

AD-A149 364

ORGANIZATIONS AS INFORMATION PROCESSING SYSTEMS TOWARD
A STRATEGIC CONTIN. (U) TEXAS A AND M UNIV COLLEGE
STATION DEPT OF MANAGEMENT G A GIROUX ET AL. OCT 84
TR-DG-11-ONR N00014-83-C-0025

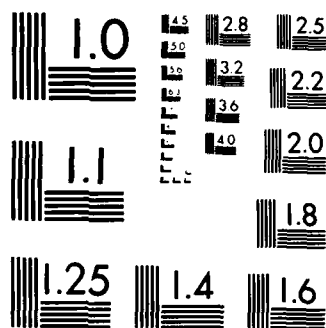
1/1

UNCLASSIFIED

F/G 5/2

NL

									END				
									FILED				
									DTIC				

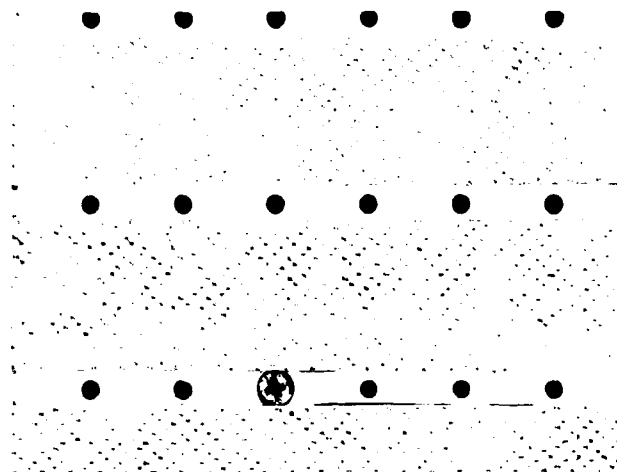


MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AD-A149 364

Organizations As Information Processing Systems

Office of Naval Research
Technical Report Series



Department of Management
Texas A&M University

DTIC FILE COPY



JAN 8 1985

A

Richard Daft
and
Ricky Griffin
Principal Investigators

84 12 28 188

This document has been approved
for publication and distribution
by the Office of Naval Research

17

Toward a Strategic Contingencies
Model of Budget Related Influence
in Municipal Government
Organizations

Gary A. Giroux
Alan G. Mayper
Richard L. Daft

TR-ONR-DG-11

November 1984

11/11/84
11/11/84
11/11/84

Office of Naval Research
N00014-83-C-0025
NR 170-950

Organizations as Information Processing Systems

Richard L. Daft and Ricky W. Griffin
Co-Principal Investigators

Department of Management
College of Business Administration
Texas A&M University
College Station, TX 77843

- TR-ONR-DG-01 Joe Thomas and Ricky W. Griffin. The Social Information Processing Model of Task Design: A Review of the Literature. February 1983.
- TR-ONR-DG-02 Richard L. Daft and Robert M. Lengel. Information Richness: A New Approach to Managerial Behavior and Organization Design. May 1983.
- TR-ONR-DG-03 Ricky W. Griffin, Thomas S. Bateman, and James Skivington. Social Cues as Information Sources: Extensions and Refinements. September 1983.
- TR-ONR-DG-04 Richard L. Daft and Karl E. Weick. Toward a Model of Organizations as Interpretation Systems. September 1983.
- TR-ONR-DG-05 Thomas S. Bateman, Ricky W. Griffin, and David Rubenstein. Social Information Processing and Group-Induced Response Shifts. January 1984.
- TR-ONR-DG-06 Richard L. Daft and Norman B. Macintosh. The Nature and Use of Formal Control Systems for Management Control and Strategy Implementation. February 1984.
- TR-ONR-DG-07 Thomas Head, Ricky W. Griffin, and Thomas S. Bateman. Media Selection for the Delivery of Good and Bad News: A Laboratory Experiment. May 1984.
- TR-ONR-DG-08 Robert H. Lengel and Richard L. Daft. An Exploratory Analysis of the Relationship Between Media Richness and Managerial Information Processing. July 1984.
- TR-ONR-DG-09 Ricky Griffin, Thomas Bateman, Sandy Wayne, and Thomas Head. Objective and Social Factors as Determinants of Task Perceptions and Responses: An Integrative Framework and Empirical Investigation. November 1984.
- TR-ONR-DG-10 Richard Daft and Robert Lengel. A Proposed Integration Among Organizational Information Requirements, Media Richness and Structural Design. November 1984.
- TR-ONR-DG-11 Gary A. Giroux, Alan G. Mayper, and Richard L. Daft. Toward a Strategic Contingencies Model of Budget Related Influence in Municipal Government Organizations. November 1984.

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

DD FORM 1 JAN 73 1473

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Abstract (continued) Block #20

that budget departments generally had greater perceived influence than operating departments for budget related issues. The findings are used to develop a strategic contingencies model of budget-related power, and to suggest some research steps for testing the proposed model.

Accession For	
NTIS GRA&I	☒
DTIC TAB	☐
Unannounced	☐
Justification	
By	
Distribution	
Availability	
A. Special	
Dist	Special
A1	



Unclassified

Toward a Strategic Contingencies Model of Budget
Related Influence in Municipal Government Organizations

ABSTRACT

This paper explores the relationship between budgeting and perceived power in city government organizations. Data are reported from a survey of perceived budget influence in six city governments in Texas. During budget formulation city managers were perceived as having the most vertical power, followed by the city council, department heads, and department employees. During budget implementation, there was a perceived increase in department head vertical power and a decrease in city council power. Perceptions of horizontal power suggested that budget departments generally had greater perceived influence than operating departments for budget related issues. The findings are used to develop a strategic contingencies model of budget-related power, and to suggest some research steps for testing the proposed model.

- A -

Toward a Strategic Contingencies Model of Budget
Related Influence in Municipal Government Organizations

Does power accrue to those who administer the budget and allocate resources within organizations? The answer would seem to be yes based upon traditional views of influence within organizations. Those who administer the budget have control over information (Mechanic, 1962; Mowday, 1978), control over financial resources (Pfeffer, 1981; Salancik and Pfeffer, 1974), and the budget is part of the legitimate authority structure of the organization (Bruns and Waterhouse, 1975). However, studies of power in the commercial sector suggest a different answer. Hinings et al. (1974) found that the accounting department was relatively powerless compared to production, marketing, and engineering departments in seven business firms. Perrow (1970) surveyed managers in twelve industrial firms by asking the question, "Which department has the most power?" The finance and accounting department was found to have less power than production, sales, or research and development. Markus and Pfeffer (1983) proposed that failure to implement important budget and accounting procedures could be traced to the distribution of power away from these departments in organizations.

The important question thus seems to be, what factors explain the level of organizational influence attained by an accounting or budget department (Hopwood, 1983)? In spite of the nearly universal use of budgets for control in organizations, we do not understand why budget departments seem powerless in some settings. In one sense, power and budgets seem like opposites. Power is intangible. Power is sometimes associated with the political and nonrational side of the organization. Budgets, by contrast, are tangible, explicit, and intendedly rational. Budgets record precise numbers and financial values that have legitimacy within organizations. Yet, despite the differences between them, budgets and power are interconnected. The

impact of the budget within an organization will be related to perceived influence of the budget/finance department. The performance of the budget department during budget allocation and implementation may be related to the power structure of the organization. If budget/finance departments do not share in the distribution of power within the organization, then they become record keepers rather than active players in organizational decision processes.

The purpose of this paper is to explore the relationship between budgeting and influence in governmental organizations. Our goal is to begin to understand the nature and source of budget related power. Power and influence concepts from the organizational and accounting literatures are reviewed and related to the budget process. Power can be derived from a number of organizational sources, both vertical and horizontal, that may be relevant to budgets. Working hypotheses are proposed for preliminary evaluation, and data are reported from a survey of perceived budget influence in six city government organizations in Texas. The data are extremely tentative. However, the findings are helpful for developing a strategic contingencies model of budget power, and for suggesting some ways to test the proposed model.

Budgeting and Power

The concept of power and its relationship to accounting has been discussed in the literature (Hopwood, 1974, 1983; Markus and Pfeffer, 1983; Swenson, 1983; Bruns and Waterhouse, 1975). Power is part of the social fabric of the organization. Power may have an effect on accounting, and accounting may influence power relationships (Hopwood, 1983). An accounting department may achieve some power in an organization due to its control over information (Saunders, 1981) or other resources (Pfeffer, 1981).

Budgeting, one of the tools of accounting, can influence the behavior of organizational participants. When the budget is used to exert control over participants, it represents a source of power to influence behavior throughout the organization (Bruns and Waterhouse, 1975). The budget may reinforce, vertically through the organization, management's particular conception of the organization's legitimate power structure. Hence the people who are in charge of the budget may exert power over others (Hopwood, 1983). Additionally, the budget may be viewed as a means to reduce uncertainty within the organization. By coping with uncertainty about the source and allocation of financial resources, the budget may increase the relative power of people who control the budget (Hickson, et al. 1971).

The interactive nature of power and budgeting is an area in which there is little direct empirical research. Bruns and Waterhouse (1975) hypothesized and showed that the level of perceived control was related to budget related behavior and organizational structure. Their measure of perceived control was Tannenbaum's (1968) control graph, which can be related to the concept of vertical power because perceived influence is a manifestation of power (Allen and Porter, 1983). Another study about the interactive nature of budgeting and power was by Hinings et al. (1974). Power was a dependent variable (rather than an independent variable as in Bruns and Waterhouse), and they found in the commercial sector that the accounting department was relatively powerless. Nevertheless, for the one organization in which detailed power measures were reported, the accounting department exerted power within its own task areas (e.g., capital budgeting), although it had little power over the total organization. This result appears to be a function of the accounting departments' role within these organizations, as the study states,

The weakness of accounting departments follows from what they did. They kept records of everything and sent reports to and collected information from

everyone . . . but took no action on this themselves and hence influenced no one.

