TRENDS IN STRATEGIC PLANNING IN PRIVATE SOCIAL SERVICE AGENCIES: A TEST OF THE RAMANUJAM AND VENKATRAMAN PLANNING MODEL

DISSERTATION

Presented to the Graduate Council of the University of North Texas in Partial Fulfillment of the Requirements

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By

Diana L. Gilbertson, B.S.Ed., M.S.Ed., M.B.A.

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This study modified the Ramanujam and Venkatraman (1987) questionnaire that was used to develop their model of planning system dimensions and planning effectiveness, and tested the model on a sample of private social service agencies. The criterion measures were level of planning sophistication, agency size, perceived environmental uncertainty, and relative competitive position.

The sample was randomly drawn from private social service agencies which were members of the Community Council of Greater Dallas. Telephone interviews with fifty executive directors were conducted by a trained, impartial interviewer.

Stepwise discriminant analysis was used to predict group membership between informal and formal planners. Of the nine dimensions in the model, three dimensions correctly classified 84 percent of the sample. The three dimensions were fulfillment of planning objectives, use of decision making techniques, and lack of resistance to planning.
The level of perceived environmental uncertainty was another criterion set. Directors who perceived high uncertainty paid more attention to the external environment, used more decision making techniques, and relied on functional specialists when planning.

Large and small agencies were classified by their annual budgets. Stepwise discriminant analysis using the planning system dimensions failed to reject the null hypothesis.

Agencies reporting strong relative competitive positions placed greater emphasis on seeking information for planning from external sources. These agencies also reported less resistance for planning within their organizations, fulfillment of more planning objectives, and a flexible planning system. The discriminant analysis correctly classified 74 percent of the sample.

Finally, the study provided some baseline information on the use of planning techniques by private social service agencies. Just over half of the sample reported having written strategic plans covering at least three years.
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CHAPTER I

INTRODUCTION

Recently, a planning model has been introduced that attempts to specify some of the dimensions of an organizational planning system. The model further develops an expanded approach to assessing the effectiveness of the planning system based on its ability to support strategy development and implementation (Ramanujam & Venkatraman, 1986). To date, the model has been tested on only one population of Fortune 500 manufacturing and service firms. The authors have called for further testing and refinement of their model especially in single industry studies.

Along these lines, the literature in the area of nonprofit organizational administration has increasingly addressed the need to employ strategic marketing and strategic management principles (e.g., Espy, 1987; Kotler, 1979; Powell, 1987). Within the non-profit sector, the bulk of the research in strategic management has been conducted in hospitals or universities. Only a few case studies exist that discuss strategic management in private social service agencies (e.g., Feinstein, 1985; Vogel & Patterson, 1986). There is no baseline study of this
segment that has assessed the degree to which strategic management principles are being applied.

Purpose

The purpose of this study was two-fold. First, the study sampled a group of private social services agencies in a large metropolitan area to determine the degree to which formal planning strategies were being used. The second purpose was to adapt and refine the questionnaire used by Ramanujam and Venkatraman (1987b) in order to test their planning system and planning effectiveness model on this segment of the nonprofit population. Additional research was included to expand the contextual dimensions of the planning systems model.

Model Development

In 1984, Ramanujam, Venkatraman, and Camillus undertook a study to assess the trends and developments in corporate strategic planning practices in the United States. A survey questionnaire was mailed to 600 planning units in companies randomly selected from Fortune 500 manufacturing and service organizations. A response rate of 34.5 percent \((N = 207)\) was received. Data were from a single respondent in each organization.

Respondents were asked to indicate their perceptions of the extent of change that had occurred over the past five years with regard to changes in functional emphasis in
planning, key planning issues, trends in the use of planning techniques, achievement of planning objectives and contextual planning constraints. These responses were analyzed using mean scores and percentages. Further comparisons were made between large and small firms, manufacturing and service firms, more mature and less mature planning systems, and high and low performing firms. Results of these analyses are reported in Ramanujam, Venkatraman, and Camillus (1987) and Ramanujam and Venkatraman (1987a).

Using this original data base, the researchers did further analysis on the multi-item scales. After eliminating responses with incomplete data, a total of 93 cases remained to be analyzed. The multidimensional model of planning and effectiveness was based on content validity of each dimension through the use of extensive literature review and multiple experts. The questionnaire items and the reliabilities (Cronbach alphas) for each dimensions may be found in Appendix A. The model is outlined below (Ramanujam & Venkatraman, 1987b).

Findings based on statistical analyses include support for the two-dimensional conceptualization and operationalization of planning system effectiveness: capabilities and objective fulfillment. Canonical analysis of effectiveness as the criterion set showed capabilities to
be the most important dimension followed by objective fulfillment.

Among the planning system dimensions, the two organizational context dimensions, resistance and resources, were the most important contributors to planning effectiveness. The design dimensions ranked, in order of predictive importance, are as follows: techniques, external, internal, and functions.

Building on the planning system construct, and in line with recommendations from Ramanujam and Venkatraman (1987b), another contextual dimension has been added to the model.
Specifically, this dimension, developed by Specht (1987) addresses the respondent's perception of environmental uncertainty and change with regard to planning.

Background

One of the underlying questions for a study of this nature to ask is if there is a need for nonprofit organizations to be concerned about strategic planning. In a recent issue of Insight (July 25, 1988), the American Association of Fund-Raising Council reported that although donations to charitable organizations rose in 1987, the 6.5 percent rate of growth was a sharp drop from the 9.2 percent increase in 1986. In 1987, Americans contributed $93.68 billion to charities. Tax act changes have made charitable deductions less attractive, and as a result, the growth rate of contributions is expected to slow even more.

Another economic consideration, employment level, shows that in 1982 the nonprofit share of the service producing economy in terms of employment was 14 percent or 6.5 million workers. This figure reflects a 43 percent increase between 1972 and 1982 (Rudney, 1987). Clearly, the nonprofit sector is becoming a major portion of modern society and of the economy. "These organizations must perform satisfactorily if society and the economy are to function efficiently and effectively" (Borst and Montana, 1987: 1). Strategic planning offers nonprofit organizations a set of tools that
can help to ensure the long-term health of third sector organizations.

To meet these challenges, nonprofit organizations are beginning to look at practices used in the for-profit sector. Indeed, in many instances, these two sectors are in direct competition with each other for rapidly dwindling resources. In addition, funding sources are demanding greater accountability from nonprofit organizations (Gruber & Mohr, 1982). "The explosive growth of expenditures for government and social welfare has reached a level at which inefficiency can no longer be tolerated" (Ansoff, 1979:30). Finally, McConkey (1981) adds that in most nonprofit organizations, change is more rapid now than in the past. Nonprofit managers must be increasingly more concerned about the outside environment than internal efficiency.

To respond to fiscal stress and environmental uncertainty, Gruber and Mohr (1982) recommend strategic planning to nonprofit managers. According to them, strategic planning will encourage a holistic viewpoint and provide guidelines for assessing the overall health of organizations. Relevance and delivery of services may be severely restricted if nonprofit organizations cannot effectively adapt to changing environmental factors (Hatten, 1982). Hatten adds that strategic planning is just as possible for the nonprofit organization as it is for the corporation.
In an interview on June 29, 1988, with Barbara Landix, United Way Services Director for the Dallas Metroplex, she stated that the strategic management concept was fairly well known among the larger social service agencies. "Strategic planning is the wave of the future" according to Landix. The current expectation is that at least some of the nonprofit organizations are aware of and involved in aspects of strategic planning.

The importance of looking more systematically at the nonprofit sector is illustrated by a recent comment of Peter Drucker's in the Harvard Business Review (Drucker, 1989:88), "In two areas, strategy and the effectiveness of the board, they (nonprofit organizations) are practicing what most American businesses only preach." Specifically, with regard to strategy, Drucker was suggesting that nonprofit organizations may be practicing strategic management whereas businesses are only interested in expediency. If this observation is legitimate, scholars and practitioners need to know exactly what is happening in the nonprofit sector and how those practices relate to organizational success.

Problem

There are two distinct problems to be addressed by this research. First there is a need to gather data on the degree of strategic or formal, long-term planning being done
in private social service agencies. Aside from a few case studies, no baseline data exist.

The second issue arises when one considers just how to assess the presence of a formal, strategic planning process. A recent model of planning system characteristics and planning effectiveness has been developed by Ramanujam and Venkatraman (1987b) that offers what may be a more comprehensive approach to both planning and effectiveness. The model is new and has had limited testing. As such, it provides a foundation and point of departure for the study of planning in nonprofit organizations.

Too often studies which attempt to link planning with effectiveness rely solely on financial performance data as the "success" measure. The planning effectiveness dimensions consider the process benefits as well as generic end result measures. For nonprofit agencies, this focus seems far more appropriate than mere financial data.

An ancillary problem associated with the study of strategic planning in nonprofit organizations is the possibility that terms and concepts commonly used in the business environment may not be well known among administrators in the nonprofit sector. With regard to the concept of "strategic planning", which is the systematic and explicit process of determining the "mission, goals, strategies, programs, and allocation of resources that will enable the organization to best cope with and influence an
uncertain future" (King and Cleland, 1978:45), Coghlan (1987) and Odom and Boxx (1988) expressed concern for their nonprofit sample agencies' understanding of business terminology recommending that "formal, long-range planning" be used instead. This study has also elected to use this term. Coughlan notes that "the processes of strategic planning--sense of core mission, environmental scan, internal review, strategic posture, appropriate blend of integration and adaptation, are in essence what religious orders do, whether conscious of such a conceptual structure or not" (1987:45).

Research Hypotheses

1. Agencies classified as formal long-term planners will differ significantly from agencies classified as informal planners along all of the planning system design dimensions and the contextual dimensions.

   Specifically, agencies having a formal planning system will have significantly higher scores on the design and contextual dimensions of the model. The model will have high predictability of group membership.

2. Agencies classified as formal long-term planners will differ significantly from agencies classified as informal planners along all of the planning effectiveness dimensions.
Specifically, agencies classified as formal planners will have significantly higher scores on the planning effectiveness dimensions. The model will have high predictability of group membership.

3. Agencies whose directors perceive a high degree of uncertainty for planning will differ significantly from agencies whose directors have a low degree of perceived uncertainty for planning along the design dimensions.

Specifically, when perceived uncertainty is high, scores on the planning dimensions will be significantly lower than those who perceive low uncertainty.

4. Agencies regarded as large based on a median split of total annual budget will differ significantly from small agencies in terms of the planning system design dimensions.

Larger agencies will incorporate significantly more of the design dimensions in their planning.

5. Agencies that perceive their performance as better than their competition will differ significantly from low performers on all of the planning system and effectiveness measures.

Perceived high performers will have significantly higher scores on all of the design and effectiveness dimensions than perceived low performers (significance level \( \alpha = 0.05 \)).
Additional descriptive statistics will illustrate the current status of formal long-term planning among social service agencies in this sample.

Assumptions

The underlying assumption of the planning-effectiveness model is that planning is a multidimensional process. Further, effectiveness is measured not just in terms of end results, but also in relationship to goal attainment and the capabilities of the planning system to facilitate adaptation.

Another assumption is that the executive directors in this sample have had some exposure to planning and the vocabulary commonly associated with planning. In order to reduce misunderstandings, most of the technical terms used in the questionnaire were defined for the respondents (Appendix B).

Finally, it is assumed that each agency's executive director is in the best position to be knowledgeable about the present planning system and its perceived effectiveness. The executive director is also assumed to be the leader or catalyst of the planning process. Middleton (1987) reported that nonprofit boards do not formulate policy, but rather ratify policy that is presented to them by staff. Boards depend on the executive for most of their information and for policy.
Significance

This study will establish some baseline planning data relative to the progress being made by selected regional social service agencies. It should also give some measure of the perceived effectiveness associated with planning sophistication.

Though some changes have been made in the original instrument, a panel of experts determined that the planning and effectiveness dimensions were intact vis a vis content validity, therefore, allowing the Ramanujam and Venkatraman (1987b) model to be tested on a "single industry" population. Some initial comparisons may be offered between the nonprofit sample and their manufacturing/service business sample.

Finally, statistical tests of the instrument suggest further directions for refinement and standardization. Reliabilities for some of the dimensions on the original Ramanujam and Venkatraman (1987b) instrument were below commonly recommended levels.

Limitations

The social service agency sample has limited external validity. Though randomly selected, the sample frame is restricted to one large metropolitan area in the southwestern United States. Planning sophistication may differ sharply in other regions of the country.
The model of planning system dimensions and effectiveness dimensions is very new and relatively untested. It may simply be a point of departure to stimulate broader conceptualizations of planning and not meet the tests of statistical rigor necessary for a standardized questionnaire.

Finally, this study relies on one respondent per agency. There is some risk associated with just one individual's perspective on the issues, though perhaps less so in this nonprofit population due to the relatively small size of most of the agencies.
Planning

Formal business planning gained relatively wide acceptance in the 1960s. By the mid-1960s, additional attention was being focused on strategic aspects of planning (Ansoff, 1965). During the next decade, researchers studied the environmental influences on planning and developed prescriptive tools and techniques.

From the 1970s to the present time, research has been trying to answer the question "Does planning pay?". Ansoff, Avner, Brandenburg, Portner, and Radosovich (1970) conducted one of the first major studies regarding the relationship between strategic planning and profitability. In their longitudinal study of 93 manufacturing firms, formal planners outperformed informal planners on a variety of sales and earnings measures.

In another study, Thune and House (1970) researched 36 firms in several different industries. Again, formal planners outperformed informal planners. They further found that when firms shifted to a planning mode, the firm's performance significantly improved.
A large study (N=386 firms) conducted by Fulmor and Rue (1974) covering financial performance during a three year period. Planners in durable goods manufacturing were more successful than their non-planning counterparts. For firms in other sectors, including service companies, the planners did not outperform non-planners on average. The authors speculated that the idea of strategic planning may have been too new to these business sectors.

Another multi-industry study (Karger & Malik, 1975) found that long-range planners outperformed nonformal planners when using financial measures as performance criteria. This conclusion held true for nine of the thirteen measures that they used to gauge performance.

Strategic planning among small businesses in several sectors was studied by Robinson (1982). Those small businesses using strategic planning methods outperformed non-systematic planners in sales, profitability, and productivity. Not all of the small business studies have supported strategic planning as a means of enhancing financial performance (Robinson & Pearce, 1983).

Grinyer and Norburn (1975) surveyed 91 executives in 21 United Kingdom industries and found no relationship between planning formality and financial performance. Kudla (1980) studied 348 large businesses classifying them as "planners" on the basis of written documents. His findings were similar to those of Grinyer and Norburn (1975). Kudla used
risk-adjusted returns to measure performance. He speculated that the unstable external environment may have negated any long-range forecasting.

