Y/X_1, X_2, \ldots, X_n, \text{ or } \Theta_M}$$

It is the probability of placing a subject in the correct nominal category of the dependent variable, Y, given knowledge of the code values of the independent variables, X_1, X_2, ..., X_n, when using a prediction to the mode strategy.

The MNA technique is essentially a series of parallel MCA runs using each of the dummy variables in turn as the dependent variable. For each of the dependent variable codes, a predicted probability (Θ_m) of each subject being in that category is calculated. Each subject has a probability figure associated with each code of the dependent variable category that is associated with the highest of these probabilities. A check is then made against the actual category and the proportion of subjects correctly classified is then calculated.

An Application Example

One example of how this technique was used in the analysis described in chapter 4 is presented here. This example pertains to the association of each of management's expectations of future firm growth and firm sales to the planning sub-process 'operating statements'. In the sample of 40 firms the distribution found among the categories for 'operating statements' was:

Minimal	30%
Moderate	25%
Comprehensive	45%

With this distribution and without any knowledge of firm size or management's expectations of future firm growth, one would be able to correctly classify 45% of the firms. By knowing both firm size and firm growth expectancies this ability to predict, however, increased substantially.

With three categories for each of firm size and firm growth expectancies nine combinations were possible. Each of these could be allocated to one of three categories of 'operating statements'. A comparison of the predictions generated in this manner using firm size and firm growth expectancies, with the actual results obtained, was as follows:

Operating Statements Actual	Operating Statements Predicted		
	Minimal	Moderate	Comprehensive
Minimal (N=12)	42%	33%	25%
Moderate (N=10)	10%	70%	20%
Comprehensive (N=18)	6%	11%	83%

Reading from left to right, predictions in the minimal category were correct 42% of the time. While this was not exceptionally high, it was a better predictor than the original estimate of 30%. The largest error in prediction occurs in classifying 33% of the minimal in the moderate category. Since moderate was the closest category to minimal the error is understandable. In the moderate category predictions were correct 70% of the time. In the comprehensive category predictions were correct 83% of the time. Overall, with information on firm size and firm growth expectancies, the ability to classify firms correctly among the three categories of 'operating statements' was 68%. This was a substantial improvement on the orginal 45%.

Similar computations and comparisons were made using firm sales size, firm future sales growth expectancies and the categories for the other seven planning process elements. Results similar to the above were obtained on the 'one year market and sales forecast', 'the greater than one year market and sales forecast', and 'the formal long range plan'. Poorer results were obtained in predicting one or more of the categories for 'the annual profit plan', 'the production forecast' and 'the personnel forecast'. Overall, however, the ability to properly classify was significantly increased. The MNA technique increased the ability to classify by using information pertaining to management's expectations of future firm growth and firm sales size. Both the growth and the size information were important information inputs to these predictions.

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RAPPORT DE RECHERCHE SUR LE PROGRAMME DE SUBVENTIONS AUX UNIVERSITES

	AUTHOR(S)/AUTEUR(S)	UNIVERSITY/UNIVERSITÉ	REPORT TITLE/TITRE DE L'OUVRAGE
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18.	M. James Dunn Boyd M. Harnden P. Michael Maher	Faculty of Business Administration and Commerce, University of Alberta.	An Investigation into the Climate for Technological Innovation in Canada, May, 1974.
19.	K.R. MacCrimmon A. Kwong	Faculty of Commerce and Business Administration, University of British Columbia.	Measures of Risk Taking Propensity, July, 1972.
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