The above two studies indicate that the concept of power is relevant to budgeting and accounting. From the Bruns and Waterhouse study it appears that individuals who have perceived power relate more positively to the budget which in turn influences their budget related behavior. On the other hand, the Hinings et al. study indicated that even though accounting departments may be a source of information, they may have only a little power within organizations because other contingencies are more important sources of power. Both studies were in the context of the private sector, where budgeting is one of many controls used to monitor behavior. In the public sector, where budgeting is more in the center of control (NCGA, 1982), the vertical and horizontal power relationships to budgeting may have different impacts on budget power and behavior.

Budgeting and City Governments

One reason for studying municipal budgeting is that the annual operating budget represents the primary internal document guiding the allocation of resources in city governments. The importance of municipal budgets has been expressed by the National Council on Governmental Accounting (NCGA), Financial Accounting Standards Board (FASB) and a subcommittee of the American Accounting Association (AAA). The NCGA (1982) issued a Discussion Memorandum entitled "Budgetary Reporting in State and Local Governments," that discusses the problems associated with the municipal budget, budget reporting, and financial reporting. In SFAC No. 4, the FASB (1980) stated that budgets are particularly important in the nonbusiness environment compared to the private sector. In the research report on which the FASB's statement of concepts was based, Anthony (1978) stated that since the budget is prepared prior to financial reports, it may be a more important source of information to

internal and external users than the year-end financial reports. The AAA also stressed the importance of the budget document. In response to the FASB's concept statement, an AAA subcommittee [AAA, 1980] said that the budget is significant since it sets goals, allocates resources and is the center of political attention. Hence, the budget is of primary importance in the municipal setting because it represents the primary control of resources and is the planning tool used to carry out the goals and objectives of the municipal government.

The budget process is a major endeavor for city governments, typically involving most city personnel. The initial budget preparation begins several months before the beginning of the fiscal year, while the evaluation phase continues many months after the completion of the fiscal year. The budget process consists of four basic phases: (1) preparation; (2) legislative approval; (3) implementation; and (4) evaluation and audit (Lee and Johnson, 1977). Budgeting involves all departments and most management personnel of the city. The budget process includes the interaction of operating departments (e.g., police, fire) with the budget and accounting department and with central city administration. Considering the time and effort devoted in the budget process, the budget may be the most significant document generated by a municipality.

Municipal Budget Power: Assumptions and Theory Development

Any study of organizational behavior requires the researcher to make certain assumptions about organizations. First, this study assumes that power can be studied as an organization level phenomenon. Many studies view power as an individual-level phenomenon and define power as the ability of one person to make another person carry out orders or to do something that the person would not otherwise have done (Kotter, 1977; Dahl, 1957; Milgram, 1965;

Schilit and Locke, 1982; Mowday, 1978). Recent organizational research indicates that larger organization forces influence the distribution and use of power in organizations (Salancik and Pfeffer, 1974, 1977). The enactment of power arises from situations and forces independent of the personal dominance and style of individuals. At the organization level, the achievement of desired organizational outcomes is the most important use of power. For this study power is defined as the ability of persons or departments in organizations to bring about desired organizational goals or outcomes (Pfeffer, 1981). Budget related power is defined as the ability of persons or departments to bring about desired budget outcomes. In addition, power and influence are considered to be synonymous as recommended by Mintzberg (1983).

The second assumption is that organizational power derives from both vertical and horizontal sources. Figure 1 illustrates a typical city government organization.¹ The city council is at the top of the pyramid, with ultimate responsibility for budget decisions. The city manager is the chief operating officer and has authority over the line departments that provide city services. Department managers are below the city manager in the hierarchy, but are at an equal level with one another. Supervisors and other employees are below the department heads. Vertical power arises from the formal hierarchy and the legitimate authority, resources, and responsibility assigned to each position. Horizontal power pertains to the relative influence over budget goals, decisions, and outcomes by departments at the same level in the organization.

Figure 1

The final assumption is that budget influence may be related to stages of

the budget cycle. The budget cycle has not been studied in previous research, but may be a factor in power relationships. The budget cycle (Lee and Johnson, 1977) is similar to the allocation of resources through the strategic decision process (Schendel and Hofer, 1977; Daft and Macintosh, 1984). In the strategic management literature, factors associated with formulation are different from factors associated with implementation. The formulation stage includes preparation and approval of plans. The implementation stage includes implementation and evaluation. In municipal governments the formulation stage for budgeting involves the setting of premises and goals for the organization, and defining budget priorities among programs, departments, and activities. The implementation stage for budgeting occurs after priorities have been set and involves the allocation and monitoring of resource expenditures. The record keeping activity typically associated with accounting departments (Hinings, et al., 1974) pertains to the implementation stage of the budget cycle.

The nature of the city government organizations, the concepts of vertical and horizontal power, and the formulation versus implementation stage of the budget are the basis for the theoretical expectations that guided the study. For clarity, our expectations are formed into working hypotheses. This is an exploratory study to answer preliminary questions about perceived budget power relationships in city governments. The working hypotheses represent the theoretical framework within which these preliminary questions were addressed.

Vertical Power Relationships

The organizational hierarchy represents the vertical authority allocated to the city council, city manager, and department heads. In the formulation stage of the budget, most power is at the top of the hierarchy. Budget formulation involves the setting of decision priorities and goals. This

includes overall decisions about organization priorities and resource allocation. Budget formulation represents both the legal domain and responsibility of the city council who set tax rates and are ultimately responsible to the citizens. The city manager is the chief operating officer, and probably also helps set premises for budget formulation. The city manager has information and expertise, but the legal responsibility for budget setting is somewhat less than for the city council. The city manager, as chief operating officer, would have greater influence over implementation. Department heads and lower level supervisors make budget requests of the city manager and city council. The lower levels of the hierarchy are expected to have little perceived power during formulation, but somewhat more during the implementation stage of the budget process. Thus our expectations for the relationship of vertical power to the budget process are:

Hypothesis 1a. Perceived vertical power for budget formulation will follow the management hierarchy and be greatest for the city council, followed closely by the city manager, and then by department heads and employees.

Hypothesis 1b. Perceived vertical power for budget implementation will be greatest for the city manager, followed by the city council, and then by department heads and employees.

The general pattern of vertical power relationships in hypotheses 1a and 1b may be moderated by two contextual factors of the organization--organization size and type of budget process. Small organizations tend to be informal. Large organizations tend to be bureaucratic, and to place greater reliance on rules, procedures, and formal ways of doing things. Rules and procedures are a surrogate for personal supervision in large organizations (Blau and Schoenherr, 1971; Child, 1972; Daft, 1983). Small organizations typically are more participative and equalitarian. The rules and procedures in large organizations enable top managers to retain decision making authority for important issues, such as for

strategy and resource allocation. These same rules enable the delegation of specialized activities, such as the implementation of budget decisions. Thus city size may increase the division of labor between upper and lower hierarchical levels, giving upper levels even more power in the budget formulation stage, and giving lower levels more power in the budget implementation stage.

The budget process in city governments includes line item budgeting and may also include more sophisticated techniques such as program budgeting. The specific budget process may represent a crucial factor in perceived power relationships. Line item budgeting represents a traditional, top down approach based on functional departmentation. The line item budget is consistent with the vertical hierarchy, wherein basic premises and priorities are set at the top, followed by implementation by operating managers. Program budgeting, in contrast, is designed for greater involvement and participation from department managers and lower level personnel, especially during implementation. Program budgeting seeks widespread commitment to the budget because department personnel are involved in justification of program objectives, statements of expected accomplishments, and documentation of expenditures and performance. It is expected that perceived power at lower organization levels is greater in program budgeting than in line item budgeting, and during budget implementation more than during formulation. The hypotheses related to the contextual factors include:²

Hypothesis 2a. Top levels in the municipal hierarchy will have greater perceived power over budget formulation in large than in small cities, and for line item rather than program budgets.

Hypothesis 2b. Lower hierarchical levels in municipal governments will have greater perceived power over budget implementation in large cities than in small cities, and for program rather than line item budgets.

Horizontal Power Relationships

Horizontal power relationships in organizations are especially complicated. Horizontal power and authority are not defined on the organization chart. Departments at the same level in the management hierarchy, exert different levels of influence over organizational decisions and outcomes. The power differences among departments of apparently equal rank is determined by factors in the organization's context called strategic contingencies.

Strategic contingencies are the environmental events and organizational activities perceived as key to the organization's purpose, survival, and success (Pfetter, 1981; Pfeffer and Salancik, 1974; Hickson, et al., 1974; Hambrick, 1981). While every department is important to the organization, departments contribute differently to strategic contingencies. One department may have greater power because it is more central to the organization's mission or because it serves a key constituency. In the private sector, the necessity to innovate in the electronics industry leads to higher power for R&D departments. In consumer goods firms, the strategic contingency is sales and marketing which increases the influence of marketing departments.

As illustrated in Figure 1, cities may have separate departments for police, fire, public works, parks and recreation, and budgeting/finance. The question for our research is how these departments vary in perceived influence over budget formulation and implementation based on the strategic contingencies facing municipal governments. The strategic contingencies for a municipal government would include the uncertainty associated with obtaining and distributing financial resources; the centrality and visibility of city departments for satisfying and serving local citizens; the size of the city and the relative size of respective departments; and line item versus program budgeting which may allocate more or less influence to specific line departments.

In profit making organizations, the responsibility for resource acquisition rests with departments that make and sell goods and services, and hence they have considerable power. In city governments, resources come primarily from residents through taxation, and these resources are allocated through the budget process. The budgeting/finance department is intimately involved in the resource acquisition and allocation process. Budget personnel may help determine the city's financial needs as well as to allocate funds. The delivery of products or services is not directly exchanged for the inflow of dollars as in for-profit organizations. The city council and city manager have power concerning the acquisition of funds through taxation, but the budget department can reduce uncertainty for other departments about resources and programs for the coming year. Hence we expect that the budget department will be seen as powerful in city governments. We cannot test directly whether budget influence is greater in government than in profit making organizations, but we do expect budget/finance to be perceived as having influence compared to other line departments during both formulation and implementation of budgets.