The perceived importance of planning as reported by CEOs and the perceived contribution of planning to firm success were the two independent variables studied by Leontiades and Tezel (1980). Several measures of financial performance over a seven year period were compared with perceptions of planning success and importance. The study failed to support the contention that formal planners outperform informal planners.

Robinson and Pearce (1983) studied 38 small banks over a three year period finding no significant differences in performance between formal and nonformal planners. They believed that the findings may be related to the small size of the banks studied.

A number of other studies (e.g., Birnbaum, Mitchell, and Scott, 1981; Dalton, Shrader, and Taylor, 1984) failed to find a definitive link between formal strategic planning and financial performance. In a review of eighteen studies investigating the relationship between formal strategic planning and organizational financial performance, Pearce, Freeman, and Robinson (1987) found numerous inconsistencies among conceptual definitions and operational approaches. These eighteen research studies were divided into two groups according to their research design criteria. One subset of
studies classified respondents according to some type of continuum classifying degree of formality of planning. The other subset measured the executives' perceived importance of planning.

Pearce, Freeman, and Robinson (1987) suggest that future researchers consider the contextual influences on planning that were ignored by these previous studies. Among the specific suggestions were dynamism of the environment, the role of the single industry context, and the stages of business life cycle.

A multidimensional approach to the study of strategic planning and its concomitant success has been developed by Ramanujam and Venkatraman (1987b). They argue that formal planning consists of at least six facets or dimensions. Their four planning design dimensions are: (1) use of planning techniques; (2) attention to internal facets; (3) attention to external facets; and (4) functional coverage. In addition, they identified at least two contextual dimensions: resources for planning and resistance to planning.

Ramanujam and Venkatraman (1987b) also sought to expand "success" measures beyond financial data to include three effectiveness dimensions: (1) planning system capabilities; (2) fulfillment of planning objectives; and (3) relative competitive performance.
The broad research question asked by Ramanujam and Venkatraman was "What characteristics of a planning system are central for planning effectiveness?" The findings indicate that the most important influence on planning system effectiveness was resistance to planning followed by resources for planning. In order of importance, the design dimensions impact on effectiveness were: (1) techniques for decision making; (2) external scanning; (3) internal assessment and (4) functional coverage.

Overall, their findings suggested a strong multivariate relationship between planning system dimensions and planning system effectiveness. They found the system capability dimensions to be the primary reference point for evaluating planning effectiveness.

Formality of Planning

Formality refers to "the degree to which membership, responsibilities, authority, and discretion in decision making are specified. It is an important consideration in the study of strategic management because degree of formality is usually positively correlated with the cost, comprehensiveness, accuracy, and success of planning" (Pearce & Robinson, 1987:11). Dalton and Duncan (1987) add that formalized planning processes systematize information collection and dissemination.
A number of researchers have categorized organizations according to their levels of planning sophistication. Rhyne (1987) notes that as planning sophistication increases, a wider range of planning information is considered relevant. His five classifications range from short-term forecasting of less than one year to strategic planning which may cover five to fifteen years.

Odom and Boxx (1988) classified churches in one of three categories based on written plans and budgets. Churches were either informal planners, operational planners, or long-range planners.

Capon, Farley and Hulbert (1987) in discussing what may be the only non-exploratory study of the relationship among planning activity, strategy, and performance, divided their target business firms (N=113) into planners and non-planners based on the presence of a "physical document". Their overall conclusion was that earnings were not significantly different for corporate strategic planners than for organizations utilizing less formal planning systems.

Contextual Dimensions

Ramanujam and Venkatraman (1987b) developed their model of planning with two elements of organizational context. The first element was resources provided for planning. Based on previous supporting literature (King & Cleland,
1978; Steiner, 1979), committed resources such as time and staff were considered important to successful planning.

Their second element, resistance to planning, referred to lack of participation in planning activities as well as lack of acceptance of the outcomes of planning (Steiner, 1979; Steiner & Schallhammer, 1975). Feinstein reports that resistance to change was not infrequent in her study of the Boy Scouts of Boston.

The literature suggests that other contextual dimensions may also be considered. Several authorities have proposed that size of the organization may affect planning (Glueck & Jauch, 1984; Pearce, Freeman & Robinson, 1987; Kotler, 1982). Diffenbach (1983) found that larger organizations, measured by sales, were more likely to do environmental analysis. Odom and Boxx (1988) found size and planning sophistication to be positively related for the nonprofit organization that they examined. Lindsay and Rue (1980) found some size differences related to planning completeness, though overall they found a stronger positive relationship between environmental complexity and formal planning.

Pearce, Freeman, and Robinson believe that "there is a compelling argument for explicit research attention to firm size and formal planning" (1987:672). Ramanujam and Venkatraman (1987b) concur that planning dimensions should
be considered for small firms in more narrowly defined contexts.


Kotler (1982) maintains that large organizations tend to be less adaptive than small organizations. He contends that the bureaucracy present in large organizations makes change more difficult. On the other hand, he indicates that organizations with smaller financial resources tend to be slower to adapt. Here the lack of money hampers marketing research, staff retraining, new hiring, and other areas such as information campaigns.

Certainty one of the most discussed contextual variables is environmental uncertainty. Numerous researchers have studied the impact of various external conditions on many aspects of an organization's strategic behavior (e.g., Emery and Trist, 1965; Thompson, 1967; Duncan, 1972). Often the terminology varies from uncertainty to turbulence to dynamism to complexity. For the purpose of this research, it is sufficient to recognize the importance of the organization-environment interaction and to look specifically at the perceptions of the executive directors.
Specht (1987) is the only researcher to focus specifically on uncertainty for planning. It occurs "when planners feel uncomfortable or are not sure about their decisions (Specht, 1987:25)." This construct contains two factored dimensions: uncertainty due to change and uncertainty due to complexity. In this context, Specht believes that planners' uncertainty may exist for reasons such as limited planning experience, past ineffective planning, and a perceived unanalyzable environment. Reliability coefficients (Cronbach alphas) were .79 for the complexity dimension and .87 for the change dimension. In her study of small firm strategic planning groups, she found uncertainty for planning to be a moderator of the relationship between external environmental characteristics and scanned information sources. Respondents in her study relied more on personal information sources than impersonal sources when uncertainty was high.

Further support for considering the uncertainty perspectives of planners may be found in Capon et al. "The major single influence on planning is the CEO..." (1987:99). They added that planning has assisted, at least to some degree, in dealing with uncertainty, that is, the planning process can be considered a strategy for reducing perceived uncertainty.
Design Dimensions

Four components constitute the design dimensions of the planning systems model of Ramanujam and Venkatraman (1987b). The first component is the degree of external orientation of the system, often called environmental scanning.

Aguilar, an early pioneer in environmental scanning, defines it as "the way in which top management gains relevant information about events occurring outside the company in order to guide the company's course of action (1967:vii)." Daft and Weick (1984) state that scanning is concerned with data collection either as a formal system or through informal contacts. Wolfe (1976) found that as strategists increased their knowledge of environmental analysis and diagnosis, firms increased in effectiveness. Use of environmental information allows organizations to adjust both defensively and offensively in order to achieve a better fit with the environment (Hedberg, 1981). Long-term survival demands that organizations survey the environment for new opportunities (Mintzberg, 1973; Kefalas & Schoderbek, 1973).

"By almost everyone's definition, environmental analysis has the explicit purpose of leading executive thinking beyond current activities and short time horizons (Engledow & Lenz, 1985:99)." Achieving an accurate picture of what the future holds is generally considered both an art and a science (MacMillan, 1983; Jain, 1984).
"The environmental factors affecting the nonprofit managers are generally very similar to those which must be continually assessed by managers in the profit making sector (Hatten, 1982:99)." The relevance of the information may be affected by a lack of awareness or response to changing environmental factors. Pflaum and Delmont (1987) add that there is no evidence to suggest that differences between public and private sectors make the practice of external scanning inappropriate for the public sector. It is equally important for both sectors to be able to identify emerging trends and minimize the number of surprises encountered. Scanning should enhance strategic thinking and planning (Pflaum & Delmont, 1987; Espy, 1986).

In making recommendations regarding strategic planning to nonprofit managers, McConkey (1981) extols establishing a dynamic planning approach to cope with rapid changes. A major part of the process is scanning the outside environment. Nonprofit organizations should shift from an internal efficiency orientation to an external orientation.

Much of the literature approaches scanning from the perspective of sectors scanned. Sectors are areas of general focus which represent components of an organization's external environment. Regrettably, there is little agreement among researchers on these components. The listings below are illustrative of the similarities and differences that exist in naming sectors.
TABLE 1

Environmental Sectors Identified by Selected Researchers

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<tr>
<td>Economic</td>
<td>Economic</td>
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<tr>
<td>Technological</td>
<td>Technological</td>
</tr>
<tr>
<td>Regulatory</td>
<td>Competitive</td>
</tr>
<tr>
<td>Socio-Cultural &amp; Competition</td>
<td>Social, Cultural, Demographic &amp; Geographic forces</td>
</tr>
<tr>
<td>Customer</td>
<td>Political, Governmental, Legal</td>
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<tbody>
<tr>
<td>Economic</td>
<td>Economic</td>
<td>Economic</td>
</tr>
<tr>
<td>Political</td>
<td>Technological</td>
<td>Political</td>
</tr>
<tr>
<td>Legal or Regulatory</td>
<td>Political-Regulatory</td>
<td>Demographic</td>
</tr>
<tr>
<td>Technological or Medical</td>
<td>Social</td>
<td>Competitive</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td>Internal</td>
</tr>
<tr>
<td>Demographic</td>
<td></td>
<td>Information</td>
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<tr>
<td>Competitive</td>
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<tbody>
<tr>
<td>Marketing</td>
<td>Economic</td>
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<tr>
<td>Technological</td>
<td>Political</td>
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<tr>
<td>Government</td>
<td>Social</td>
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<tr>
<td>Resources</td>
<td>Special Interest Groups</td>
</tr>
<tr>
<td>External Growth</td>
<td>Competition</td>
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<tr>
<td>Other</td>
<td>Technology</td>
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<tr>
<td></td>
<td>Clients</td>
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<td></td>
<td>Funding Sources</td>
</tr>
</tbody>
</table>

Sector importance, and often, specific sources of information within each sector, aid researchers in understanding the priorities given to various components of the external environment. A few investigators have even attempted to link scanning behavior with organizational strategy (Hambrick, 1981; Miller & Friesen, 1986).
Scanning has historically been considered both a formal and an informal search with varying degrees of direct effort to seek information (Aguilar, 1967; Hambrick, 1982). The compiled information gathered from both written and human sources may be a function of availability or access to certain kinds of data, and as a result of present strategic thrusts which focus on particular sectors (Hambrick, 1982). As organizations become increasingly more involved in strategic planning, they tend to adopt more structured systems of environmental scanning (Jain, 1984). Formalized planning processes systematize information collection and dissemination (Dutton & Duncan, 1987).

Jain (1984) found top management to be the true catalyst for scanning. Hambrick (1981), in a study of colleges, hospitals, and life insurance companies, disagreed, finding that scanning was not primarily a top management task. He found scanning to be an unassigned activity where voids or redundancies occurred. Montanari and Bracken (1985) add that environmental analysis is dependent upon strategic planners having an accurate reading of the organization's constituents, advocates, resource competitors and political climate.

Freeman (1984) concludes that organizations that do not have an appropriate societal strategy over time are not viable and will experience a great deal of internal and external turbulence. Developing the appropriate strategy
requires seeking the best fit between services and stakeholders. Scanning is a critical component to assessing stakeholder demands (Hatten, 1982).

Rhyne's (1987) research concluded that external environmental information became more important as the planning systems became more sophisticated. He also found that informal sources of information became more important as planning systems developed. Relatedly, Cameron (1986) found that an external orientation was an important predictor of higher education institutions' effectiveness.

Internal Analysis

Another design dimension, and one which represents the assessment of organizational strengths and weaknesses, is that of internal analysis. The degree of attention to internal facets has been positively associated with designing a planning system (e.g., Ansoff, 1965; Espy, 1985; Steiner, 1979). Coghlan (1987), in his study of religious orders, states that the internal review consisted of assessing past performances, distinctive competencies, personnel resources (number, age, skills), and quality of activities. Espy (1986) suggests that nonprofit organizations consider program quality, community reputation, unique delivery of service features, staff training, volunteer workers, and physical facilities. These topics may generate both strengths and weaknesses. In addition, organizations should assess their financial
health, public image, staff turnover, and ability to adapt to change.

Items assessing internal facets in the Ramanujam & Venkatraman (1987b) study include degree of emphasis on past performance, internal capabilities, and reasons for past failures. Of the design dimensions that they used in their study, attention to internal facets ranked third among the four dimensions as a predictor of planning effectiveness.

Planning Techniques

The third dimension of the planning process model is the use of planning techniques. A variety of quantitative and qualitative techniques exist as tools to aid decision making (e.g., David, 1986; Hofer & Schendel, 1978; Grant & King, 1982). Use of techniques help structure decision situations, allowing top management to gain a clearer picture of available data and opinions to enhance effective planning. Analytical tools can improve the quality of strategy decisions (David, 1989).

In an article on strategic thinking for human services managers, Weiner (1983) recommended several evaluative techniques including operations research, simulations, needs assessments, demographic studies, econometrics, delphi, and financial investment-divestment analysis. Raiken (1985) also recommends that nonprofit organizations use a variety of forecasting methods easily run with computerized statistical packages.
Stubbart (1983) warns that data bases and forecasts alone cannot equip planners to deal with turbulent changes. Strict reliance on quantifiable data may lead to rigid patterns of strategic thinking.

Functional Coverage

Dyson and Foster (1982) found that the effectiveness of certain parts of a planning process are improved through the participation of many organizational members. The fourth facet of the Ramanujam & Venkatraman (1987b) model addresses the degree of emphasis accorded the functional areas. Seven functional areas were targeted: marketing, operations and manufacturing, finance, personnel, purchasing and procurement, R&D and technology, and computers and MIS. Functional emphasis may vary with an organization's choice of competitive strategy (Hitt, Ireland, & Palia, 1982).

The findings of the Ramanujam & Venkatraman (1987b) study showed functional emphasis to be a relatively weak influence on planning effectiveness. They had expected to find greater levels of involvement from all of the functional areas as a result of the trend to delegate planning to the line organization. They surmised that functional involvement may be a given that no longer requires special emphasis. As more managers apply the principles of strategic thinking to their work, functional
lines blur as territorial domains overlap to achieve strategic cooperation.

Effectiveness of Planning

Almost all of the studies investigating the link between planning and performance in the profit sector have used financial measures to gauge effectiveness. It is more complicated to judge effectiveness in the nonprofit sector because services, not profits, tend to reflect the organizational end result.