Other contingencies, however, may provide more influence to line departments and to the budget department. Line departments are substantially larger than the budget/finance department, which may give them substantial influence, especially in the formulation stage of budgeting. The centrality and visibility of line departments may also enhance their power. The police and fire departments are highly visible and react directly to citizen requests for help (Kochran, 1975). Parks and recreation and public works are also important, but are more routine and taken for granted. Police and fire tend to be reactive, while other departments are more passive. Police and fire departments are perceived as providing essential services, while parks and recreation provide services that are expendable. We expect that department

size, centrality and visibility will shape horizontal power and hence provide different levels of department influence over budget decisions.

We cannot predict exactly how the confluence of strategic contingencies will determine perceived budget related power in city governments. We do predict that the budget department will be perceived as influential in budget formulation, although perhaps less so than major departments like police and fire. For budget implementation, the budget department has expertise and responsibility for the budget, nevertheless, line departments generally have autonomy in carrying out the details of the budget within their own department. Hence it may be expected that there is little difference in perceived influence between departments for budget implementation.

Hypothesis 3a. The budget/finance department will be perceived as having less power than police and fire departments for budget formulation, but will have greater perceived power than public works and parks and recreation.

Hypothesis 3b. The budget/finance department will be perceived to have power equal to other line departments for budget implementation.

City size and budget complexity may affect the distribution of horizontal power between the budget department and line departments. The traditional line item budget process, used in small cities, would tend to provide authority to the budget department. It is a formal process wherein resources are allocated from the top down, and the budget department is a central figure in this allocation. Complex budgeting systems are designed to engage line departments more directly in the budgeting process by seeking departmental inputs and justification for expenditures. Program budgeting would tend to equalize power between budget and other departments. We expect the impact of program budgeting to be greatest during budget formulation when requests and justifications are utilized. In large, complex cities, the budget process is also complex. It will be governed by more rules and procedures, will involve

larger amounts of money, and budget managers will require greater expertise. The importance of the budget/finance department for managing a large budget in a large organization will be especially important during the implementation stage, which involves allocating resources, evaluation and auditing. Thus we propose that budget department influence during implementation of the budget will be perceived as greater in large cities than in small cities. Our expectations for city size, budget complexity and perceived power are as follows.

Hypothesis 4a. The budget/finance department will be perceived to have less power for budget formulation in large cities with complex program budgets than in small cities with line item budgets.

Hypothesis 4b. The budget/finance department will have greater perceived power over budget implementation in large cities with complex program budgets than in small cities with line item budgets.

In summary, we have argued that budget related power and the influence of the budget department are not random occurrences in city government organizations. Budget related power is affected by vertical power relationships, and we predict that top levels have greater perceived power over budget formulation, and intermediate hierarchical levels have greater perceived power over implementation. These hierarchical relationships may be influenced by city size and budget complexity. For horizontal influence across operating departments, we argue that budget/finance departments will be perceived as powerful because they have expertise, and they reduce budget uncertainty and provide resources to other departments. However, the budget department is small and may still have less influence than large, visible line departments such as police and fire. We also propose that budget/finance power will be greater than line departments during implementation of the budget, which is within the budget department's domain of responsibility and expertise. The working hypotheses (with results) are summarized in Tables 2

Method

Seven cities were contacted for participation in this study.³ Six of the cities agreed to participate and undergo extensive interviews, all of which were carried out in summer 1983.

The cities were widely divergent by population size. The six cities represent three size categories (two cities in each): (1) small--under 5,000 people; (2) medium--25,000-100,000; and (3) large--over 250,000. It was decided to stay within Texas to limit the study geographically and to avoid conflicting state laws.

The city visits included interviews with (1) the city manager (CM); (2) the budget/finance department head (BF); and (3) each of four department heads (DH) associated with the basic governmental operations.⁴ The project was explained in each interview. An unstructured interview was completed for both the city manager and budget/finance department head. We asked the city manager questions on the general operations of the city, number of employees, and their "philosophy" of budgeting, including its use in evaluating performance. The budget/finance questions focused on specific budget procedures, priorities, and similarities and differences across cities. No formal interview instruments were used in the talks with the department heads; however, we asked a number of questions based on the initial discussions with city managers and budget/finance heads. This was an exploratory study, and the purpose of these open ended interviews was to verify our understanding of city procedures and to determine if there was general agreement on budget procedures and their utility. Department heads, on occasion, had viewpoints on the utility of budget procedures considerably different from central administration.

After each of the interviews, questionnaires were distributed with the request that they be returned as soon as possible (pre-addressed and pre-paid

envelopes provided). The city manager questionnaire requested information on horizontal and vertical influence, using questions based on the previous work of Tannenbaum (1968) and Salancik and Pfeffer (1974). Other questions pertained to the utility of budget information for specific management decisions; budget influence during the budget cycle; and perceptions of the primary purposes of budgeting. All department heads were asked to fill out questionnaires on horizontal and vertical influence; budget preparation activities; and purposes of budgeting. The department heads also were requested to distribute almost identical questionnaires to the department supervisors and other employees who were directly involved in the budgeting process. Usable responses were received from all six city managers, 28 of the 30 department heads and 86 supervisors, for a total return of 120 of 204 questionnaires distributed (59%).

A summary of city demographic characteristics is presented in Table 1. The number of city employees varied by population size. The smallest city had 18 employees, while the largest had 7,900. The two small cities had volunteer fire departments and few employees across the other functions. The largest had over 1,000 employees in each of three departments that we analyzed. In general, police and public works had the largest departments, followed by the fire department and parks and recreation. Relative spending by department generally followed a similar pattern. Among the largest cities the police department had the largest spending share (30-40%); while public works out-spent the other operating departments at the two small cities (46-50%). The smallest spending share belonged to parks and recreation for larger cities, but to the fire departments at the small cities (due to the volunteer nature of this department). On average 5-10% of the employees were involved

TABLE 1

in the budget process. In all cities the management staff (department heads and supervisors) were involved in the budget process, along with administrative assistants at the larger cities.

Research Findings

The Budget Process Within Sampled Cities

This section summarizes the budget context and procedures used, which were identified in the unstructured interviews with city officials and the review of budget/accounting documents. The officials were helpful and candid about their respective systems. All cities were in the process of preparing or had just completed the proposed 1983-84 budget. The budget for this year was considered "tight" within all cities, since revenues were projected to be depressed while expenditure needs continued to expand.⁵

The budget process was similar across cities. The process was typically controlled by the city manager, beginning with the accumulation of budget requests and forecasts by central administration before the start of the fiscal year. The city manager accumulated spending needs as well as expected revenue and was responsible for putting together the package that became the proposed budget. Although alternative procedures did exist, all sample cities were concerned with line item spending. That is, spending budgets were accumulated on a program, zero-based, or traditional basis, but spending also were analyzed by line item (major categories were salary, non-salary operations, and capital items). In addition all cities made reference to maintaining the status quo. For planning purposes a "baseline" budget was calculated that indicated costs for maintaining existing services. The

baseline budget normally included adjustments for expected inflation and anticipated growth. The primary constraint was forecasted revenues. City officials were expecting reduced revenues, and their planning efforts included the need for spending cuts. All city managers were reluctant to propose raising taxes.

Accounting for appropriations, encumbrances and expenditures appeared to be similar across cities, with periodic information (generally monthly) available by department and by line item. With more sophisticated accounting procedures (associated with larger cities) information was available more frequently and in greater detail.

The differences across cities were related primarily to size. In the small cities the city managers seemed to centralize authority, claiming that department heads had no expertise in budgeting/accounting matters. In the two medium sized cities, procedures followed a traditional textbook description of budgeting. The medium sized cities used line item budgeting and depended on considerable participation from department heads. The large cities were decentralized and relied on program budgeting techniques. Interestingly, large cities had experimented with alternative approaches (both had abandoned zero based budgeting within the previous two years), before settling on program budgeting.

Analysis of Vertical Power

The questionnaires completed by city managers, department heads and supervisors included three questions on vertical power, based on Tannenbaum's (1968) perceived influence measure. The respondents were asked to rate the relative influence of the city manager, city council, department heads, and department employees on a five point scale ranging from very little (1) to a great deal (5) of influence. The three influence questions pertained to

budget formulation (1 and 2 below) and implementation (3 below):

1. Setting budgetary goals and objectives.
2. Deciding the final budget numbers to be submitted to the city council.
3. Carrying out the budget such as hiring personnel and scheduling jobs and programs.

A summary graph of vertical power is presented in Figure 2 for all cities and for each size category. The numerical scores associated with Figure 2 are tabulated in Appendix 1. Table 2 presents the tentative statistical results, averaged across all cities, for the working hypotheses about vertical power. The Figure 2 and Table 2 data for each city are based on the average of all city respondents, which is congruent with previous research on vertical influence (Tannenbaum, 1968).

FIGURE 2 AND TABLE 2

The first vertical power hypothesis (1a) was that the city council would exert more overall influence for budget formulation, followed by the city manager, department heads, and department employees. The city manager was expected to have the greatest influence for budget implementation. These relationships were evaluated by directional analysis of the mean responses and the use of Duncan's multiple range test. Table 2 reports mean responses by position, with statistically different responses (.05 level) placed on separate lines. The city manager and city council had essentially similar power for setting budget goals, but the city manager statistically had the greatest influence for determination of final budget numbers. The level of influence dropped considerably for department heads and further for department employees. This pattern was similar throughout the sample except for one large and one small city, where the city council had slightly more influence

There appears to be a "power shift" when influence is analyzed in terms of implementing the budget (hypothesis 1b). Influence for carrying out the budget apparently rests within the operating departments. The department heads had the most perceived influence (except for small cities), with city managers second and city council and department employees having relatively little influence. Figure 2 and Table 2 show considerable divergence by city size. The city manager had the most power in small cities, probably indicative of the centralized structure of these cities. For large cities, implementation power went to department heads first and city manager second, with the city council having virtually no influence. This suggests considerable delegation of authority by large cities and suggests that the city councils are interested in the "big picture," and formulating budget priorities, rather than in day-to-day operations.

It was hypothesized (2a) that top management (city council and city manager) in large cities would have more influence than in medium or small cities for budget formulation. This hypothesis was not supported for goal setting. There were no differences in perceived influence across city size for setting budget goals; however, small cities rated statistically lower than large and medium cities for submitting final budget numbers.

It was also hypothesized (2b) that lower management and staff (department heads and department employees) would have relatively more influence for implementation in large than in small cities. This was consistent with the findings, with small cities having significantly lower ratings than large and medium cities.

The responses for small cities generally indicated less influence for all levels of management, so that directional differences (emphasized in Figure 2) are important to analyze. For the most part relationships were similar across sizes, except the small city's council had more influence than the city

manager for setting goals, while both the council and city manager had considerable power for implementing the budget.

Overall, most vertical power for budget matters in the six cities rested with the city manager while department employees had little influence. The city council had considerable influence over budget formulation. Department heads had considerable influence for budget implementation. Within large and to a lesser extent medium cities, the influence of department heads suggests they receive vertical authority for day-to-day operations.

Analysis of Horizontal Power

The questionnaires also included three questions about perceived horizontal power related to budget formulation (1 and 2 below) and implementation (3 below).

1. Setting initial budgetary goals and objectives.
2. Deciding the final budget numbers to be submitted to the city council.
3. Carrying out the budget such as hiring and scheduling jobs and programs.

Respondents were asked to rate the relative influence of the four operating departments (abbreviated PD, FD, PW, and PR) and the budget/finance function (BF). Figure 3 graphs the summary responses for all respondents by city size. Numerical scores associated with Figure 3 are in Appendix 1. Table 3 presents the mean results for the horizontal power hypotheses, based on city manager and department head responses. Supervisor responses were not included in the calculation of horizontal power scores for each city because previous research reported that department heads and above are better informed than lower level employees about horizontal power relationships (Salancik and Pfeffer, 1974). A comparison of statistical results with Figure 3 based on all respondents with Figure 3 scores suggests that the results are similar with or without the

supervisor responses, but supervisor score were omitted anyway.

FIGURE 3 AND TABLE 3

The third hypothesis concerns the relative power of budget/finance and the operating departments, expecting the reactive departments to have greater influence for formulating the budget (3a), but equivalent power among departments for implementing the budget (3b). The budget/finance department had greater perceived power than operating departments for budget formulation. Among operating departments the police department rated higher than parks and recreation. The police department is a reactive department but is also generally the largest department in our sample of cities. Both department size and characteristics (especially reactive vs. proactive) may explain relative power among operating departments.

There was essentially no difference across departments for budget implementation. The result differed for small cities, where budget/finance had the most influence and fire department the least. Both small cities had volunteer fire departments (and thus no full-time department head), and the city manager in each city prepared the budget. This may have influenced the overall results.

The last hypothesis concerns the relative power of budget/finance by city size.⁶ Greater reliance was placed on sophisticated program budget procedures in large cities that encouraged power equalization, so it was expected that large city budget/finance departments would have less influence than their smaller counterparts during budget formulation (hypothesis 4a). The reverse was expected for implementation since traditional budgeting should delegate authority to the budget/finance department (4b). Table 3 shows that budget/finance had high ratings for formulation, which is generally the

opposite of our hypothesis. Large city budget/finance departments had the highest perceived power and were significantly higher than small cities for setting budget goals. There is virtually no difference associated with implementation across city size. Thus, budget/finance power is greater in the formulation stage and especially for larger cities.

Discussion: Toward a Strategic Contingency Model
of Budget Department Influence

One purpose of the research reported here was to provide an initial exploration into the relationship between budgeting and power in municipal government organizations. Working hypotheses about vertical and horizontal power relationships were developed based upon previous research from organization theory and accounting. These expectations were tested using data from six Texas cities. Our findings suggested that vertical budget power did not correspond perfectly to the organizational hierarchy (Hypothesis 1). City managers, the second level in the hierarchy, were perceived as having the most power in budget formulation, followed by the city council, department heads, and department employees. There appeared to be significant vertical power delegation during budget implementation, because perceived department head power increased and city council power decreased, especially in large and medium sized cities. City size accentuated the delegation of vertical power during budget implementation (Hypothesis 2), although size made little difference to the distribution of power during formulation.

The findings for horizontal budget power suggested that budget departments generally had greater perceived influence than operating departments during both formulation and implementation budget stages (Hypothesis 3). Among operating departments, police departments had the most power, and parks and recreation the least. This finding suggests that horizontal power was affected by department size and visibility to the public.

Large city size was associated with greater budget power for budget departments during formulation compared to operating departments (Hypothesis 4). This suggests that budget complexity and formalization adds to the power of budget departments.

Another purpose of this research was to develop preliminary findings from government organizations that could be combined with previous research to develop a model of budget power in organizations. The question raised at the beginning of this paper was "What factors explain the level of organizational influence attained by an accounting or budget department?" One use of exploratory research is to gather preliminary data to begin to answer this question and to propose a model and hypotheses that can be tested in future research. The research reported in this paper has many limitations. The findings are by no means conclusive. Our summary model will extend beyond the data, but the proposed model is consistent with the data and provides an overall framework for beginning to explain budget related power.

Our findings combined with previous research identify six factors that appear to be associated with budget related power. Three of these elements (uncertainty, centrality and dependency) are associated with the organization's strategic contingencies, that is, from budget activities that are relevant to the organization's mission and environment. The other three factors pertain to the organization context and include size, hierarchical level, and budget procedures. These six factors are illustrated in Figure 4, and are the basis for the following summary propositions. We stress that the Figure 4 relationships and the following propositions are not hard conclusions. They represent tentative hypotheses that go beyond our data to explain budget department power and to serve as tentative hypotheses for future research.

FIGURE 4

1. Budget department power will be greater when the management of financial resources is central to the mission of the organization. The budget department is responsible for the internal management of financial resources. Budget activity is central to the mission of the organization when the primary goal is internal efficiency. For example, efficient use of scarce resources may be more critical to performance in governmental than in for-profit organizations, and in financial organizations than in organizations that provide other types of products and services. Previous studies that reported low power for budget departments included a sample of marketing (Hickson, et al., 1974) and manufacturing (Perrow, 1970) oriented firms where cost efficiency was less important than marketing and production. One reason our study suggested greater influence for the budget department than found in previous studies is that financial management is an essential mission of city governments. Cost control is important. Financial resources are scarce. Our interviews found that city officials are expected to be efficient, and not to raise taxes arbitrarily. The emphasis on cost and internal efficiency gives greater power to the department that manages and controls financial resources. The same forces could be expected to also give power to budget departments in corporations whose strategy and dominant competitive issue is efficiency rather than effectiveness (Hall, 1974), and for financial organizations where financial control is important to performance.

2. Budget department power will be greater when the budget department reduces uncertainty for other departments in the organization. The reduction of uncertainty appears to be a source of power in almost every organization (Hickson, et al., 1971; Pfeffer, 1981). An important source of uncertainty in

city governments is the allocation of future resources. Departments make their annual plans based upon presumed budget allocations. Once line department heads know the budget allocation, they can implement and carry out their operational activities for the rest of the year. The budget thus reduces uncertainty about the resources available to spend for the next year (Daft and Macintosh, 1984). Uncertainty is greater during budget formulation, hence budget departments may acquire power by involvement in this stage. The role of the budget department in reducing uncertainty also can be expected to be greater under conditions of financial resource uncertainty. Greater financial uncertainty would occur under rapidly changing environmental circumstances, during resistance to tax increases by residents in government organizations, and in case of organizational and financial decline (Whetten, 1980; Ford, 1980). The budget department would be a central figure in these situations, and would have budget information and knowledge to reduce uncertainty for other departments.

3. Budget department power will be greater when other departments depend upon the budget department. Dependency is another major source of power in virtually every organization (Pfeffer, 1981; Dahl, 1957). A department can increase dependency on itself through the acquisition of expertise needed by other departments, by having specialized information, by acquiring broad responsibilities within the organization, or by obtaining resources that can be allocated to other departments (Hickson, et al., 1971; Pfeffer and Salancik, 1974; Hinings, et al., 1974; Astley and Sachdeva, 1984). Dependency on the budget department will be greater in large cities where all personnel with budget expertise and responsibility are housed directly within the budget department. The extent to which budget departments reach out to acquire additional responsibilities will also increase dependency upon them. Moreover, if budget departments can be the source of new resources for other

departments, such as through the acquisition of state or federal grants, dependency upon them will increase and so will their relative power within the organization.

4. Budget department power will be greater in organizations of large size. Large organizations are more bureaucratic, more complex, more specialized, more formalized, and have more rules and procedures. These characteristics also typify budget procedures in large organizations. The budget department has the responsibility for the budget process and to provide expertise about budget procedures to other departments. This is especially true during budget formulation. The budget department brings together diverse budget requests, and may exercise its own judgment in compiling these requests for approval by upper management. The budget department can be especially powerful in helping establish priorities in large cities. The specialized budget department will also have a role in budget implementation and evaluation, although many day-to-day implementation activities are delegated to respective department heads.

5. Budget department power will be greater when the budget department is located at a higher level in the hierarchy. This is consistent both with our findings and other research on vertical power (Astley and Sachdeva, 1984; Kanter, 1979; Franklin, 1975). The top levels of the organization, especially the city manager or chief executive officer, have legitimate authority. Our findings indicated that the city manager had the most vertical power overall. The top levels have formal responsibility for setting priorities and making budget decisions. The budget department thus will be more powerful if it reports directly to senior management. The extent to which the budget department is an extension of the chief executive's office, or is at least located well up in the hierarchy, will be important to its perceived power. A budget department that is placed low in the hierarchy and is disconnected from

the center of vertical power can be expected to have less influence over budget related activities.

6. Budget department power will be greater in the formulation stage of the budget cycle. The formulation stage of the budget cycle is when organizational premises and priorities are set. When the budget department can insert itself into priority setting activities associated with budget formulation, its power will be enhanced. It will have say over how resources are allocated. Budget departments typically have formal responsibility for helping to implement the budget, but implementation and evaluation are record keeping activities that will have less impact on city outcomes than will budget formulation. Efforts to become involved in goal setting and formulation decisions will tend to increase budget department influence.