The literature on effectiveness has, for several years, reflected a diversity of models. Campbell (1977) clearly stated that effectiveness was not one thing. Specific models simply provide a means for looking at different parts of the effectiveness construct. "Organizational effectiveness is not a truth that is buried somewhere waiting to be discovered if only our concepts and data collection methods were good enough. As with theories in general, a particular conceptualization may be useful only for certain purposes (Campbell, 1977:15)."

Price (1972) defines effectiveness as the degree of achievement of multiple goals. The goal-centered approach is one of three multidimensional domains selected by Ramanujam and Venkatraman (1987b) to measure planning effectiveness. Raiken (1985) supports this approach by
stating that effectiveness in social service agencies should be assessed by evaluating progress against formal goals.

The basic question of the planning objectives dimension is: "To what extent are multiple goals of planning fulfilled (Venkatraman & Ramanujam, 1987b:456)?" Based on previous supporting literature, they selected six general content indicators of outcome benefits of planning. The six include predicting future trends (Paul, Donovan, & Taylor, 1978), enhancing the professional educational value of the planning process (Hax & Majluf, 1984), evaluating alternatives based on more relevant information (King and Cleland, 1978), avoiding problem areas (Shrivastava and Grant, 1985), and improving short and long-term performance.

Predicting future trends refers to the planning system's ability to make reasonably plausible forecasts about the future. This objective results from the increasingly turbulent environment to which organizations must adapt (Ansoff, 1987). An appropriate response would appear to be to develop rather formalized systems for monitoring the environment, and developing concomitant strategies to forecast trends (Rhyne, 1985).

The formal planning process is considered to have educational value to managers. Through involvement in the planning process, managers may broaden their perspectives, gain additional knowledge, and perhaps develop a power base for succession (Pfeffer & Salancik, 1978).
An effective planning system has been thought of as one that stimulates innovation (Kanter & Summers, 1987; Miller & Friesen, 1987). Kanter and Summers (1987) report that innovation occurs more frequently with top management support, teamwork, and available resources including information. These factors have also been associated with formal planning systems. Therefore, the concept of generating and evaluating alternative choices would seem to be dependent on an atmosphere conducive to stimulating creativity.

Learning from experience is the idea behind "avoiding problem areas". Organizations learn from past mistakes if the analysis of problems is part of the adaptive planning process (Lorange & Vancil, 1977).

Lastly, improving long-term and short-term performance is considered "the raison d'être for adopting elaborate planning systems in the first place (Ramanujam, Venkatraman, & Camillus, 1986:353)." Planning systems are generally expected to produce better performance returns.

System Capabilities

This dimension focuses on the process of planning. Venkatraman and Ramanujam (1987) argue that every planning system strives to develop certain capabilities in order to perform effectively. Planning systems must have the ability to identify the strategic needs of the organization in terms
of subsystems, or means, that help achieve the end goals. For example, organizations need to know how they are progressing toward their objectives. If the planning system is not capable of providing this kind of feedback, the objectives may not be reached. However, if the system is capable of providing necessary feedback, appropriate adjustments can be made so that the objectives will be met. Effective planning systems, capable of meeting certain identified needs, are means to ends. Though in most organizations some of the capabilities are either specific to the organization or the industry, Ramanujam and Venkatraman (1987b) have selected a dozen generic indicators based on supporting literature. Some of these capabilities include the planning system's ability to encourage innovation, identify new opportunities, and facilitate top-down communication. The general parameters of this dimension include proactivity, flexibility, control, integration, autonomy, innovation and aptitude for change. Their complete set of generic criteria can be found below.

Relative Performance

The last component of the effectiveness dimension asks organizations to evaluate their performance relative to their competition. These items refer to traditional financial and marketing indicators of organizational performance such as sales growth and return on investment.
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Supporting Literature for its Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ability to anticipate surprises and crises</td>
<td>Ansoff (1975, 1984)</td>
</tr>
<tr>
<td>2. Flexibility to adapt to unanticipated changes</td>
<td>Ansoff (1975, 1984); Epink (1978)</td>
</tr>
<tr>
<td>3. Ability to identify new business opportunities</td>
<td>Ansoff (1965)</td>
</tr>
<tr>
<td>4. Ability to identify key problem areas</td>
<td>Andrews (1971); Steiner (1979)</td>
</tr>
<tr>
<td>5. Ability to foster managerial motivation</td>
<td>Hall (1977); Steiner (1979)</td>
</tr>
<tr>
<td>6. Ability to enhance the generation of new ideas</td>
<td>Shank, Niblock and Sandalls (1973)</td>
</tr>
<tr>
<td>7. Ability to communicate top management's expectation down the line</td>
<td>Lorange and Vancil (1977)</td>
</tr>
<tr>
<td>8. Ability to foster management control</td>
<td>Anthony (1965); King &amp; Cleland (1978)</td>
</tr>
<tr>
<td>9. Ability to foster organizational learning</td>
<td>Shrivastsava &amp; Grant (1985)</td>
</tr>
<tr>
<td>10. Ability to communicate managers' concerns to top management</td>
<td>Lorange &amp; Vancil line (1977); Steiner (1979)</td>
</tr>
<tr>
<td>11. Ability to integrate diverse functions and operations</td>
<td>Grant &amp; King (1982); Steiner (1979)</td>
</tr>
<tr>
<td>12. Ability to enhance</td>
<td>Taylor (1975); Taylor</td>
</tr>
</tbody>
</table>

**FIGURE 2**

Key Capabilities of a Planning System From Venkatraman & Ramanujam (1987:691)
Though these particular measures are not appropriate for nonprofit organizations, MacMillan (1983) has suggested multiple measures such as size of client base, resource attraction, management information systems, and advocacy capabilities.

Based on opinions from a panel of experts representing nonprofit organizations and academic personnel, the number of clients served was considered to be an important indicator of organizational success. Other surrogates of organizational performance were rate of growth of service offerings, ability to attract higher levels of funding, and positive community relations.

The Nonprofit Sector

Over the past decade, the highest growth rates in organizational formation and development have been in nonprofit organizations, particularly federal and other governmental agencies (Schendel and Hofer, 1978). "As a major national employer and service provider, effective nonprofit management is required for long-term national growth, efficiency, and effective resource allocation. Strategic thinking can significantly improve the quality of nonprofit management" (Hatten, 1982:104). Borst and Montana (1977) second the call for nonprofit organizations to become more "management conscious".
Recently, Raiken (1985), in relating a multi-year planning system in a large social service agency, underscored some of the issues that are affecting nonprofit organizations in the 1980s. He cites declining child populations, dramatic demographic changes, and fiscal constraints as reasons for instituting long-term planning.

Defining the Nonprofit Sector

Legally, "nonprofit" is used to describe organizations under the guidelines of section 501 c.3 of the Internal Revenue Code (Young, 1982). In a sociological sense, nonprofit organizations "have a mandate from society to provide services necessary for the maintenance of the social infrastructure that are typically not provided by the private sector" (Montanari and Bracker, 1986).

Within the nonprofit sector the organizations are often grouped by purpose or primary funding source. Kotler (1982) groups private nonprofit organizations such as hospitals, universities, charities, museums, and associations calling them "third sector" organizations. In general, they tend to "carry out a social purpose, are more experimental and change oriented, and depend on donations of money and volunteer time" (1982:13). Similarly, Rudney (1987) groups privately controlled, tax-exempt organizations to which donor contributions are tax deductible calling this group the "philanthropic sector". This classification includes
religious, educational, health, scientific, cultural, and social service organizations, which constitute the majority of nonprofit organizations.

Characteristics of Nonprofit Organizations

Newman and Wallender (1978) were among the first to look at nonprofit organizations from a planning perspective. They reported that nonprofit agencies had few or no long-range goals. Some of the reasons offered to explain this short-term focus include: (1) difficult to measure intangible services; (2) weak client influence; (3) employee allegiance to professional societies; (4) reliance on charismatic leaders; (5) restraints on the use of rewards and punishment; and (6) resource contributor interference in internal management.

These characteristics have been widely cited in strategic management texts (e.g., Wheelen & Hunger, 1987) and could be construed to excuse nonprofit organizations from formal long-range planning. Yet, their article goes on to state that these characteristics may also exist in the private sector. Some of the leading scholars in business management and marketing have led the movement for formal planning among nonprofit organizations (e.g., Ansoff, 1979; Kotler, 1982; Schendel & Hofer, 1979; Wortman, 1978).

Glueck & Jauch (1984) state that many public institutions and nonprofit organizations are managed like
small and medium-sized business since they have many of the same characteristics. "It appears reasonable to conclude that these institutions will receive benefits similar to what businesses receive if their management groups practice effective strategic management" (1984:23).

In analyzing similarities and differences between for-profit and nonprofit organizations, Steinberg (1987) concluded that the differences are not as pronounced as they first may appear. "Advertising is in many way analogous to fund raising, foundations play the role of stock market in providing initial equity capital, and sales of goods and services are important sources of revenue for both types of organizations" (1987:134).

Recently, Pflaum and Delmont (1987) concluded that there is no evidence to suggest that differences between public/nonprofit sectors and the for-profit sector make the planning practice of external scanning inappropriate for the public/nonprofit sector. Raiken (1985) believes that nonprofits often avoid research, statistics, and anything quantitative because helping professionals tend to be number-averse. However, in this age of accountability, more and more nonprofit managers are recognizing the importance of numbers. Planning requires the use of "data regarding the outside world and internal statistical trends" (Raiken, 1985:600).
Strategic behavior among the nonprofit organizations may be stimulated by the need to compete for scarce resources (Montanari & Bracker, 1986). Strategic planning, strategic audit, and portfolio management have ready applicability for many nonprofit organizations according to Gruber and Mohr (1982). Programs, like products, compete with one another for the scarce resources of the organization. Kotler contends that "nonprofit organizations face a host of problems that would be analyzed as straightforward marketing problems if found in the for-profit sector" (1982:xiii).

According the Hatten (1982) survival is the paramount value of the nonprofit sector. Other values include service excellence and professional growth. In a dynamic society, change is the norm, "new client needs and wants appear, new competition emerges, social values change, new laws are passed, and radically different technostructures appear" (Kotler, 1982:13). Organizational survival depends on being adaptive. Adaptation refers to a readiness to revise mission and strategic objectives to be aligned with new opportunities (Kotler, 1982).

Studies of Planning in Nonprofit Organizations

Strategic planning in the nonprofit sector has received uneven coverage. Universities and hospitals have been studies far more than other segments of the sector. All of
the work related to social service agencies is either case study or prescriptive in nature.

In a study of a single denomination of churches in a regional area, Odom and Boxx (1988) investigated planning sophistication, perceived environmental uncertainty, church size, and growth rate. They found that planning sophistication (three levels) was related to size, and that more formal planning processes were used when church leaders perceived the environment as complex. Additionally, formal planners were associated with higher levels of growth in services.

Sprafkin (1978), in discussing long-range planning for family service agencies, notes that awareness of the need for planning began in 1962 when an executive with IBM addressed a conference of social service executive directors. Sprafkin goes on to say that the executive director is the primary leader in planning. Plans should be developed at least three to five years ahead. Good planning involves the board of directors and other employees in the decision making process.

Two planning models were compared by Van de Ven (1980) in the context of creating fourteen new child care programs in Texas. He defined planning as the "process or series of actions undertaken to develop an innovation" (1980:712). In this study, the Program Planning Model was more effective than the conventional planning model.
Standardized planning procedures are discussed in an article by Eldridge (1983). He recommends that social service agencies gather empirical data on their programs, activities, client needs, and measures of effectiveness. Despite the bureaucratic environment, Eldridge believes that agency planners have considerable latitude in designing and operating creative service delivery strategies.

A number of recent articles illustrate the range of topics covered in journals targeted to social service agency administrators. Sircar, Schkade, and Schoech (1983) have written about data base management systems; Friesen and Frey (1983) discuss fiscal stress and organizational decline. Other coverage includes social work marketing and accountability in human services (Elkin, 1985; Genkins, 1985).

Vogel and Patterson (1986) combine strategic management practices with accountability in describing the case study of Youth Guidance of Chicago. They relate assessing the agency's role in the community as an important aspect of analyzing opportunities and threats. The plan becomes the standard of performance against which success can be measured.

"Strategic planning has become increasingly popular with nonprofit organizations over the past few years" (Feinstein, 1985:36). She explains the strategic planning process as a long-term focus of at least three to five years.
and one that concentrates on assessing strengths, weaknesses, opportunities, and threats. "The product of a strategic planning effort is a comprehensive blueprint for action that can ensure the organization's survival and enable it to serve more people better" (1985:37).

The impact of united funds such as the United Way of America has influenced member agency behavior. According to Steinberg (1987), united fund members enjoy greater contributions than they could obtain on their own. Since donations are generally given to the fund as a whole, donor decision making is reduced. United funds may also have a monopoly on payroll deduction plans. Competitive fund raising among member agencies is diminished, and perhaps most importantly, united funds assess needs and audit performance of member agencies. In many regions, for example, the United Way requires strategic planning for all member agencies requesting multi-year funding (Feinstein, 1985).

Unique Planning Issues Among Nonprofits

Nutt and Backoff state that third sector and public (governmental) agencies have a tendency to "stay rooted in past practices and conventional wisdom" (1987:45). They believe that agency goals are often ambiguous. This ambiguity seems related to Newman and Wallender's (1978) opinion that nonprofit agencies experience more goal
conflict than for profit organizations because of divergent aims of stakeholders.

As a result of multiple funding sources, most nonprofit agencies must be responsive to oversight (Nutt & Backoff, 1987). This may create a planning focus geared to budgets or personnel rather than mission (Newman & Wallender, 1978).

Despite these differences, Newman & Wallender conclude that "the planning process in nonprofit enterprises is basically similar to planning in profit-seeking companies. Missions, operating objectives, budgets, scheduling, policies, procedures, etc., all have a similar role" (1978:28). They conclude that the success of planning often depends on the skill of the charismatic leader.

Summary

This chapter has reviewed some of the research involving strategic planning and effectiveness. Results are mixed regarding the efficacy of planning.

The Ramanujam and Venkatraman (1987b) model has delineated some of the key aspects of the planning process incorporating them into their planning design dimensions. To these, they have added certain other requirements believed necessary to facilitate the planning process. The two contextual dimensions included are resources for planning and absence of resistance to planning. Other variables to consider include environmental uncertainty, planner characteristics, and organizational size.
The third component of their model assesses effectiveness in several ways. It taps the degree of attainment of planning goals, achievement relative to perceived competition and specific generic capabilities a good planning system is thought to possess. These effectiveness measures go beyond the traditional financial data used in most previous research. These dimensions also open up the possibility of evaluating effectiveness in organizations not easily assessed with financial measures.