In summary, the relationships in Figure 4 attempt to explain why budget departments are more or less powerful in certain organizations, and to suggest some ways in which budget departments might be able to increase their power. The ideas are consistent with previous research, but they are unproven at this point. Many questions remain to be answered about budget related power in organizations. More research into budgets and power is needed. Evidence to date indicates that the impact of budgets within organizations and the performance of budget departments are related to the power structure of organizations (Hopwood, 1983; Markus and Pfeffer, 1983). One line of research to test these ideas would be to compare budget department power across business and government organizations, and across organizations facing different contingencies of financial constraint, market conditions and slack. Specific strategies for increasing budget department influence could also be studied. Research into these topics can tell us more about organizational power relationships so that budget and finance departments can share in the distribution of power and be active players in organizational decision processes.

References

- Allen, R. W. and L. W. Porter (Eds.), Organizational Influence Process (Scott-Foresman, 1982).
- American Accounting Association, Report of the Subcommittee to Respond to FASB Exposure Draft: Objectives of Financial Reporting by Nonbusiness Organizations (AAA, 1980).
- Anthony, R. N., Financial Accounting in Non-Business Organizations (Financial Accounting Standards Board, 1978).
- Blau, P. M. and R. A. Schoenherr, The Structure of Organizations (Basic Books, 1971).
- Bruns, W. J. and J. H. Waterhouse, "Budgetary Control and Organization Structure," Journal of Accounting Research (Autumn 1975), pp. 177-203.
- Child, J., "Strategies of Control and Organizational Behavior," Administrative Science Quarterly (1973, 18), pp. 1-17.
- Daft, R. L., Organization Theory and Design (West, 1983).
- Daft, R. L. and N. B. Macintosh, "The Nature and Use of Formal Control Systems for Management Control and Strategy Implementation," Journal of Management (1984, 10), pp. 43-66.
- Financial Accounting Standards Board, Statement of Financial Accounting Standards No. 4, "Objectives of Financial Reporting by Nonbusiness Organizations" (FASB, 1980).
- Franklin, J. L., "Down the Organization: Influence Processes Across Levels of Hierarchy," Administrative Science Quarterly (1975, 20), pp. 153-164.
- Hambrick, D. C., "Environment, Strategy, and Power Within Top Management Teams," Administrative Science Quarterly (1981, 26), pp. 253-271.
- Hickson, D. J., C. R. Hinings, C. A. Lee, R. E. Schneck, and J. M. Pennings, "A Strategic Contingencies Theory of Intraorganizational Power," Administrative Science Quarterly (June 1971), pp. 216-229.
- Hinings, C. R., D. J. Hickson, J. M. Pennings, and R. E. Schneck, "Structural Conditions of Intraorganizational Power" Administrative Science Quarterly (1974), pp. 22-44.
- Hopwood, A., Accounting and Human Behavior (Prentice-Hall, 1974).
- _____, "On Trying to Study Accounting in the Contexts in Which it Operates," Accounting, Organizations and Society (1983), pp. 287-305.
- Kochan, T. A., "Determinants of the Power of Boundary Units in an Interorganizational Bargaining Relation," Administrative Science Quarterly (1975, 20), pp. 434-452.

- Lee, R. D. and R. W. Johnson, Public Budgeting Systems (University Park Press, 1977).
- Markus, M. L. and J. Pfeffer, "Power and the Design and Implementation of Accounting and Control Systems," Accounting, Organizations and Society (1983), pp. 205-218.
- Mechanic, D., "Sources of Power for Lower Participants in Organizations," Administrative Science Quarterly (1962, 17), pp. 349-364.
- Mintzberg, H., Power In and Around Organizations (Englewood Cliffs, NJ: Prentice-Hall, 1983).
- Mowday, R. T., "The Exercise of Upward Influence in Organizations," Administrative Science Quarterly (1978, 23), pp. 137-156.
- National Council on Governmental Accounting, Discussion Memorandum, "Budgetary Reporting in State and Local Governments" (NCGA, 1982).
- Perrow, C., "Departmental Power and Perspective in Industrial Firms," in U.N. Zald (Ed.), Power in Organizations (Vanderbilt University Press, 1970), pp. 59-89.
- Pettigrew, A. M., "Information Control as a Power Resource," Sociology (May, 1972), pp. 187-204.
- Pfeffer, J., Power in Organizations (Pittman, 1981).
- Salancik, G. R. and J. Pfeffer, "The Bases and Use of Power in Organizational Decision Making: The Case of the University," Administrative Science Quarterly (1974, 19) pp. 453-470.
- Salancik, G. R. and J. Pfeffer, "Who Gets Power--and How They Hold On To It," Organizational Dynamics (1977, Winter), pp. 3-21.
- Standers, Carol Stoak, "Management Information Systems, Communications, and Departmental Power: An Integrative Model," Academy of Management Review (1981, 6), pp. 431-442.
- Schendel, D. E. and C. W. Hofer (eds.), Strategic Planning: A New View of Business Policy and Planning (Little, Brown, 1979).
- Schilit, W. K. and E. A. Locke, "A Study of Upward Influence in Organizations," Administrative Science Quarterly (1982, 27), pp. 304-316.
- Swensen, E. B., "Rationality and Politics in Information System Design and Implementation: A Juxtaposition of Two Views," Accounting, Organizations and Society (1983), pp. 219-222.
- Tannenbaum, A., Control in Organizations (McGraw-Hill, 1965).

Footnotes

1. The study included only cities that had city managers and did not include any mayor-council cities. This constraint was adhered to since the sample size was small.

2. The study sampled various size cities (see method section) from very large to small. Large cities used sophisticated program budgeting, whereas smaller cities used line item budgeting. Hence, these two contextual factors in our sample are confounded with each other.

3. The seven cities were recommended by the Texas Department of Community Affairs (TDCA). These cities were chosen because they maintained appropriate budget standards and, in the opinion of TDCA, would cooperate in a lengthy study. The cities were initially contacted by TDCA and this was followed up by telephone to set up one-to-two day interviews within each city.

4. These departments are accounted for in the general fund. This excludes utilities and other enterprise operations that are funded from user charges. The basic functions that exist in virtually all cities are parks and recreation, police, fire, and public works. Although organization structure differed somewhat, these services were provided by all six cities.

5. According to state law Texas cities must prepare a balanced budget; that is, appropriations cannot exceed estimated revenues.

6. In this sample city size was confounded with budget complexity. The large cities used program budgeting and statistical forecasting methods; medium cities used traditional procedures but with considerable participation of departments; and small city budgeting relied on the city managers with little department input. However, there is no evidence that these procedures are caused by city size.

FIGURE 1
TYPICAL ORGANIZATION CHART FOR TEXAS CITIES

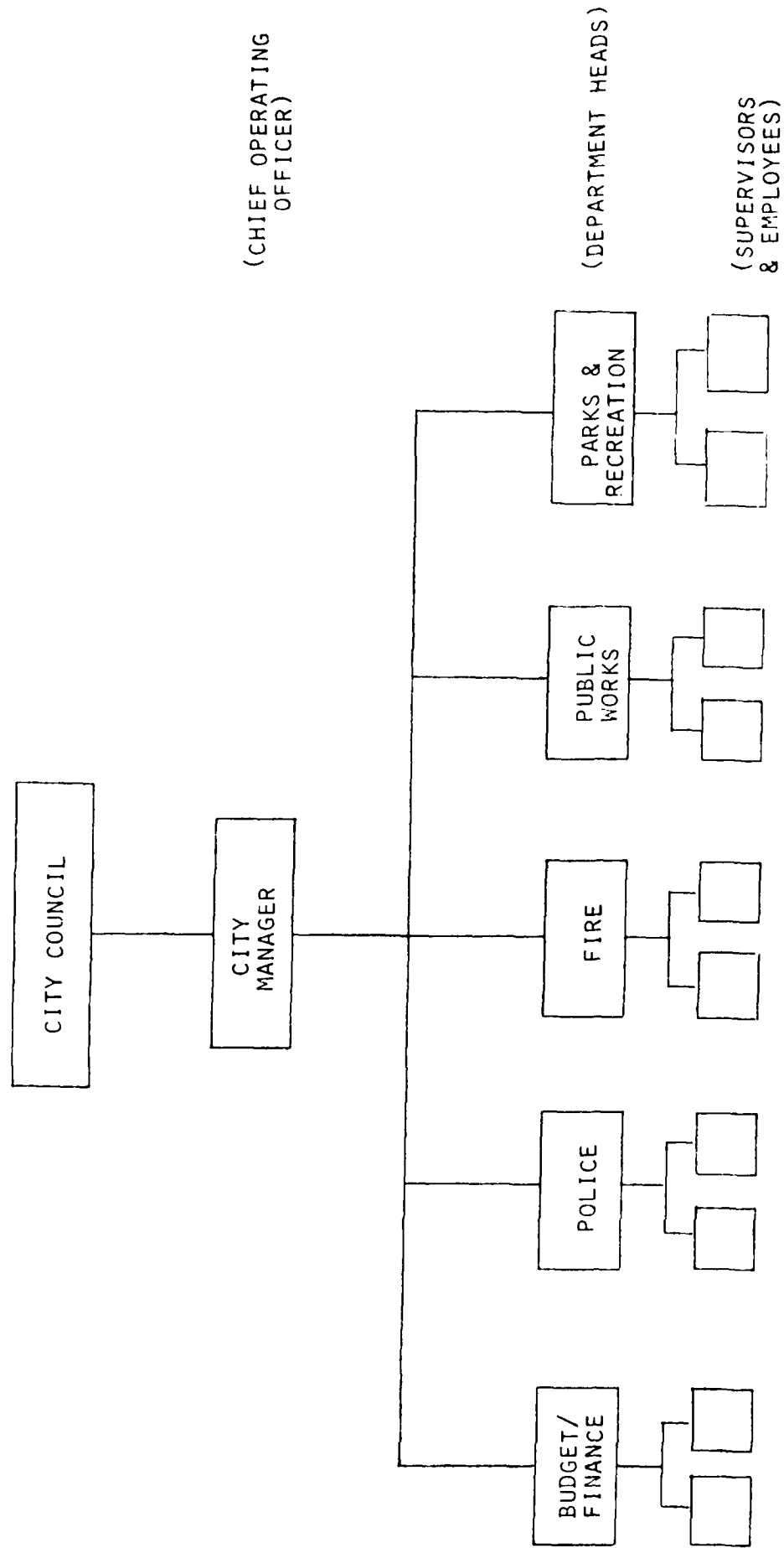


TABLE 1
MUNICIPAL DEPARTMENT/EMPLOYEE CHARACTERISTICS

A. Number of Employees by Department (FTE)

City	PD	FD	PW	PR	BF	Total
1	1600	1118	1920	771	26	7900
2	915	540	705	460	25	7500
3	147	134	NA	89	NA	756
4	96	82	95	51	3	690
5	20	Volunteer	23	10	8	85
6	3	Volunteer	7	2	2	18

B. Number of Employees Involved in Budget Process

1	30	16	26	21	26	500
2	10	25	16	50	22	800
3	2	4	4	9	NA	35-50
4	9	8	12	7	1	40
5	3	1	2	2	3	11
6	1	1	1	1	1	5

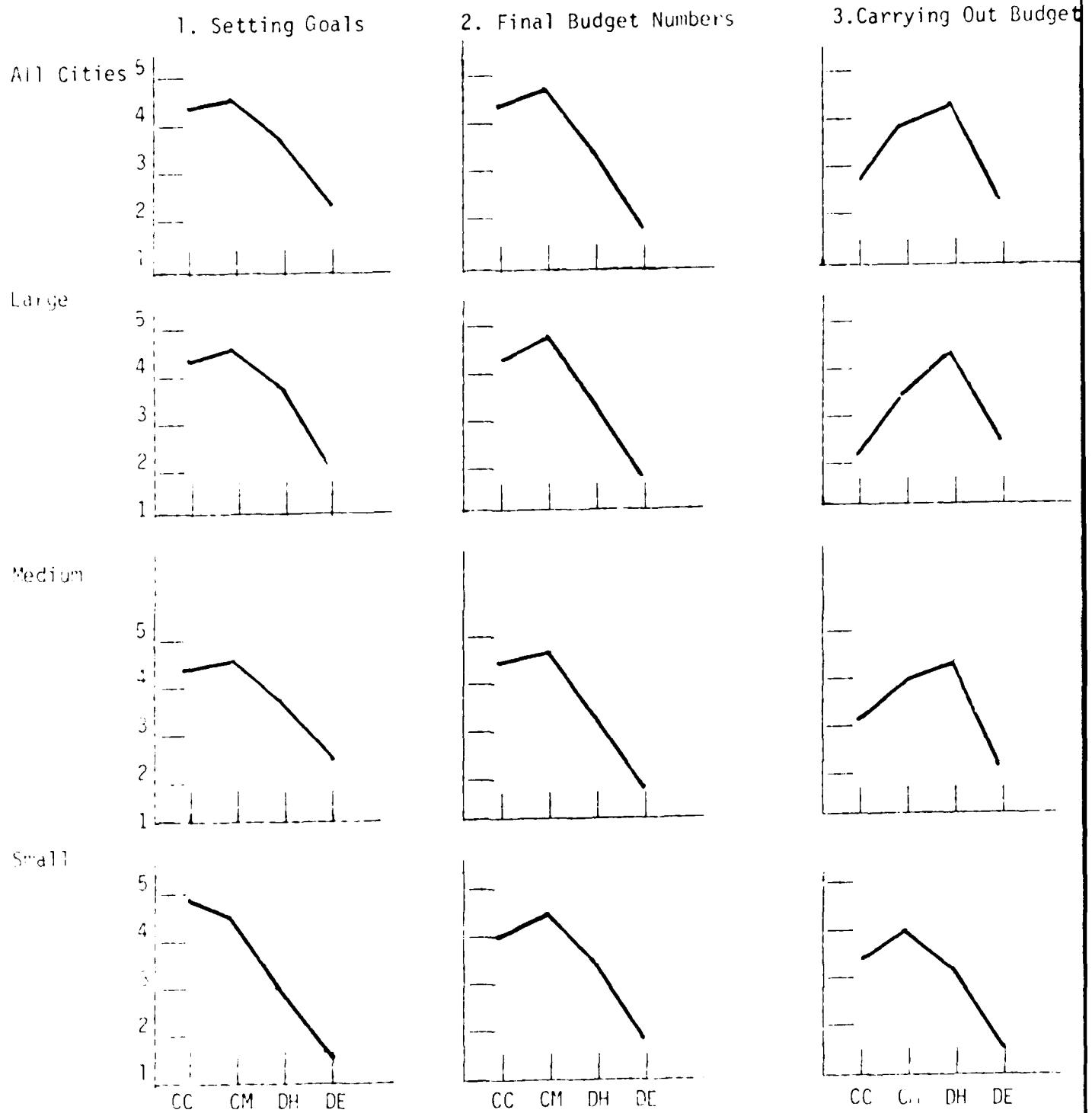
C. Relative Spending by Department (Percent Across the Four Operating Departments)

1	38%	20%	28%	14%
2	42	26	15	17
3	40	29	20	11
4	34	27	30	9
5	30	8	46	16
6	26	10	50	14

(NA - not available)

Key: PD - Police Department
 FD - Fire Department
 PW - Public Works
 PR - Parks and Recreation
 BF - Budget/Finance Department

FIGURE 2
VERTICAL POWER



Key to abbreviations: CC - City Council
CM - City Manager
DH - Department Heads
DE - Department Employees

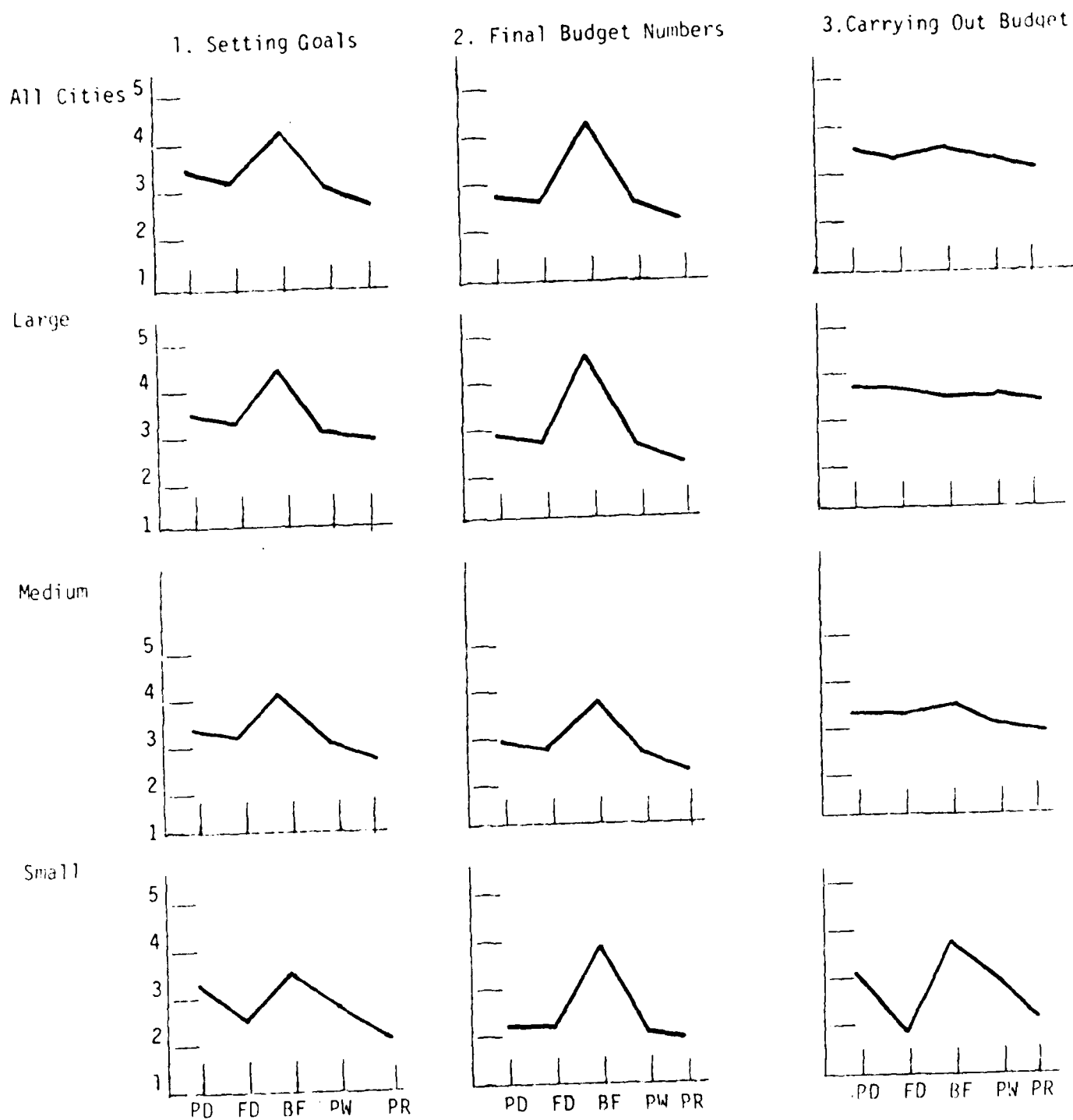
TABLE 2
ANALYSIS OF HYPOTHESIS TESTING:
Vertical Power

Hypotheses	Statistical Results*				Discussion
	CC	CM	DH	DE	
1a. CC > CM > DH > DE [budget goals]	4.41	4.55	3.82	2.23	CC and CM have equivalent influence, which is significantly different from DHs and DEs.
[final budget numbers]	4.34	4.66	3.44	1.83	Each level has significantly different influence, with CM having the greatest power.
1b. CM > CC > DH > DE [carrying out budget]	2.71	3.75	4.22	2.38	Each level has significantly different influence, with DHs having the greatest power.
2a. Large Medium Small CC + CM > CC + CM > CC + CM [budget goals]	Large 8.91	Medium 8.97	Small 9.19		There is not significant difference across cities.
[final budget numbers]	9.11	9.00	8.31		Top management has more influence at large and medium cities than at small cities.
2b. Large Medium Small DH + DE > DH + DE > DH + DE [carrying out the budget]	8.91	6.53	5.00		Lower organization levels have more influence in medium and large cities than in small cities.