Planning research has been limited in the nonprofit sector even though recognized experts in strategic management and marketing have suggested broader application of strategic planning techniques. Hospitals and universities have been in the forefront of application, while very little is known about planning in private social service agencies.

The literature indicates that awareness of strategic planning is increasing. Public demands for greater accountability coupled with dwindling resources call for the application of techniques that will provide efficient and effective operation of nonprofit organizations. It is believed that strategic planning can make a strong contribution to meeting these needs.

Level of Planning Sophistication

In the Ramanujam et al. (1987) investigation of trends in strategic planning, an assessment was made of the
maturity of the planning systems. For their large business sample the median firm began formal strategic planning around 1975. In order to compare responses between recent and mature planners, they used 1976 as a cut-off point.

Maturity of the planning system concept seemed to assume too much for the social service sector. It assumed that organizations are engaged in formal planning and asks simply when the process began.

A more reasonable approach was to assess the kinds of written plans, if any, that were employed. Odom and Boxx (1988), in their study of a sample of 179 churches, used a multiple cut-off system similar to that used by Lindsay and Rue (1980). The six questions (Appendix E) asked about the presence of written plans. The more detailed and long-term the plans, the greater the rating of planning sophistication.
CHAPTER III

METHODOLOGY

Introduction

This research project has tested the Ramanujam and Venkatraman (1987b) model of planning system dimensions and planning system effectiveness on a sample of nonprofit organizations. Modifications to the original questionnaire (Appendix A) have been made in order to adapt the items and the vocabulary to the nonprofit sector sample.

This research has also assembled baseline descriptive data about the extent of formal planning strategies among private nonprofit social service agencies. Data included characteristics of the agency in terms of budget, number of employees, volunteers, and clients as well as the presence of written long-range plans.

Data were gathered through the use of a structured telephone interview questionnaire administered by a trained, impartial interviewer. The sample was randomly selected from among the members of the Community Council of Greater Dallas. In each case, the respondent was the executive director of the agency.
Variables

Measures of planning system design dimensions, context planning dimensions, and planning effectiveness dimensions constituted the primary variables in this study. Given that this research is in part a test of the Ramanujam and Venkatraman model, the foundation for the operationalization of these variables was adapted from their work. The development of the questionnaire was firmly grounded in previous research findings from the field of strategic management. To further assess the adequacy of the domains, a panel of experts composed of social service agency directors and academicians reviewed the instrument to assess the appropriateness of the measures and the language. Coupled with the exhaustive literature search, the variables were deemed appropriate representations of the dimensions.

Contextual planning dimensions used by Ramanujam and Venkatraman (1987b) included "Resources Provided to the Planning Function" which was measured by the number of planners, time spent by CEO in planning, involvement of staff managers in strategic planning, and resources provided for strategic planning. Their research reported a Cronbach alpha reliability coefficient of 0.60. Though a reliability at that level is considered adequate for exploratory research, the present study attempted to raise that coefficient by including other appropriate statements (Davis & Cosenza, 1985).
The adaptation of this variable breaks out staff and line management involvement in the planning process. The level of involvement of the board of directors is also assessed.

It should be noted that the term "formal long-term planning" was used in place of "strategic planning". This change was deemed necessary based on previous concerns expressed by Coghlan (1987) and Odom and Boxx (1988) that business terminology may not be clearly understood by nonprofit administrators. Further support for the adjustment in terminology was offered by members of the expert panel who felt that respondents would not understand the concept of "strategic planning" even though they may be actively engaged in the process. Given that the essential processes of strategic planning were still being assessed, the change in terminology will not impact the results of this study.

The second contextual measure used by Ramanujam and Venkatraman (1987b) is "Resistance to Planning". It consists of the degree of emphasis on strategic planning, involvement of line managers in planning, acceptance of outputs of planning by top managers, resistance to planning in general, and threats to the continuation of planning. The reported alpha was 0.614.

In the nonprofit sector, it is believed that board support is critical for long-range planning (Feinstein, 1985), therefore, acceptance of the results by the board
have been assessed. Other items in this category remain essentially the same. For scoring purposes, the two items assessing emphasis on planning and board acceptance of the planning process have been reverse coded in order to maintain a consistent direction among the responses. This is in keeping with the Ramanujam and Venkatraman format.

A third contextual variable included in this study is that of size. In this study size has been measured by the total annual budget reported. The sample has been divided at the median to create two categories: large and small.

The last measurement in this section is that of uncertainty for planning. Based on research done by Specht (1987), uncertainty for planning can be measured through two dimensions: uncertainty due to change and uncertainty due to complexity. Specifically, this measure assesses the planner's perception of the environment. Her four item scale has been used intact with one exception. The question that read "Many parts of the environment external to our organization that we have to consider when planning do not directly affect us". Clarification of the concept of the indirect relationship could not be found in her research, therefore this question was altered to eliminate the last five words. Cronbach alpha reliability scores were .79 for the uncertainty due to change items and .87 for the uncertainty due to change items (Specht, 1987).
Planning system design dimensions consist of four components in the Ramanujam and Venkatraman (1987b) research. They developed these components based on extensive literature review and through the use of an expert panel.

The first component is "Attention to Internal Facet". It is composed of the degree of emphasis on internal capabilities, past performance, and reasons for past failures. The reported Cronbach alpha was 0.540. They further report that "all item-to-total correlations were positive and significant at p-levels better than 0.01" (Ramanujam & Venkatraman, 1987b:458).

Changes were made in this section to add clarity and to include more items. Specifically, agreement with the following concepts will be assessed: (1) examination of agency strengths and weaknesses, (2) reasons for past failures and successes, (3) staff members' areas of professional expertise, (4) current organizational structure, and (5) current agency performance. All of these areas are included in the management literature as internal audit features (c.f., David, 1989). In addition, the expert panel considered the items clear and appropriate.

The second component in designing a planning system was "Attention to External Facets". Included here were general economic and business conditions, regulatory issues, worldwide competitive trends, supplier trends, customer
preferences, and technological trends. The reported Cronbach alpha score from the Ramanujam and Venkatraman study was 0.613.

While still assessing the underlying concept of attention to the external environment, changes involved assessing the relative importance of selected sectors of the external environment. Each of the six sectors included some examples to help define the sector. The six were: economic, regulatory, technological, sociocultural, client/customer, and competitive. These sectors were deemed the most appropriate based on feedback from the expert panel and a review of literature. The targeted sectors were grounded in previous research on environmental scanning.

"Functional Coverage" is the third component of the design dimensions. Included in the Ramanujam and Venkatraman (1987b) model were the functional areas of marketing, operations, finance, personnel, purchasing, research and development, and computers/MIS. Their Cronbach alpha was 0.772 for this component.

Appropriate functional areas for this study were marketing, finance/accounting, purchasing/procurement, personnel, medical or clinical technology, computers/MIS, and program operations. The scale used determined the degree of importance given to each functional area when planning. The option of "not applicable" was also
available to agencies which did not have representation in one or more of these functional areas.

The last component under design dimensions was the "Use of Techniques" for decision analyses. Nine frequently used methods such as zero-based budgeting and stakeholder analysis were included (alpha=0.834).

The present study included eleven quantitative and qualitative techniques mentioned in the business and social service literature. The degree of importance each one played in the planning process was assessed. Again, the option of "not applicable" was available to agencies when selected techniques were not employed for decision making.

Measurement of the contextual dimensions of "Resources", "Resistance", and "Uncertainty for Planning" used a 5-point Likert type scale. For each item, 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, and 5=strongly agree. Size, as previously stated, was measured by the median split of total annual budget.

The design dimension of "Internal Facets" was also measured on the 5-point Likert type scale mentioned above. The remaining design dimensions of "External Facets", "Functional Coverage", and "Decision Making Techniques" was measured using a 5-point scale where 1=very unimportant, 2=unimportant, 3=neither unimportant nor important, 4=important, and 5=very important. The option of responding "not applicable" was also available for items noted above.
Planning system effectiveness dimensions included "System Capabilities", "Objective Fulfillment", and "Relative Competitive Performance". These three dimensions constitute the effectiveness measures used by Ramanujam and Venkatraman (1987b).

The "System Capability" dimension assessed a range of possible benefits associated with a well designed planning system. Ramanujam and Venkatraman (1987b) included thirteen items in this category with a Cronbach alpha of 0.871. Their items included such benefits as the ability to anticipate surprises and crises, benefits as a tool for management control, and a basis for enhancing innovation. The complete version of their questionnaire can be found in Appendix A.

Adjustments made to the present questionnaire were recommended by the expert panel. The word "control" was replaced by "measure progress toward goals". Innovation and creativity were combined into one item and "organizational learning" was omitted. A total of eleven items constitute "System Capability".

"Objective Fulfillment" in the original questionnaire had a Cronbach alpha of 0.748 and consisted of six items focused on generic objectives associated with a planning system. The only change in the current assessment was from "enhancing management development" to "develop managers' professional growth".
The "Relative Competitive Performance" dimension from the Ramanujam and Venkatraman (1987b) study consisted of four items: sales growth, earnings growth, market share change, and return on investment ($\alpha=0.953$). This traditional approach was altered for the nonprofit sector. The items recommended by the panel included community relations, funding attractiveness, the number of clients served, and growth rate of services. This dimension constituted the broadest departure from the original study, but was considered appropriate for the target population based on the goals discussed in the social service literature.

Measurement of the "System Capability" items, "Objective Fulfillment", and "Relative Competitive Performance" items was made on a 5-point Likert type scale where 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, and 5=strongly agree.

It should be noted that the original Ramanujam and Venkatraman (1987b) scales were 5-point Likert type measures, but the points ranged from "significant decrease" to "significant increase", or "significantly less emphasis" to "significantly more emphasis" on the planning system dimensions. Scales for the effectiveness dimensions ranged from "much improvement" to "much deterioration", "much worse" to "much better", and "entirely unfulfilled" to "entirely fulfilled". These scales were logical in the
context of their original survey in 1984 which addressed the trends and changes in strategic planning among large businesses.

However in this study, no baseline data were available to allow one to assume that some or all of these items were being addressed by nonprofit agencies, therefore most dimensional items were reworded so that scoring could occur within a range of "strongly disagree" to "strongly agree". Remaining dimensional items were scored on the basis of perceived importance.

Planning Classifications

Based on the work of Odom and Boxx (1988), five questions were included to assess the level of formal planning within each agency. The questions asked about written plans, budgets, and action plans covering one year or at least three years (Appendix D). Responses were recorded either "yes" or "no". The cut-off for scoring agencies as formal planners was the presence of a written three year plan. Agencies at planning levels below three years were classified as informal planners for the purposes of this study.

Other Extraneous Variables

Certain other information that may be of future interest was collected at the conclusion of the questionnaire. Such items included the agency affiliation,
the number of levels of management, characteristics of the executive director, and satisfaction with the planning system.

Research Design

This exploratory research was basically descriptive and comparative. The components of the Ramanujam and Venkatraman (1987b) planning system characteristics and planning effectiveness dimensions were predictor variables. The Odom and Boxx (1988) system for assessing formality of planning provided the foundation for the criterion set. Additional criterion variables included organizational size, perceived planning uncertainty, and relative competitive performance.

Statistical Hypotheses

H₀₁: There will be no difference between agencies classified as formal planners and agencies classified as informal planners along all of the planning system design dimensions and the contextual dimensions (significance level = .05).

H₀₂: There will be no difference between agencies classified as formal planners and agencies classified as informal planners along all of the effectiveness dimensions (significance level = .05).

H₀₃: There will be no difference between executive directors who perceive a high degree of uncertainty for
planning and those who perceive a low degree of uncertainty for planning along the planning system design dimensions (significance level = .05).

$H_04$: Agencies classified as large will not differ from agencies classified as small along the contextual and design dimensions (significance level = .05).

$H_05$: Agencies with high relative competitive performance will not differ from agencies with low relative competitive performance on the contextual dimensions, planning system design dimensions, and on the effectiveness dimensions of "Objective Fulfillment" and "System Capabilities" (significance level = .05).

Sampling Plan

The sampling frame consisted of agencies listed in the 1988 Directory of Health, Welfare and Recreation Services compiled and published by the Community Council of Greater Dallas. A total of 194 agencies were listed that met the criteria of being privately supported social service agencies. Programs or agencies directly operated by city, county, or state governments were eliminated.

Since the directory was alphabetical by agency name and no other pattern to the listing order was present, a systematic random sample was used. From a random start, every third eligible agency listed was selected. Each agency's executive director was contacted by mail to enlist
his or her support and alert the director to the interviewer's impending phone call. The total sample consisted of 50 agencies.

Data Collection Procedures

A structured interview format was used to gather data for this study. Information was collected by an impartial telephone interviewer trained in interviewing by the United States Census Department.

The executive director or designated head of each agency was the only individual targeted as respondent. Though in some settings relying on only one respondent may bias the results, it was felt that within social service agencies, the executive director was the most reliable and informed individual when discussing planning systems.

Prior research has found telephone interviewing to be equal to, if not superior to, other active methods of data collection in obtaining accurate and valid data (Davis and Cosenza, 1985). The time for each interview was approximately thirty minutes. The response sheet found with the questionnaire in Appendix E was developed to facilitate ease of scoring.

Statistical Analysis

In addition to compiling descriptive statistical data on the use of strategic planning among selected social service agencies, this study compared the findings with the
Ramanujan and Venkatraman (1987b) model of planning. Discriminant analyses was the statistical method used to determine if the dimensions differed significantly for the criterion sets under study. Respective F-tests were employed to determine the level of significance of the computed discriminant equations and the percent of cases correctly classified through stepwise discriminant analyses was examined against chance predictions. Cronbach alpha reliability analyses were run on the dimensions of the adapted questionnaire. Comparisons were made to the original Ramanujam and Venkatraman (19876) instrument.
CHAPTER IV

RESULTS

This chapter describes the nature of the sample. It begins with a series of descriptors about the agencies and their directors. The next section examines the reliability of the questionnaire items and compares them with the Ramanujam and Venkatraman (1987b) Cronbach alpha scores. The balance of the chapter is devoted to a series of discriminant analyses that address the research hypotheses.

Structured Interviews

Using a random start and selecting every third agency in the 1988 Directory of Services compiled by the Community Council of Greater Dallas, a letter was sent to each executive director requesting his/her participation in the study (Appendix C). A total of sixty-one (61) letters were mailed in order to provide some slack for the trained interviewer in the event of refusals or scheduling problems.