*Based on Duncan's multiple range test. Statistically similar groups (.05 level) are presented on the same line.

Key to abbreviations: CC - City Council
CM - City Manager
DH - Department Heads
DE - Department Employees

FIGURE 3
HORIZONTAL POWER



Key to abbreviations: PD - Police Department
FD - Fire Department
BF - Budget/Finance Department
PW - Public Works
PR - Parks and Recreation

TABLE 3
ANALYSIS OF HYPOTHESIS TESTING:
Horizontal Power [Department Heads and City Manager Responses Only]

Hypotheses	Statistical Results*				Discussion
	PD	FD	BF	PW	PR
3a. PD + FD > BF > PW + PR [budget goals]	3.49 3.49	3.06 3.06	3.38	3.09 3.09	2.68
[final budget numbers]	2.87	2.81	4.16	2.84	2.47
3b. PD = FD = BF = PW = PR [carrying out budget]	3.66	3.20	3.69	3.66	3.26
4a. Large Medium Small BF < BF < BF [budget goals]	Large 4.03	Medium 3.93	Small 3.19		
[final budget numbers]	4.31	4.26 4.26	3.75		
4b. Large Medium Small BF > BF > BF [carrying out budget]	3.64	3.74	3.56		

*Based on Duncan's multiple range test. Statistically similar groups (.05 level) are presented on the same line.

Key to abbreviations: PD - Police Department
FD - Fire Department
PW - Public Works
PR - Parks and Recreation
BF - Budget/Finance Department

APPENDIX I
AVERAGES ASSOCIATED WITH FIGURES 2 & 3

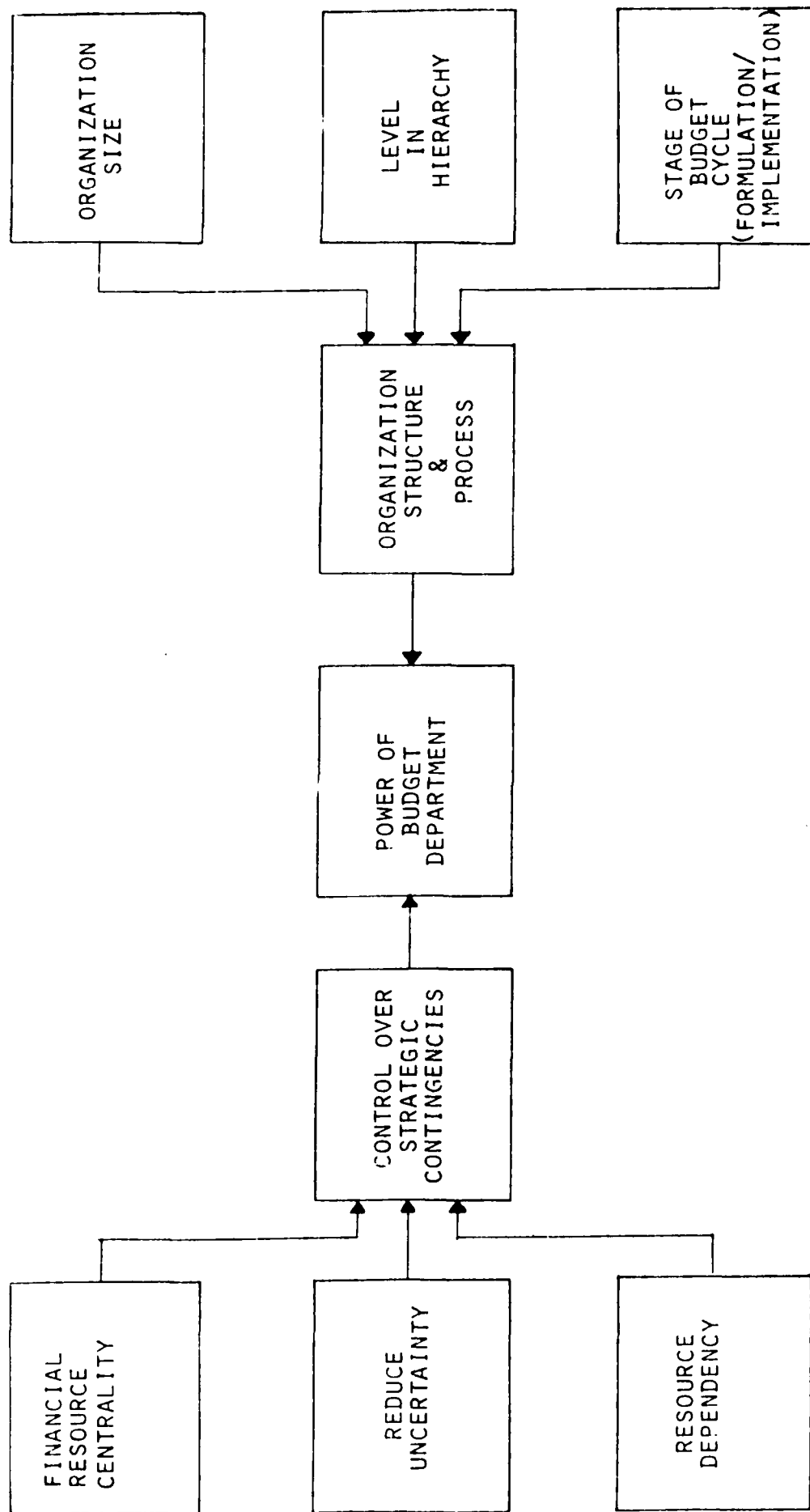
A. Vertical Power												
1. Setting Goals				2. Final Budget Numbers				3. Carrying Out Budget				
	OC	CM	DH	DE	OC	CM	DH	DE	OC	CM	DH	DE
All Cities	4.41	4.55	3.82	2.22	4.34	4.66	3.42	1.83	2.71	3.75	4.22	2.38
Large	4.36	4.54	3.90	2.14	4.37	4.75	3.53	1.82	2.28	3.52	4.38	2.51
Medium	4.35	4.59	3.89	2.46	4.37	4.59	3.33	1.78	3.09	3.96	4.24	2.33
Small	4.82	4.55	3.09	1.64	4.00	4.46	3.46	2.00	3.36	4.00	3.18	1.73

B. Horizontal Power												
1. Setting Goals				2. Final Budget Numbers				3. Carrying Out Budget				
	PD	BF	PW	PR	PD	FD	BF	PW	PR	PD	FD	PW
All Cities	3.49	5.23	4.16	3.09	2.86	2.77	4.23	2.75	2.44	3.54	3.40	3.44
Large	3.59	3.34	4.37	3.27	2.91	2.82	4.59	2.79	2.47	3.80	3.77	3.73
Medium	3.43	3.31	4.02	3.16	2.91	2.86	3.84	2.86	2.53	3.31	3.31	3.18
Small	3.25	2.50	3.50	2.75	2.17	2.17	3.92	2.17	2.00	3.08	1.83	3.00
All Cities	120	Large	63	Medium	46	Small	11					

Key to abbreviations:

- OC - City Council
- CM - City Manager
- DH - Department Heads
- DE - Department Employees
- PD - Police Department
- FD - Fire Department
- BF - Budget/Finance Department
- PW - Public Works
- PR - Parks and Recreation

FIGURE 4
PROPOSED MODEL OF BUDGET DEPARTMENT POWER



4420E DISTRIBUTION LIST

LIST 1
MANDATORY ↓

Defense Technical Information Center (12 copies)
ATTN: DTIC DDA-2
Selection and Preliminary Cataloging Section
Cameron Station
Alexandria, VA 22314

Library of Congress
Science and Technology Division
Washington, D.C. 20540

Office of Naval Research (3 copies)
Code 4420E
800 N. Quincy Street
Arlington, VA 22217

Naval Research Laboratory (6 copies)
Code 2627
Washington, D.C. 20375

Office of Naval Research
Director, Technology Programs
Code 200
800 N. Quincy Street
Arlington, VA 22217

Psychologist
Office of Naval Research
Detachment, Pasadena
1030 East Green Street
Pasadena, CA 91106

LIST 2
OPNAV

Deputy Chief of Naval Operations
(Manpower, Personnel, and Training)
Head, Research, Development, and
Studies Branch (OP-01B7)
1812 Arlington Annex
Washington, DC 20350

Director
Civilian Personnel Division (OP-14)
Department of the Navy
1803 Arlington Annex
Washington, DC 20350

Deputy Chief of Naval Operations
(Manpower, Personnel, and Training)
Director, Human Resource Management Division
(OP-15)
Department of the Navy
Washington, DC 20350

Chief of Naval Operations
Head, Manpower, Personnel, Training
and Reserves Team (Op-964D)
The Pentagon, 4A478
Washington, DC 20350

Chief of Naval Operations
Assistant, Personnel Logistics
Planning (Op-987H)
The Pentagon, 5D772
Washington, DC 20350

LIST 3
NAVMAT & NPRDC V

NAVMAT

Program Administrator for Manpower,
Personnel, and Training
MAT-0722
800 N. Quincy Street
Arlington, VA 22217

Naval Material Command
Management Training Center
NAVMAT 09M32
Jefferson Plaza, Bldg #2, Rm 150
1421 Jefferson Davis Highway
Arlington, VA 20360

Naval Material Command
Director, Productivity Management Office
MAT-00K
Crystal Plaza #5
Room 632
Washington, DC 20360

Naval Material Command
Deputy Chief of Naval Material, MAT-03
Crystal Plaza #5
Room 236
Washington, DC 20360

Naval Personnel R&D Center
Technical Director
Director, Manpower & Personnel
Laboratory, Code 06
Director, System Laboratory, Code 07
Director, Future Technology, Code 41
San Diego, CA 92152