The trained interviewer conducted fifty (50) complete interviews during a two week period. There were eight agencies which did not participate in the study for various reasons. Among the participating agencies, the structured telephone interview lasted thirty (30) minutes on average. Thirty-nine (39) of the agency directors requested a copy of
the summary report. These feedback reports will be forwarded at the conclusion of this project by the telephone interviewer who has the master list of participating agencies.

Sample Characteristics

Size

One of the measures of the size of an agency is the number of full-time equivalent (FTE) employees. Among the fifty (50) agencies, the range was 0 to 444 FTEs. Those in the zero category represented agencies that were totally staffed by unpaid volunteers. The majority of the sample agencies employed 20 or fewer full-time equivalent workers with 80 percent employing 50 or less. Only 12 percent of the sample had 100 or more FTEs. Table 2 summarizes these frequencies.

Another measure of agency size was the number of volunteers used during the course of a year. The numbers ranged from 0 to over 10,000. The distribution showed half of the participating agencies with 60 or fewer volunteers. Only 8 percent of the agencies had greater than 1000 volunteers. Table 3 provides a summary of the number of volunteers.

Two additional questions asked the number of managerial levels and the number of departments within the agency. Again, these data indicate that the majority of the sample
TABLE 2
Distribution of Sample According to Full-time Equivalent Employees (N=50)

<table>
<thead>
<tr>
<th>FTE</th>
<th>Frequency</th>
<th>%</th>
<th>Cum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 10</td>
<td>21</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>11 - 50</td>
<td>19</td>
<td>38</td>
<td>80</td>
</tr>
<tr>
<td>51 - 99</td>
<td>4</td>
<td>8</td>
<td>88</td>
</tr>
<tr>
<td>100 - 444</td>
<td>6</td>
<td>12</td>
<td>100</td>
</tr>
</tbody>
</table>

Range: 0 to 444
Median: 12
Mean: 42
Mode: 15
SD: 80.5

TABLE 3
Distribution of Sample According to Number of Volunteers (N=50)

<table>
<thead>
<tr>
<th>Volunteers</th>
<th>Frequency</th>
<th>%</th>
<th>Cum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 10</td>
<td>7</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>11 - 20</td>
<td>9</td>
<td>18</td>
<td>32</td>
</tr>
<tr>
<td>21 - 40</td>
<td>5</td>
<td>10</td>
<td>42</td>
</tr>
<tr>
<td>41 - 60</td>
<td>6</td>
<td>12</td>
<td>54</td>
</tr>
<tr>
<td>61 - 100</td>
<td>6</td>
<td>12</td>
<td>66</td>
</tr>
<tr>
<td>101 - 200</td>
<td>4</td>
<td>8</td>
<td>74</td>
</tr>
<tr>
<td>201 - 300</td>
<td>5</td>
<td>10</td>
<td>84</td>
</tr>
<tr>
<td>301 - 1000</td>
<td>4</td>
<td>8</td>
<td>92</td>
</tr>
<tr>
<td>over 1000</td>
<td>4</td>
<td>8</td>
<td>100</td>
</tr>
</tbody>
</table>

Range: 0 to over 10,000
Median: 55
Mean: 600
Mode: 15
SD: 1996
represented relatively small organizations (Table 4 and Table 5).

The range of clients served during the most recent twelve month period was from 33 to over 100,000. Again, the majority of the agencies fell within the lower end of the range. Sixty (60) percent of the agencies served 2000 or fewer clients. Table 6 summarizes these data.

The agencies annual budgets ranged from $3850 to $20,000,000. Sixty (60) percent of the budgets were under $750,000. Twenty (20) percent were between two million and twenty million dollars (Table 7).

Though not directly related to size, agency longevity gave some indication of an agency's staying power. No agency in the sample had less than two years in operation while one had a 110 year history. The median number of years in operation was 19.5 years. Table 8 summarizes operating history. Additionally, half of the sample agencies were affiliated with a national organization other than United Way. Twenty agencies were members of United Way, the umbrella agency that coordinates fund raising and distributes the money according to predetermined criteria.

Executive Directors' Characteristics

Forty-four percent of the executive directors in the sample were female and fifty-six percent were male. The majority, fifty-two percent, had been in their present
### TABLE 4
Distribution of Sample According to Number of Managerial Levels (N=50)

<table>
<thead>
<tr>
<th>Managerial Levels</th>
<th>Frequency</th>
<th>%</th>
<th>Cum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>30</td>
<td>44</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>32</td>
<td>76</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>10</td>
<td>86</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>8</td>
<td>94</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>2</td>
<td>96</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>2</td>
<td>98</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>2</td>
<td>100</td>
</tr>
</tbody>
</table>

Range: 1-10  
Median: 3  
Mean: 3  
Mode: 3  
SD: 1.7

### TABLE 5
Distribution of Sample According to Number of Departments (N=50)

<table>
<thead>
<tr>
<th>Departments</th>
<th>Frequency</th>
<th>%</th>
<th>Cum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1</td>
<td>11</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>2 - 3</td>
<td>16</td>
<td>32</td>
<td>54</td>
</tr>
<tr>
<td>4 - 5</td>
<td>13</td>
<td>26</td>
<td>80</td>
</tr>
<tr>
<td>6 - 7</td>
<td>6</td>
<td>12</td>
<td>92</td>
</tr>
<tr>
<td>8 - 9</td>
<td>1</td>
<td>2</td>
<td>94</td>
</tr>
<tr>
<td>10 - 15</td>
<td>2</td>
<td>4</td>
<td>98</td>
</tr>
<tr>
<td>over 15</td>
<td>1</td>
<td>2</td>
<td>100</td>
</tr>
</tbody>
</table>

Range: 0 - 25  
Median: 3  
Mean: 4  
Mode: 2  
SD: 4
TABLE 6
Distribution of Sample According to Number of Clients Served Annually (N=50)

<table>
<thead>
<tr>
<th>Clients</th>
<th>Frequency</th>
<th>%</th>
<th>Cum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 375</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>376 - 850</td>
<td>10</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>851 - 2,000</td>
<td>10</td>
<td>20</td>
<td>60</td>
</tr>
<tr>
<td>2001 - 10,000</td>
<td>10</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>10,001 - 100,000</td>
<td>10</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

Range: 33 - 10,000
Median: 1200
Mean: 11,305
Mode: 1200
SD: 25,184

TABLE 7
Distribution of Sample According to Annual Budget (N=50)

<table>
<thead>
<tr>
<th>Budget($)</th>
<th>Frequency</th>
<th>%</th>
<th>Cum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>3850 - 100,000</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>100,001 - 360,000</td>
<td>10</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>360,001 - 750,000</td>
<td>10</td>
<td>20</td>
<td>60</td>
</tr>
<tr>
<td>750,001 - 2,000,000</td>
<td>10</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>2,000,001 - 33,500,000</td>
<td>10</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

Range: 3850 - 33,500,000
Median: 500,000
Mean: 2,153,916
SD: 5,446,900

position for less than five years. The average tenure in office was seven years with twenty percent in their present positions for over ten years.
TABLE 8

Distribution of Sample According to Years in Operation
(N=50)

<table>
<thead>
<tr>
<th>Years in Operation</th>
<th>Frequency</th>
<th>%</th>
<th>Cum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 5</td>
<td>6</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>6 - 10</td>
<td>7</td>
<td>14</td>
<td>26</td>
</tr>
<tr>
<td>11 - 20</td>
<td>15</td>
<td>30</td>
<td>56</td>
</tr>
<tr>
<td>21 - 30</td>
<td>8</td>
<td>16</td>
<td>72</td>
</tr>
<tr>
<td>31 - 40</td>
<td>2</td>
<td>4</td>
<td>76</td>
</tr>
<tr>
<td>41 - 50</td>
<td>3</td>
<td>6</td>
<td>82</td>
</tr>
<tr>
<td>51 - 60</td>
<td>0</td>
<td>0</td>
<td>82</td>
</tr>
<tr>
<td>61 - 70</td>
<td>2</td>
<td>4</td>
<td>86</td>
</tr>
<tr>
<td>71 - 80</td>
<td>1</td>
<td>2</td>
<td>88</td>
</tr>
<tr>
<td>81 - 90</td>
<td>2</td>
<td>4</td>
<td>92</td>
</tr>
<tr>
<td>91 - 100</td>
<td>2</td>
<td>4</td>
<td>96</td>
</tr>
<tr>
<td>100 over</td>
<td>2</td>
<td>4</td>
<td>100</td>
</tr>
</tbody>
</table>

Range: 2 - 110
Median: 20
Mean: 31
Mode: 10
SD: 30

The executive directors in this sample represented a broad range of academic backgrounds. Though the most frequent training was in social work, Table 9 illustrates the variety of academic preparations.

Three questions related to long-range planning were asked each executive director. The first one asked the director to assess the level of board involvement in the planning process using a five point Likert-type scale.
Seventy percent of the executive directors were either satisfied or very satisfied with the degree of involvement.

The same scale was used to assess the executive director's overall level of satisfaction with the present agency planning system. Here, only forty-two (42) percent were satisfied or very satisfied with the present system.

Lastly, the directors were asked if their agencies used consultants to assist with the long-range planning process. Twenty-seven (27) agencies did not use consultants. Of the
twenty-three (23) that did, ten (10) used volunteer consultants, seven (7) paid consultants, and six (6) used both paid and volunteer consultants.

Questionnaire Reliability

Post hoc analysis was performed on the dimensions portion of the questionnaire. It was not reasonable to assume that the Cronbach alpha scores reported by Ramanujam and Venkatraman (1987b) would remain constant for this study since the scales and some of the items were altered to meet the needs of this study. Cronbach's alpha and standardized item alpha scores were calculated for each dimension (Cronbach, 1951). Table 10 provides the complete results.

The alpha levels considered acceptable vary with the use of the measure. Modest reliability (0.50 to 0.60) may suffice for the early stages of research while a reliability of 0.95 or better will suffice for important decision making situations (Nunnally, 1967). A suggested threshold for this type of study is 0.70 (Nunnally, 1978). In this study, seven of the values exceed 0.70 with two more values above 0.60. The external scanning set of questions was below 0.60, but was in the expected direction.

Treatment of Criterion Measures

Four different criterion variables were used to test the hypotheses. Post hoc categories were formed based on level of planning sophistication, perceived relative
### TABLE 10
Reliabilities of Dimensions
Cronbach's Alpha Scores
(N=50)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Sample Alpha</th>
<th>Ramanujam and Venkatraman Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>0.738</td>
<td>0.597</td>
</tr>
<tr>
<td>Resistance</td>
<td>0.790</td>
<td>0.614</td>
</tr>
<tr>
<td>Internal</td>
<td>0.839</td>
<td>0.540</td>
</tr>
<tr>
<td>System Capability</td>
<td>0.941</td>
<td>0.871</td>
</tr>
<tr>
<td>Objective Fulfillment</td>
<td>0.916</td>
<td>0.748</td>
</tr>
<tr>
<td>External</td>
<td>0.519</td>
<td>0.613</td>
</tr>
<tr>
<td>Functions</td>
<td>0.810</td>
<td>0.772</td>
</tr>
<tr>
<td>Techniques</td>
<td>0.842</td>
<td>0.834</td>
</tr>
<tr>
<td>Performance</td>
<td>0.636</td>
<td>0.953</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>0.673</td>
<td>0.830 ( ^a )</td>
</tr>
</tbody>
</table>

\( ^a \) From Specht (1987) representing an average of the two alphas.

...competitive position, the executive director's perception of planning uncertainty, and the size of the agency.

**Planning Sophistication**

Using the Odom-Boxx (1988) model for planning, questionnaire items asked the degree to which formal planning was undertaken. Sophisticated planners were classified as those agencies that prepared a written long-
range plan covering at least three years. Informal planners were those doing less than a three-year written plan. Adding a mid-range category of operational planners was rejected because of the resulting small numbers in each category. A larger sample would be needed in order to use discriminant analysis given the number of predictor variables involved.

Competitive Position

Four items assessed an agency's relative competitive position. Executive directors responded on a five-point Likert-type agreement/disagreement scale. Those classified as having a highly positive competitive position were agencies responding with "agree" or "strongly agree" on each item.

Perception of Planning Uncertainty

The four questionnaire items used to assess each executive director's perception of planning uncertainty were from Specht (1987). Those individuals responding with either "agree" or "strongly agree" on each item were classified as perceiving an uncertain environment.

Agency Size

Total annual budget was used as a surrogate for agency size. Using a median split, which in this case was $500,000, the sample was divided into two groups. The two
groups did not have equal numbers because three agencies had budgets of $500,000.

Originally, it was proposed that size of the agency be determined by using a median split of the full-time equivalent employees. The data revealed that such a split occurred between 12 and 13 employees. Such an insignificant separation was difficult to justify, therefore separation by total annual budget was used as a surrogate for agency size. This division by a median split was a much cleaner natural break between $500,000 and $750,000.

TABLE 11

<table>
<thead>
<tr>
<th>Summary of Groupings</th>
<th>Groups</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning Sophistication</td>
<td>Formal</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Informal</td>
<td>23</td>
</tr>
<tr>
<td>Competitive Position</td>
<td>High</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>33</td>
</tr>
<tr>
<td>Size By Budget</td>
<td>Above $500,000</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Below $500,000</td>
<td>27</td>
</tr>
<tr>
<td>Perceived Uncertainty</td>
<td>High</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>19</td>
</tr>
</tbody>
</table>

Discriminant Analysis

Discriminant analysis was used as a means of testing and interpreting group differences. Discriminant analysis attempts to identify those variables that statistically
differentiate two or more groups. In addition, it is possible to apply the discriminant function coefficients to provide the greatest differentiation between groups (Cooley and Lohnes, 1971).

Opinions differ regarding the ratio of cases to variables. Rhyne (1985) suggested a ratio of ten cases per discriminating variable. In contrast, Wahl and Kronmal (1977) suggested that for every four predictor variables there be 25 observations with an additional 25 observations for every two variables added beyond the original four. To further confuse this picture, Klecka (1984) stated that any number of discriminating variables was acceptable provided that the number was less than the total number of cases minus two.

Certain statistical assumptions are inherent in discriminant analysis. These assumptions include (1) two or more criterion groups, (2) at least two cases per group, (3) discriminating variables measured at the interval level, (4) no discriminating variable may be a linear combination of other discriminating variables, (5) the covariance matrices for each group must be approximately equal, and (6) that each group has been drawn from a population with a multivariate normal distribution on the discriminating variables (Klecka, 1984). The most difficult assumptions to meet are the multivariate normal distribution and equal group covariance matrices. Green (1978) reported that if the
covariance matrices are unequal, too many cases will be assigned to the group with the larger matrix. Several authors have demonstrated that discriminant analysis is a rather robust technique that can tolerate violation of these assumptions provided that the findings are interpreted with caution since deviation from these assumptions may cause some reduction in accuracy. (Lachenbruch, 1975, Jackson, 1983).

Several methods are available to calculate the discriminant functions; among them are the direct method based on Fisher's calculations (1951) and the stepwise method minimizing Wilks' lambda (SPSSX, 1986). The stepwise method is often used for exploratory research when all of the discriminating variables in the original set may not be of value for interpretation (Klecka, 1984). Often weak variables increase the probability of misclassification (Klecka, 1984).

Since this study was primarily exploratory, the stepwise procedure was used as well as the direct method in most cases. Comparison of the outcomes and the subsequent predicted membership matrices follows. When the percentage of correct classifications was exceptionally poor, additional discriminating variables were added to the set to explore the contributions of other dimensions for a given criterion variable.
Statistical Test Results

H₀₁: There will be no difference between agencies classified as formal planners and agencies classified as informal planners along all of the planning system design dimensions and the contextual dimensions (significance level = 0.05).

Table 12 displays the results of the discriminant analysis of formal and informal planners when the six planning dimensions were used as discriminating variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Wilks' Lambda</th>
<th>Mean Scores</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Formal</td>
<td>Informal</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Planners (27)</td>
<td>Planners (23)</td>
<td></td>
</tr>
<tr>
<td>Resistance to Planning</td>
<td>.769***</td>
<td>8.22</td>
<td>11.74</td>
<td></td>
</tr>
<tr>
<td>Use of Techniques</td>
<td>.671***</td>
<td>34.33</td>
<td>23.61</td>
<td></td>
</tr>
</tbody>
</table>

*** p < .001

Two of the six planning dimensions, resistance to planning and use of decision making techniques, yielded a discriminant function with a significance level of 0.0001. An examination of the mean scores for these two dimensions showed that agencies classified as formal planners experienced less resistance than agencies classified as
informal planners. Mean scores also indicate that formal planners employ more decision making techniques than were used by informal planners. The remaining four dimensions did not contribute further to the significance of the discriminant function.

The two dimensions of resistance to planning and use of techniques correctly classified 74 percent of the cases in this sample. The matrix in Table 13 illustrates the percentage of correct and incorrect cases assigned to the respective groups. The predictive value of this discriminant analysis is significantly better than chance (Table 14).

<table>
<thead>
<tr>
<th>Group #</th>
<th>N</th>
<th>Predicated Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal Planners</td>
<td>(27)</td>
<td>21 (78.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 (22.2%)</td>
</tr>
<tr>
<td>Informal Planners</td>
<td>(23)</td>
<td>5 (21.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18 (78.3%)</td>
</tr>
</tbody>
</table>

The test for equality of group covariance matrices, Box's M, was not significant at the 0.05 level, therefore the test failed to reject the null hypothesis that the covariance matrices were equal. Theoretically then the discriminant analysis is considered to have met this
assumption and the results can be interpreted with confidence.

TABLE 14

Percent of "Grouped" Cases Correctly Classified

<table>
<thead>
<tr>
<th>Chance</th>
<th>Twenty-five Percent Better than Chance</th>
<th>Correctly Classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>63%</td>
<td>74%</td>
</tr>
</tbody>
</table>

TABLE 15

Test for Equality of Group Covariance Matrices

<table>
<thead>
<tr>
<th>Box's M</th>
<th>Approximate F</th>
<th>D.F.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.35</td>
<td>2.34</td>
<td>3,34710707</td>
<td>.072</td>
</tr>
</tbody>
</table>

Tables 36 and 37 in Appendix F provide further statistical detail on the separation of the groups as noted by the group centroids and the discriminant coefficients for both dimensions. In addition, the structure correlations are provided since some authorities believe that these correlations have important predictive value (cf. Klecks, 1984).

H₀2: There will be no difference between agencies classified as formal planners and agencies classified as
informal planners along all of the effectiveness dimensions (significance level = .05).

Stepwise discriminant analysis for planning sophistication with the three effectiveness dimensions as predictor variables, yielded a significant discriminant function of 0.0005. Table 16 illustrates that two of the three dimensions had strong predictive value. Formal planners reported a stronger competitive position and greater attainment of their planning objectives.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Wilks' Lambda</th>
<th>Mean Scores</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Formal</td>
<td>Informal</td>
<td></td>
</tr>
<tr>
<td>Objective Fulfillment</td>
<td>.748***</td>
<td>15.56</td>
<td>13.52</td>
<td></td>
</tr>
<tr>
<td>Competitive Position</td>
<td>.726***</td>
<td>23.41</td>
<td>18.09</td>
<td></td>
</tr>
</tbody>
</table>

*** p < .001

The percentage of grouped cases correctly classified by this discriminant function was 76 percent. From Table 18, it is clear that the predictive value is significantly better than chance. It should be noted that the function
was better able to correctly classify formal planners (88.9%) than informal planners (60.9%) using the two effectiveness dimensions.

<table>
<thead>
<tr>
<th>N</th>
<th>Predicted Group Membership</th>
<th>Predicted Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Formal Planners</td>
<td>Informal Planners</td>
</tr>
<tr>
<td>Formal Planners (27)</td>
<td>24 (88.9%)</td>
<td>3 (11.1%)</td>
</tr>
<tr>
<td>Informal Planners (23)</td>
<td>9 (39.1%)</td>
<td>14 (60.9%)</td>
</tr>
</tbody>
</table>

TABLE 18

Percent of "Grouped" Cases Correctly Classified

<table>
<thead>
<tr>
<th>Chance</th>
<th>Twenty-five Percent</th>
<th>Better than Chance</th>
<th>Correctly Classified</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50%</td>
<td>63%</td>
<td>76%</td>
</tr>
</tbody>
</table>

Box's M test for equal covariance matrices was significant. This means that the null hypothesis was rejected and the matrices are unequal. Under these conditions caution should be taken in interpreting the findings from this particular discriminant function even though discriminant analysis tends to be robust. As a further step in the analysis, the direct discriminant analysis method was also run to look for differences in
Box's M test. Loading all three dimensions simultaneously did not change the test for equal covariance matrices nor did it add further predictive value to the analysis.

### TABLE 19

<table>
<thead>
<tr>
<th>Box's M</th>
<th>Approximate F</th>
<th>D.F.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.33</td>
<td>6.15</td>
<td>3,3471707</td>
<td>.0004</td>
</tr>
</tbody>
</table>

Additional supporting statistical information is included in Appendix F. Table 38 illustrates the spatial separation of the two groups through the centroids. Table 39 includes the function coefficients and structure correlations as further support for the predictive value of the analysis.

Looking at planning sophistication and all of the dimensions was not one of the hypotheses, but it seemed to be the next logical step in the analysis. The results of that statistical run are reported below.

Three of the nine dimensions provided strong predictive separation between the two groups of planners (Table 20). The three provide logical confirmation of the two previous tests in that they represent three of the four previously mentioned dimensions. The three in order of importance of their predictive value are (1) fulfillment of planning...
### TABLE 20

**Stepwise Discriminant Analysis For Planning Sophistication and All Planning and Effectiveness Dimensions**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Wilks' Lambda</th>
<th>Formal Planners</th>
<th>Informal Planners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective Fulfillment</td>
<td>.748***</td>
<td>23.41</td>
<td>18.09</td>
</tr>
<tr>
<td>Use of Techniques</td>
<td>.676***</td>
<td>34.33</td>
<td>23.61</td>
</tr>
<tr>
<td>Resistance to Planning</td>
<td>.656***</td>
<td>8.22</td>
<td>11.74</td>
</tr>
</tbody>
</table>

*** p<.001

### TABLE 21

**Predicted Group Membership For Planning Sophistication By All Planning and Effectiveness Dimensions**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Formal Planners</th>
<th>Informal Planners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal Planners</td>
<td>(27)</td>
<td>23 (85.2%)</td>
<td>4 (14.8%)</td>
</tr>
<tr>
<td>Informal Planners</td>
<td>(23)</td>
<td>4 (17.4%)</td>
<td>19 (82.6%)</td>
</tr>
</tbody>
</table>

### TABLE 22

**Percent of "Grouped" Cases Correctly Classified**

<table>
<thead>
<tr>
<th>Chance</th>
<th>Twenty-five Percent Better than Chance</th>
<th>Correctly Classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>63%</td>
<td>84%</td>
</tr>
</tbody>
</table>
objectives, (2) use of decision making techniques, and (3) lack of resistance to planning. The discriminant function equation was significant at the 0.0002 level.

The total percentage of cases correctly classified using this model was 84 percent. Again this percentage reflects a level significantly greater than chance.

TABLE 23
Test for Equality of Group Covariance Matrices

<table>
<thead>
<tr>
<th>Box's M</th>
<th>Approximate F</th>
<th>D.F.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.56</td>
<td>3.19</td>
<td>6,1524</td>
<td>.0039</td>
</tr>
</tbody>
</table>

The test was significant for the assumption that the covariance matrices were equal. Given this rejection of the null, the results of this analysis must be interpreted conservatively and with caution. Other supporting statistical information related to the coefficients and the structure correlations is included in Appendix F as Tables 40 and 41.

$H_0$: There will be no difference between executive directors who perceive a high degree of uncertainty for planning and those who perceive a low degree of uncertainty for planning along the planning system design dimensions (significance level = .05).
Using the Specht classification scheme for perceived uncertainty as the criterion variable, stepwise discriminant analysis found three of the four planning system design dimensions as having predictive value. The discriminant function for the three dimensions listed in Table 24 was 0.033. Agency directors who perceived a highly uncertain environment used decision making techniques more than did the group that perceived a more stable environment. The high uncertainty group also placed greater emphasis on environmental scanning and a slightly greater reliance on functional specialties when planning.

**TABLE 24**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Wilks' Lambda</th>
<th>Mean Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>High Uncertainty</td>
</tr>
<tr>
<td>Use of Techniques</td>
<td>.931 +</td>
<td>31.77</td>
</tr>
<tr>
<td>Functional Emphasis</td>
<td>.860 *</td>
<td>25.26</td>
</tr>
<tr>
<td>External Scanning</td>
<td>.828 *</td>
<td>24.77</td>
</tr>
</tbody>
</table>

* p< .05  
+ p< .10

The model correctly classified 64 percent of the cases (Table 26). This level is below the commonly used rule of thumb of 25 percent better than chance (Hair, Anderson & Tatham, 1987). The direct discriminant analysis method was
also run, but the proportion of correctly classified cases was only 60 percent. As noted in Table 25, the model was particularly poor in classifying the low perceived uncertainty group (36.8%).

TABLE 25
Predicted Group Membership For Perceived Uncertainty By Planning Design Dimensions

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Predicted Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>High Uncertainty</td>
</tr>
<tr>
<td>High Uncertainty</td>
<td>(31)</td>
<td>20 (64.5%)</td>
</tr>
<tr>
<td>Low Uncertainty</td>
<td>(19)</td>
<td>12 (63.2%)</td>
</tr>
</tbody>
</table>

TABLE 26
Percent of "Grouped" Cases Correctly Classified

<table>
<thead>
<tr>
<th>Chance</th>
<th>Twenty-five Percent</th>
<th>Correctly Classified</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Better than Chance</td>
<td></td>
</tr>
<tr>
<td>53%</td>
<td>66%</td>
<td>64%</td>
</tr>
</tbody>
</table>

TABLE 27
Test for Equality of Group Covariance Matrices

<table>
<thead>
<tr>
<th>Box's M</th>
<th>Approximate F</th>
<th>D.F.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.74</td>
<td>.731</td>
<td>6,9560</td>
<td>.624</td>
</tr>
</tbody>
</table>
The null hypothesis was accepted that the covariance matrices were equal. This lends support for the legitimacy of the discriminant analysis, but the predictive value of this model is below acceptable standards. Other values may be needed to increase the classification rate. For information purposes, Tables 42 and 43 in Appendix F provide additional statistical data.

H₄: Agencies classified as large will not differ from agencies classified as small along the contextual and design dimensions (significance level = .05).

In this study, agencies were classified as either large or small based on a median split of annual budget. Using size as the criterion variable and considering all of the contextual and design dimensions, three of the six dimensions had predictive value. Since the discriminant function was significant at the 0.069 level which is beyond the 0.05 level set above, the procedure failed to reject the hypothesis.

The trend as indicated by the mean scores was for large agencies to have greater resources available for planning, to have slightly less reliance on internal audits when planning, and to place greater emphasis on functional specialties when planning. The direct method did not provide any higher levels of significance for this hypothesis.
Though not significant at the 0.05 level, the model correctly classified 70 percent of the agencies using the three dimensions listed in Table 28. As Table 30 indicates, 70 percent is greater than chance.

**TABLE 28**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Wilks' Lambda</th>
<th>Large Agencies</th>
<th>Small Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Availability</td>
<td>.910 *</td>
<td>18.00</td>
<td>15.52</td>
</tr>
<tr>
<td>Internal Audit</td>
<td>.878 *</td>
<td>20.49</td>
<td>20.74</td>
</tr>
<tr>
<td>Functional Emphasis</td>
<td>.859 +</td>
<td>26.78</td>
<td>23.85</td>
</tr>
</tbody>
</table>

* p<.05  
+ p<.10

The test for equality of covariance matrices was significant, therefore the null hypothesis was rejected. Given this caution and the 0.069 significance level of the discriminant function, the outcomes only offer trends requiring further investigation.

$H_0$: Agencies with high relative competitive performance will not differ from agencies with low relative competitive performance on the contextual dimensions, planning system design dimensions, and on the effectiveness
dimensions of "Objective Fulfillment" and "System Capabilities" (significance level = .05).

TABLE 29
Predicted Group Membership For Size By Contextual and Design Dimensions

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Predicted Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Large</td>
</tr>
<tr>
<td>Large Agencies</td>
<td>(23)</td>
<td>16 (69.6%)</td>
</tr>
<tr>
<td>Small Agencies</td>
<td>(27)</td>
<td>8 (29.6%)</td>
</tr>
</tbody>
</table>

TABLE 30
Percent of "Grouped" Cases Correctly Classified

<table>
<thead>
<tr>
<th>Chance</th>
<th>Twenty-five Percent Better than Chance Correctly Classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>63%</td>
</tr>
<tr>
<td></td>
<td>70%</td>
</tr>
</tbody>
</table>

TABLE 31
Test for Equality of Group Covariance Matrices

<table>
<thead>
<tr>
<th>Box's M</th>
<th>Approximate F</th>
<th>D.F.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.46</td>
<td>3.49</td>
<td>3,15524</td>
<td>.0019</td>
</tr>
</tbody>
</table>

Respondents were asked to assess their agency's position relative to the competition. Ratings on this dimension were used as the criterion for discriminant
TABLE 32

Relative Competitive Position By Contextual Design, Objective Fulfillment, and System Capabilities

<table>
<thead>
<tr>
<th>Variable</th>
<th>Wilks' Lambda</th>
<th>High Comp. Pos.</th>
<th>Low Comp. Pos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Scanning</td>
<td>.856**</td>
<td>26.12</td>
<td>23.36</td>
</tr>
<tr>
<td>Resistance to Planning</td>
<td>.757**</td>
<td>7.94</td>
<td>10.82</td>
</tr>
<tr>
<td>Objective Fulfillment</td>
<td>.740**</td>
<td>22.82</td>
<td>20.00</td>
</tr>
<tr>
<td>System Capabilities</td>
<td>.710**</td>
<td>44.88</td>
<td>38.15</td>
</tr>
</tbody>
</table>

** p<.01

analysis using all of the other planning and effectiveness dimensions. Stepwise analysis yielded a significance level of 0.003. Four of the eight dimensions were found to contribute to the prediction of group membership. Agencies that had strong competitive positions engaged in more external scanning, had less resistance to planning, found more of their planning objectives fulfilled, and reported planning systems that had greater capabilities.

The model predicted group membership with 74 percent accuracy. Comparisons with Table 34 show that this level is greater than chance.

The test for equality of covariance matrices failed to reject the null hypothesis. This test lends support for interpretation of the stepwise discriminant analysis. Other supporting information is included in Appendix F. Table 46
gives the group centroids and Table 47 includes the function coefficients and the structure correlations.

**TABLE 33**

Relative Competitive Position By Contextual Design, Objective Fulfillment, and System Capabilities

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Predicted Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>High (76.5%) Low (23.5%)</td>
</tr>
<tr>
<td>High Position</td>
<td>(17)</td>
<td>13 (76.5%) 4 (23.5%)</td>
</tr>
<tr>
<td>Low Position</td>
<td>(33)</td>
<td>24 (72.7%) 9 (27.3%)</td>
</tr>
</tbody>
</table>

**TABLE 34**

Percent of "Grouped" Cases Correctly Classified

<table>
<thead>
<tr>
<th>Chance</th>
<th>Twenty-five Percent Better than Chance</th>
<th>Correctly Classified</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>55%</td>
<td>69%</td>
</tr>
</tbody>
</table>

**TABLE 35**

Test for Equality of Group Covariance Matrices

<table>
<thead>
<tr>
<th>Box's M</th>
<th>Approximate F</th>
<th>D.F.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.96</td>
<td>.890</td>
<td>10,4952</td>
<td>.542</td>
</tr>
</tbody>
</table>

**Summary**

Statistical analysis supported all of the hypothesis except the one using size as the criterion measure. In some
cases the test for equality of covariance matrices was not met, and in those instances, caution in interpreting the findings has been noted.

Overall, the dimensions did provide separation between the groups of criterion measures with the exception of size. Certain dimensions carried greater predictive weight than other. Chapter 5 will discuss these findings.
CHAPTER V

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Discussion

Overall, this study lends moderate support to the Ramanujam and Venkatraman planning model. The dimensions, as adapted, did distinguish between groups in the expected directions.

For the first grouping based on planning sophistication, the two discriminators from among the six contextual and planning system dimensions to provide significant separation among the groups were resistance to planning and use of decision making techniques. Taken together these two variable provided 74 percent accuracy in correctly predicting group membership of the sample. Additions of other dimensions lent no further significant power to this predictive model.

The more sophisticated formal planners, those with written plans covering three or more years, appear to have less resistance to the planning process from staff and boards of directors. This seems an obvious conclusion since these agencies have already been engaged in the long-range planning process. It does, of course, lend support for the
model and identifies this dimension as having greater importance than the other ones.

The second most significant dimension was use of planning techniques. Analysis of data became a more formalized and "scientific" process for the formal planners who utilized more decision making strategies in the planning process. It is interesting to note that Ramanujam and Venkatraman (1988) found that this dimension did not have a strong relationship with effectiveness. For their business sample they believe that their finding may reflect a trend away from heavy reliance on quantitative techniques with movement toward more judgmental and intuitive aspects of planning. It could be that the nonprofit sector has more recently discovered some of the quantitative tools and find them useful supplements to managerial judgments.

Using the same criterion variable, planning sophistication, the three effectiveness dimensions were measured for their predictive value. Two of the three, fulfillment of planning objectives and relative competitive performance were successful in classifying 76 percent of the sample population correctly. Fulfillment of objectives would seem to be an expected outcome of the planning process. More sophisticated planners report achieving improved performance as well as the ability to avoid problem areas.
The addition of relative competitive position to the analysis indicates that those organizations engaged in formal planning consider their agencies to be top performers. This finding gives general support for the positive association between planning and performance.

When all of the nine dimension from the model were used to discriminate between formal and informal planners, three of the four previously mentioned dimensions correctly classified the sample with 84 percent accuracy. The three were (1) fulfillment of planning objectives, (2) use of decision making techniques, and (3) lack of resistance to planning. Planning in the context of a favorable organizational climate, one that supports planning with resources, and with the help of decision making tools leads sophisticated planners to achieve more of their planning objectives.

The third hypothesis looked at the criterion grouping of perceived uncertainty for planning. This measure is patterned after one developed by Specht (1987). The predictor set consisted of the four planning system design dimensions. Of those four, the stepwise analysis found three as having predictive value: (1) use of techniques, (2) attention to external facets, and (3) functional emphasis. Together these variables predicted group membership with 64 percent accuracy. This level is only slightly better than chance and below the commonly accepted level of twenty-five
percent above chance. Though the predictive value of this discriminant analysis is less than acceptable, some trends are worth noting. The majority (31) of the executive directors in this sample perceived their planning environment as highly uncertain as measured by the Specht scale. Agency directors who perceived more environmental uncertainty placed heavier reliance on decision making techniques. They also placed greater importance on environmental scanning and relied on functional expertise when planning.

The fourth hypothesis looked at the relationship of agency size to the contextual and design variables. Using a median split on annual budget, three dimensions had predicted correct group membership for 70 percent of the cases in the sample, but the significance level of the discriminant function was above the 0.05 level. Here again it is feasible to examine the trends presented in the model while keeping in mind that the 0.069 significance level is beyond acceptable limits.

The three dimensions that differentiated large and small agencies were (1) resource availability, (2) attention to internal facets, and functional emphasis. Taken together these variables support the expectation that larger organizations may have greater resources to devote to the planning process and employ more functional specialists who also influence planning. Smaller agencies placed
slightly greater emphasis on the internal audit as a planning tool perhaps because smaller agencies do not have the resources to devote to an external audit. These results will require further investigation.

The last discriminant analysis used relative competitive position as the criterion for grouping and all of the other variables in the full model as predictors. The stepwise analysis yielded four variables which when taken together predicted group membership with 74 percent accuracy. The four were (1) attention to external facets, (2) lack of resistance to planning, (3) fulfillment of planning objectives, and (4) planning system capabilities.

Agencies reporting strong competitive positions place greater emphasis on seeking information for planning from sources outside of their internal environment. This finding is consistent with that of Ramanujam and Venkatraman (1986). Having an external focus, scanning the environment, is a factor that leads to a better competitive position.

Again, lack of resistance to planning seems to be a critical variable in distinguishing between high and low performers. Agencies with poor competitive positions report more resistance to the concept of long-range planning.

Not surprisingly, the remaining two predictor variables relate to expected outcomes of planning and the comprehensiveness of the planning system. More successful organizations, at least according to their own perceptions
of reality, were those which had achieved improved performance as well as the perception of the ability to predict future trends. These top performers reported that their planning systems were responsive to new opportunities and threats. Their planning systems had greater capabilities for responsiveness and communication.

Conclusions

This study has contributed to the body of knowledge by providing some baseline data on nonprofit private social service agencies and their use of planning strategies. Over half of the sample was classified as formal planners. Outcomes of the discriminant analyses revealed that many of the variables measured in the model were important elements in discriminating between formal and informal planners. In the organizational context, overcoming resistance to planning was a key ingredient in developing a planning system that could be associated with a strong competitive position. Formal planners also reported greater use of decision tools. The remaining dimension, fulfillment of planning objectives, simply adds support to the obvious—that formal planners perceive greater goal attainment.

The study lent support for the Ramanujam and Venkatraman model of planning in demonstrating that most their dimensions did differentiate between formal and informal planners. The dimensions also differentiated
between strong and weak competitive positions. Though there were some cautions surrounding these findings, there is also a high degree of probability that some, if not all, of the dimensions relate to greater success in terms of competitive position. It may be possible to use these dimensions to determine the efficacy of long term planning rather than relying upon the more simplistic measures currently employed that ask questions about the presence or absence of a written plan. It seems that the process of planning such as integrating functions or gathering environmental information, will improve the organization's long-range strategic decisions.

The value of a planning system is multidimensional. Components from all three planning areas identified by Ramanujam and Venkatraman (1987b); (context, design, and effectiveness), have had substantial influence on the various discriminant analyses of this study. Some, if not all, of the dimensions have predictive value when assessing the efficacy of the planning process.

Limitations

There are several limitations to this study. First, given the nature of the sample, the findings have limited generalizability to other population. These agencies are representative of only the private, social service portion of the nonprofit sector. Secondly, caution is advised in
interpreting the finding due to the low reliability score on the external facets dimension. Thirdly, on some of the discriminant analyses, the test for the assumption of equality of covariance matrices (Box's M) was significant indicating that the null hypothesis of equality was rejected. Though many experts do believe that discriminant analysis is robust enough to counter the inability to meet this assumption conservative interpretations are advised.

Recommendations

Further studies should improve upon the reliabilities of the some of the dimensions and consider adding other variables into the model. Distinguishing between dimensions that are related to certain kinds of effectiveness may allow organizations an opportunity to design planning systems to meet specific purposes.

Subsequent studies should identify more concrete methods of assessing relative competitive position as well as ways to assure that a written long-range plan does exist. It is possible that some distortion of the truth may exist when all of the survey information is gathered by telephone.

The model tests many of the concepts that have been taught in business strategy courses. These concepts include environmental scanning, auditing internal strengths and weaknesses, and providing necessary support for the planning process. Though often accepted as fact, the concepts have
not always been empirically tested. This whole research strand adds much greater specificity to the research question, "Does planning pay?".

Future research should establish more objective criteria for successful performance. The dimensions, including the measurement of perceived uncertainty, may provide further insight into designing effective planning systems. Ultimately, this body of research should produce guidelines for strategic planning among nonprofit organization, as a follow-up to this study, the sample should be expanded to include a nationwide selection of large private social service agencies. With some minor changes, the survey instrument can be adapted for mailing.
APPENDIX A

RAMANUJAM AND VENKATRAMAN
QUESTIONNAIRE
Ramanujam and Venkatraman's Operationalization of the Constructs Used

Planning system dimensions

1. **Resources provided to the planning function (0.597)**

   Operationalized by using a five-point interval scale ranging from significant decrease to significant increase on the following items:

   (i) Number of planners
   (ii) Time spent by the chief executive officer in strategic planning
   (iii) Involvement of staff managers in strategic planning
   (iv) Resources provided by strategic planning

2. **Resistance to planning (0.614)**

   Operationalized by using a five-point interval scale ranging from significant decrease to significant increase on the following items:

   (i) Overall emphasis on strategic planning
   (ii) Involvement of line managers in strategic planning
   (iii) Acceptance of the outputs of the strategic planning exercise by top management
   (iv) Resistance to planning in general
   (v) Threats to the continuation of strategic planning

3. **Attention to internal facets (0.540)**

   Operationalized by using a five-point interval scale ranging from significantly less emphasis to significantly more emphasis on the following items:

   (i) Internal capabilities
   (ii) Past performance
   (iii) Reasons for past failures

---

*Figures in parentheses are the reliability coefficients (Cronbach's alpha) for the respective constructs.*
4. **Attention to external facets** (0.613)

Operationalized by using a five-point interval scale ranging from significantly less emphasis to significantly more emphasis on the following items:

(i) General economic and business conditions
(ii) Regulatory issues
(iii) World-wide competitive trends
(iv) Supplier trends
(v) Customer/end user preferences
(vi) Technological trends

5. **Functional Coverage** (0.772)

Operationalized by using a five-point interval scale ranging from significantly less emphasis to significantly more emphasis on the following items:

(i) Marketing function
(ii) Operations/manufacturing function
(iii) Finance function
(iv) Personnel function
(v) Purchasing/procurement function
(vi) Research and development/technology
(vii) Computers and MIS

6. **Use of techniques** (0.834)

Operationalized by using a five-point interval scale ranging from significant decrease to significant increase in use on the following items:

(i) Portfolio (e.g. BCG) approaches
(ii) PIMS models
(iii) Financial models
(iv) Zero-based budgeting
(v) Value-based planning
(vi) Project management techniques (e.g. PERT/CPM)
(vii) Stakeholder analysis
(viii) Scenarios/Delphi techniques
(ix) Forecasting and trend analysis

Planning effectiveness dimensions

1. **System capability** (0.871)

Operationalized by using a five-point interval scale ranging from much improvement to much deterioration on the following items:
(i) Ability to anticipate surprises and crises
(ii) Flexibility to adapt to unanticipated changes
(iii) As a mechanism for identifying new business opportunities
(iv) Role in identifying key problem areas
(v) As a tool for managerial motivation
(vi) As a means for generating new ideas
(vii) Ability to communicate top management's expectations down the line
(viii) As a tool for management control
(ix) As a means of fostering organization learning
(x) Ability to communicate line management's concerns to top management
(xi) Ability to integrate diverse functions and operations
(xii) As a basis for enhancing innovation

In addition, the following item, scaled from strongly disagree to strongly agree was included:

(xiii) Today's system emphasizes creativity among managers more than our previous system

2. **Objective fulfillment (0.748)**

Operationalized by using a five-point interval scale ranging from entirely unfulfilled to entirely fulfilled on the following items:

(i) Improvement in short-term performance
(ii) Improvement in long-term performance
(iii) Predicting future trends
(iv) Evaluating alternatives based on more relevant information
(v) Avoiding problem areas
(vi) Enhancing management development

**Relative competitive performance (0.953)**

Operationalized by using a five-point interval scale ranging from much worse to much better on the following items:

(i) Sales growth
(ii) Earnings growth
(iii) Market share change
(iv) Return on investment (ROI)
DEFINITIONS

Brainstorming: A group technique for generating as many diverse ideas as possible in a critical free atmosphere.

Delphi Technique: Independent experts prepare forecasts. That information is compiled and recirculated. Forecasts are revised during several rounds.

Econometric models: A quantitative forecasting technique using statistical procedures. Models are generally developed with the aid of computers.

Nominal Group Technique: A group decision making process for generating ideas by following a structured format of individual response, group sharing without criticism, and written balloting (Schermerhorn, 1989).

Operations research: A scientific and mathematical approach to management decision making that uses mathematical techniques to analyze and solve problems (Schermerhorn, 1989).

Project Management Techniques: The most frequently cited techniques include Program Evaluation and Review Technique (PERT) which is a system to break various phases of a project into a sequence of events and activities, and Critical Path Method (CPM) which is also an analysis of sequential activities necessary to complete a long run project.

Scenario Building: Developing a written description of some future state in terms of key variables and issues (Wheelen and Hunger, 1987).

Social Service Agency: An organization meeting the guidelines of Section 501 c.3 of the Internal Revenue Code, not affiliated with a federal, state, or local governmental agency, and providing health, welfare, or recreational services.

Stakeholders: Constituencies of an organization including, but not limited to, stockholders, distributors, boards of directors, customers, suppliers, employees, unions, competitors, governments, and creditors. These constituencies have a stake in what happens in the organization (David, 1989).
Strategic Planning: The systematic and explicit process of determining the "mission, goals, strategies, programs, and allocation of resources that will enable the organization to best cope with and influence an uncertain future (King and Cleland, 1978, 45)."

Trend Impact Analysis: The procedure generally begins with a forecast of a trend. Various impacts on the trend are predicted resulting in three or more future alternative trends (Wheelen and Hunger, 1987).

Zero-based budgeting: A budget that allocates resources as if it were brand new. The technique forces both ongoing and newly proposed programs to compete on an equal footing for available resources. (Schermerhorn, 1989).
APPENDIX C

COVER LETTER
March 3, 1989

Dear Executive Director:

I need your help. Very little information is available on long-range planning among private, nonprofit agencies in the United States. I have developed my dissertation proposal at the University of North Texas around gathering information on this topic. Your assistance is crucial for this research.

In an effort to make your participation as painless as possible, I have hired a trained interviewer, Judy Amstutz, to handle the structured interview by telephone. There are no forms for you to fill out. She will simply go through the questionnaire with you at a convenient time. The interview will take approximately 30 minutes. You have been selected at random. No agency will be identified to me. Though Ms. Amstutz will know the identity of your agency, she has strict instructions to omit any identifying information on the response form. Please be assured that we have no motive to identify you or your agency.

You may be thinking that your agency is too small or too new or too crisis oriented to be of any value to this study, but you are wrong. It is important to know what is happening right now. Your participation will make a difference.

If you would like to have a copy of the results of this survey when it is completed, please let Ms. Amstutz know. She will maintain a list and handle the mailing.

As you can see, I am currently teaching in the Department of Management and Marketing at CSU-Fresno. I would be happy to respond to any questions that you may have. Please feel free to contact me.

My sincere thanks in advance for your help in completing this study. I believe it will provide much needed information on nonprofit planning in a competitive environment. Ms. Amstutz will be contacting you March 8, 9, or 10th if possible.

Sincerely,

Diana L. Gilbertson  MSEd., MBA
APPENDIX D

PLANNING SOPHISTICATION QUESTIONNAIRE
Odom and Boxx (1988: 199)
PLANNING SOPHISTICATION CONTINUUM
Odom and Boxx (1988: 199)

1. Does your agency prepare a written plan (and budget) covering one year?

2. Does your one-year plan include specific goals?

3. Does your one-year plan specify programs, budgets, and responses required to meet the specified goals?

4. Does your agency prepare a written long-range plan covering at least three years?

5. Does your long-range plan include specific goals?

6. Does your long-range plan include a plan of action for accomplishing long-range goals?
APPENDIX E

QUESTIONNAIRE AND RESPONSE FORM
PLEASE INDICATE YOUR LEVEL OF AGREEMENT WITH THE FOLLOWING STATEMENTS.

Scale:  1 = strongly disagree;  2 = disagree;  3 = neither disagree nor agree;  4 = agree;  5 = strongly agree.

1. As the executive director, I have ample time for formal long-term planning.

2. Program directors or other mid-level line managers are very involved in formal long-term planning.

3. Staff members, such as accountants, are very involved in formal long-term planning.

4. The board of directors is very involved in formal long-term planning.

5. Necessary resources such as materials, time, or consultants are provided for formal, long-term planning.

6. There is a strong emphasis on formal, long-term planning in our agency.

7. The board of directors enthusiastically accepts the results of the long-term planning process.

8. Overall, our agency is resistant to planning.

9. There are forces or circumstances that threaten the likelihood of long-term formal planning.

10. When planning we examine the agency's strengths and weaknesses.

11. When planning, we examine reasons for past failures and successes.

12. When planning, we assess staff members' areas of professional expertise.

13. When planning, we evaluate the agency's present organizational structure.

14. When planning, we review the agency's current performance.
15. The resources we need to attain our goals are difficult to obtain.

16. There are many parts of the environment external to our agency that we have to consider when planning.

17. The parts or sectors of the external environment that we have to consider when planning are constantly changing.

18. The changes that are taking place in the environment external to our agency are not predictable.

USING THE SAME SCALE OF 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, and 5 = strongly agree, CONSIDER THE FOLLOWING STATEMENTS IN LIGHT OF YOUR CURRENT PLANNING SYSTEM AND THE ROLE IT PLAYS IN YOUR AGENCY.

"Our present planning systems allows us..."

19. to anticipate surprises and/or crises.

20. to be flexible to adapt to unanticipated changes.

21. to identify new opportunities.

22. to identify key problem areas.

23. to stimulate managerial motivation.

24. to generate new ideas.

25. to communicate top management's expectations down the line.

26. to measure progress toward goals

27. to communicate line management's concern to top management.

28. to integrate diverse functions and operations.

29. to enhance innovation and creativity.

30. to improve short-term performance.

31. to improve long-term performance.

32. to predict future trends.
33. to evaluate alternatives based on more relevant information.

34. to avoid problem areas.

35. to develop managers' professional growth.

THE NEXT SECTION REFERS TO AREAS OUTSIDE OF YOUR AGENCY, WHERE YOU, OR YOUR STAFF OR BOARD MAY GATHER INFORMATION TO BE USED IN PLANNING. IT MAY BE FROM WRITTEN OR HUMAN SOURCES, AND FORMALLY OR INFORMALLY GATHERED. THE SCALE IS: 1 = very unimportant; 2 = unimportant; 3 = neither unimportant nor important; 4 = important; 5 = very important.

36. The economic sector including the economic climate in your region, interest rates, and inflation.

37. The regulatory sector including federal, state, and local legislation, regulations, and politics.

38. The technology sector including new medical or mental health developments and new educational or service delivery models.

39. The socio-cultural sector including demographic trends such as single parent homes and changes in social values.

40. The client or customer sector includes those individuals or groups who receive your services.

41. The competitive sector including other private or public organizations in your region who provide a similar or substitute service, or compete for the same funding sources.

USING THE SAME SCALE (1 = very unimportant; 5 = very important). PLEASE INDICATE THE DEGREE OF IMPORTANCE GIVEN TO EACH OF THE FOLLOWING FUNCTIONAL AREAS WHEN PLANNING. USE #6 TO INDICATE "NOT APPLICABLE".

42. Marketing

43. Financial/accounting

44. Purchasing/procurement

45. Personnel

46. Medical or clinical technology
47. Computers/management information systems

48. Program operations

THE FOLLOWING ARE A VARIETY OF DECISION MAKING TECHNIQUES. YOU MAY NOT BE FAMILIAR WITH SOME OF THEM. PLEASE INDICATE THE DEGREE OF IMPORTANCE EACH ONE PLAYS IN YOUR PLANNING PROCESS. USE #6 TO INDICATE "NOT APPLICABLE".

(Interviewer: Please read the Appendix B definitions with each term)

49. Brainstorming

50. Zero based budgeting

51. Trend impact analysis

52. Econometric models

53. Use of staff specialists to investigate and write reports on major decisions

54. Operations research techniques such as linear programming and simulations

55. Stakeholder analysis (single interest groups which place demands on the agency)

56. Judgment and experience

57. Scenario building

58. Project management techniques (PERT/CPM)

59. Delphi or nominal group technique

COMPARING YOUR AGENCY WITH OTHER ORGANIZATIONS WHICH MAY COMPETE WITH YOU FOR FUNDING AND/OR CLIENTS, PLEASE INDICATE HOW YOU'RE DOING.

Scale: 1 = strongly disagree; 2 = disagree; 3 = neither disagree nor agree; 4 = agree; 5 = strongly agree.

60. We have more positive community relations.

61. We attract more funding than our competition.

62. We serve more clients than our competition.

63. The services we offer are growing at a faster rate than our competitors.
AGENCY CHARACTERISTICS:

64. Does your agency prepare a written plan covering one year?

65. Does your one year plan include specific goals?

66. Does your one year plan specify programs, budgets, and responses required to meet specific goals?

67. Does your agency prepare a written long-range plan covering at least three years?

68. Does your long-range plan include a plan of action for accomplishing the long-range goals?

69. Number of full-time equivalent employees for example, two half-time employees would equal one full-time employee.

Number of volunteers. ___

70. How many levels of authority are there in the agency?

___

71. Number of management levels (or equivalent). ___
   (e.g., Ex. Dir., Asst. Dir., Division Head, Dept. Head, Supervisor, Direct care worker=6)

72. How many distinct departments are there in the agency?
   (A dept. is defined here as a group of individuals within the organization charged with a formally defined set of responsibilities, such as administering group homes.)

___

73. Number of years the agency has been in operation.

___

74. Number of clients/families served in the past 12 months. ___

75. Member of United Way? Yes ___ No ___

76. Total annual budget ________
EXECUTIVE DIRECTOR CHARACTERISTICS

77. Number of years with the agency. ____

78. Number of years in present position. ____

79. Number of years in the field. ____

80. Major course of academic study or discipline affiliation. (Ex., Social work, Psychology) ____

81. Perception of board involvement in planning (1 = shows no interest; 2 = shows some interest; 3 = indifferent; 4 = shows some leadership; 5 = shows leadership in planning). ____

82. Is your agency affiliated with a national agency other than United Way?
   Yes ____  No ____

83. Are you satisfied with your present planning system?
   Scale: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied.

84. Interviewer: Please note the respondent's gender.
   M ____  F ____

85. Has your agency ever used a strategic planning consultant? Yes, No ____
   If Yes, was the consultant(s) a volunteer ____ or a paid consultant? ____

86. Would you like to be sent a copy of this study when it is completed? Yes ____  No ____

Date: __________  Agency Code: __________
64. Y  N
65. Y  N
66. Y  N
67. Y  N
68. Y  N
69. _______  _______
70. _______ 
71. _______ 
72. _______ 
73. _______ 
74. _______ 
75. _______ 
76. $__________
77. _______ 
78. _______ 
79. _______ 
80. ________________________________
81. _______ 
82. Y  N
83. 1  2  3  4  5
84. M  F
85. Y  N
   Voluntary  ___  Paid ___  Both ___
86. Y  N
APPENDIX F
ADDITIONAL STATISTICAL DATA
**TABLE 36**

Planning Sophistication and All Planning Dimensions

<table>
<thead>
<tr>
<th></th>
<th>Group Centroids</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal Planners</strong></td>
<td>-.633</td>
</tr>
<tr>
<td><strong>Informal Planners</strong></td>
<td>.743</td>
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</table>

**TABLE 37**

Planning Sophistication and All Planning Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standardized Canonical Discriminant Function Coefficient</th>
<th>Structure Correlation</th>
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</thead>
<tbody>
<tr>
<td>Resistance to Planning</td>
<td>.673</td>
<td>.784</td>
</tr>
<tr>
<td>Use of Techniques</td>
<td>-.631</td>
<td>-.749</td>
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**TABLE 38**

Planning Sophistication and Effectiveness Dimensions

<table>
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<tr>
<td><strong>Informal Planners</strong></td>
<td>-.652</td>
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### TABLE 39
Planning Sophistication and Effectiveness Dimensions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standardized Canonical Discriminant Function Coefficient</th>
<th>Structure Correlation</th>
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<tbody>
<tr>
<td>Objective Fulfillment</td>
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<td>.945</td>
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<tr>
<td>Competitive Position</td>
<td>.346</td>
<td>.613</td>
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### TABLE 40
Perceived Uncertainty and Planning Design Dimensions

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<thead>
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</thead>
<tbody>
<tr>
<td>Formal Planners</td>
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<tr>
<td>Informal Planners</td>
<td>-.770</td>
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### TABLE 41
Planning Sophistication and All Planning and Effectiveness Dimensions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standardized Canonical Discriminant Function Coefficient</th>
<th>Structure Correlation</th>
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</thead>
<tbody>
<tr>
<td>Objective Fulfillment</td>
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<td>.800</td>
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<tr>
<td>Use of Techniques</td>
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<tr>
<td>Resistance to Planning</td>
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<td>-.756</td>
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TABLE 42
Perceived Uncertainty and Planning Design Dimensions

<table>
<thead>
<tr>
<th>Group Centroids</th>
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</thead>
<tbody>
<tr>
<td>High</td>
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<tr>
<td>Low</td>
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TABLE 43
Planning Sophistication and All Planning and Effectiveness Dimensions

<table>
<thead>
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<th>Variable</th>
<th>Standardized Canonical Discriminant Function</th>
<th>Structure Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of Techniques</td>
<td>1.368</td>
<td>0.560</td>
</tr>
<tr>
<td>Functional Emphasis</td>
<td>-1.267</td>
<td>0.023</td>
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<tr>
<td>External Scanning</td>
<td>0.530</td>
<td>0.393</td>
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TABLE 44
Size By Contextual and Design Dimensions

<table>
<thead>
<tr>
<th>Group Centroids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Agencies</td>
</tr>
<tr>
<td>Small Agencies</td>
</tr>
</tbody>
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### TABLE 45

**Planning Sophistication and All Planning and Effectiveness Dimensions**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standardized Canonical Discriminant Function Coefficient</th>
<th>Structure Correlation</th>
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</thead>
<tbody>
<tr>
<td>Resource Availability</td>
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<tr>
<td>Internal Audit</td>
<td>-.766</td>
<td>-.107</td>
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<tr>
<td>Functional Emphasis</td>
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<td>.516</td>
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</table>

### TABLE 46

**Relative Competitive Position By Contextual, Design, Objective Fulfillment, and System Capabilities**

<table>
<thead>
<tr>
<th>Group Centroids</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
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</tr>
<tr>
<td>Low</td>
<td>.449</td>
</tr>
<tr>
<td>Variable</td>
<td>Standardized Canonical Discriminant Function Coefficient</td>
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<tr>
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<td>Resistance</td>
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<td>Objective</td>
<td>.950</td>
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<tr>
<td>System</td>
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</table>