(4 copies)

Navy Personnel R&D Center
Washington Liaison Office
Ballston Tower #3, Room 93
Arlington, VA 22217

LIST 4
MEDICAL

Commanding Officer
Naval Health Research Center
San Diego, CA 92152

Psychology Department
Naval Regional Medical Center
San Diego, CA 92134

Commanding Officer
Naval Submarine Medical
Research Laboratory
Naval Submarine Base
New London, Box 900
Groton, CT 06349

Commanding Officer
Naval Aerospace Medical
Research Lab
Naval Air Station
Pensacola, FL 32508

Program Manager for Human
Performance (Code 44)
Naval Medical R&D Command
National Naval Medical Center
Bethesda, MD 20014

Navy Health Research Center
Technical Director
P.O. Box 85122
San Diego, CA 92138

LIST 5
NAVAL ACADEMY AND NAVAL POSTGRADUATE SCHOOL

Naval Postgraduate School (3 copies)
ATTN: Chairman, Dept. of
Administrative Science
Department of Administrative Sciences
Monterey, CA 93940

U.S. Naval Academy
ATTN: Chairman, Department
of Leadership and Law
Stop 7-B
Annapolis, MD 21402

Superintendent
ATTN: Director of Research
Naval Academy, U.S.
Annapolis, MD 21402

LIST 6
HRM

Commanding Officer
Organizational Effectiveness Center
Naval Air Station
Alameda, CA 94591

Commanding Officer
Organizational Effectiveness Center
Naval Training Center
San Diego, CA 92133

Commanding Officer
Organizational Effectiveness Center
Naval Submarine Base New London
P.O. Box 81
Groton, CT 06349

Commanding Officer
Organizational Effectiveness Center
Naval Air Station
Mayport, FL 32228

Commanding Officer
Organizational Effectiveness Center
Pearl Harbor, HI 96860

Commanding Officer
Organizational Effectiveness Center
Naval Base (Bldg. NH-46)
Charleston, SC 29408

Commanding Officer
Organizational Effectiveness Center
Naval Air Station Memphis
Millington, TN 38054

Commanding Officer
Organizational Effectiveness Center
1300 Wilson Boulevard, rm 114A8
Arlington, VA 22209

Commanding Officer
Organizational Effectiveness Center
5621-23 Tidewater Drive
Norfolk, VA 23509

Commander
Organizational Effectiveness Center
5621 Tidewater Drive
Norfolk, VA 23509

Commanding Officer
Organizational Effectiveness Center
Naval Air Station Whidbey Island
Oak Harbor, WA 98278

Commanding Officer
Organizational Effectiveness Center
Box 23
FPO New York 09510

Commanding Officer
Organizational Effectiveness Center
Box 41
FPO New York 09540

Commanding Officer
Organizational Effectiveness Center
Box 60
FPO San Francisco 96651

Commanding Officer
Organizational Effectiveness System, Pacific
Pearl Harbor, HI 96860

Commanding Officer
Organizational Effectiveness System, Atlantic
5621 Tidewater Drive
Norfolk, VA 23509

Commanding Officer
U.S. Navy Organizational Effectiveness System, Europe
FPO New York 09510

Commanding Officer
U.S. Navy Organizational Effectiveness Center
Box 4
FPO Seattle 98762

LIST 7
NAVY MISCELLANEOUS

Naval Military Personnel Command (2 copies)
HRM Department (NMPC-6)
Washington, DC 20350

Naval Training Analysis
and Evaluation Group
Orlando, FL 32813

Commanding Officer
ATTN: TIC, Bldg. 2068
Naval Training Equipment Center
Orlando, FL 32813

Chief of Naval Education
and Training (N-5)
Director, Research Development,
Test and Evaluation
Naval Air Station
Pensacola, FL 32508

Chief of Naval Technical Training
ATTN: Code D17
NAS Memphis (75)
Millington, TN 38D54

Navy Recruiting Command
Head, Research and Analysis Branch
Code 434, Room 8001
801 North Randolph Street
Arlington, VA 22203

Navy Recruiting Command
Director, Recruiting Advertising Dept.
Code 40
801 North Randolph Street
Arlington, VA 22203

Naval Weapons Center
Code 094
China Lake, CA 93555

LIST 8
USMC

Headquarters, U.S. Marine Corps
Code MPI-20
Washington, DC 20380

Headquarters, U.S. Marine Corps
ATTN: Scientific Adviser,
Code RD-1
Washington, DC 20380

Education Advisor
Education Center (E031)
MCDEC
Quantico, VA 22134

Commanding Officer
Education Center (E031)
MCDEC
Quantico, VA 22134

Commanding Officer
U.S. Marine Corps
Command and Staff College
Quantico, VA 22134

LIST 9
OTHER FEDERAL GOVERNMENT

Defense Advanced Research
Projects Agency
Director, Cybernetics
Technology Office
1400 Wilson Blvd, Rm 625
Arlington, VA 22209

Dr. Douglas Hunter
Defense Intelligence School
Washington, DC 20374

Dr. Brian Usilaner
GAO
Washington, DC 20548

National Institute of Education
EOLC/SMO
1200 19th Street, N.W.
Washington, DC 20208

National Institute of Mental Health
Division of Extramural Research Programs
5600 Fishers Lane
Rockville, MD 20852

National Institute of Mental Health
Minority Group Mental Health Programs
Room 7 - 102
5600 Fishers Lane
Rockville, MD 20852

Office of Personnel Management
Office of Planning and Evaluation
Research Management Division
1900 E Street, N.W.
Washington, DC 20415

Chief, Psychological Research Branch
U.S. Coast Guard (G-P-1/2/TP42)
Washington, D.C. 20593

Social and Developmental Psychology
Program
National Science Foundation
Washington, D.C. 20550

Dr. Earl Potter
U.S. Coast Guard Academy
New London, CT 06320

Division of Industrial Science
& Technological Innovation
Productivity Improvement Research
National Science Foundation
Washington, D.C. 20550

Douglas B. Blackburn, Director
National Defense University
Mobilization Concepts Development
Center
Washington, D.C. 20319

Chairman, Dept. of Medical Psychology
School of Medicine
Uniformed Services University of
the Health Sciences
4301 Jones Bridge Road
Bethesda, MD 20814

LIST 10
ARMY

Headquarters, FORSCOM
ATTN: AFPR-HR
Ft. McPherson, GA 30330

Army Research Institute
Field Unit - Leavenworth
P.O. Box 3122
Fort Leavenworth, KS 66027

Technical Director
Army Research Institute
5001 Eisenhower Avenue
Alexandria, VA 22333

(3 copies)

Head, Department of Behavior
Science and Leadership
U.S. Military Academy, New York 10996

Walter Reed Army Medical Center
W. R. Army Institute of Research
Division of Neuropsychiatry
Forest Glen
Washington, D.C. 20012

Army Military Personnel Command
Attn: DAPC-OE
200 Stovall Street
Alexandria, VA 22322

Research Psychologist
Selection and Classification Performance
Measurement Team
Army Research Institute
Attention: PERI-SF (Mr. Dennis Leedom)
5001 Eisenhower Avenue
Alexandria, VA 22333

Commanding Officer
Organizational Effectiveness Center & School
Fort Ord, CA 93941

LIST 11
AIR FORCE

Air University Library
LSE 76-443
Maxwell AFB, AL 36112

Head, Department of Behavioral
Science and Leadership
U.S. Air Force Academy, CO 80840

MAJ Robert Gregory
USAFA/DFBL
U.S. Air Force Academy, CO 80840

AFOSR/NL
Building 410
Bolling AFB
Washington, DC 20332

Department of the Air Force
HQUSAF/MPXHL
Pentagon
Washington, DC 20330

Technical Director
AFHRL/MO(T)
Brooks AFB
San Antonio, TX 78235

AFMPC/MPCYPR
Randolph AFB, TX 78150

LIST 12
MISCELLANEOUS

Australian Embassy
Office of the Air Attache (S3B)
1601 Massachusetts Avenue, N.W.
Washington, D.C. 20036

British Embassy
Scientific Information Officer
Room 509
3100 Massachusetts Avenue, N.W.
Washington, DC 20008

Canadian Defense Liaison Staff,
Washington
ATTN: CDRD
2450 Massachusetts Avenue, N.W.
Washington, DC 20008

Commandant, Royal Military
College of Canada
ATTN: Department of Military
Leadership and Management
Kingston, Ontario K7L 2W3

National Defence Headquarters
DPAAR
Ottawa, Ontario K1A 0K2

Mr. Luigi Petrullo
2431 North Edgewood Street
Arlington, VA 22207

Sequential by Principal Investigator

LIST 13
CURRENT CONTRACTORS

Dr. Clayton P. Alderfer
Yale University
School of Organization and Management
New Haven, Connecticut 06520

Dr. Janet L. Barnes-Farrell
Department of Psychology
University of Hawaii
2430 Campus Road
Honolulu, HI 96822

Dr. Jomills Braddock
John Hopkins University
Center for the Social Organization
of Schools
3505 N. Charles Street
Baltimore, MD 21218

Dr. Sara Yogev
Northwestern University
Graduate School of Management
2001 Sheridan Road
Evanston, IL 60201

Dr. Terry Connolly
University of Arizona
Department of Psychology, Rm. 312
Tucson, AZ 85721

Dr. Richard Daft
Texas A&M University
Department of Management
College Station, TX 77843

Dr. Randy Dunham
University of Wisconsin
Graduate School of Business
Madison, WI 53706

List 13 (continued)

Dr. J. Richard Hackman
School of Organization
and Management
Box 1A, Yale University
New Haven, CT 06520

Dr. Wayne Holder
American Humane Association
P.O. Box 1266
Denver, CO 80201

Dr. Daniel Ilgen
Department of Psychology
Michigan State University
East Lansing, MI 48824

Dr. David Johnson
Professor, Educational Psychology
178 Pillsbury Drive, S.E.
University of Minnesota
Minneapolis, MN 55455

Dr. Dan Landis
The University of Mississippi
College of Liberal Arts
University, MS 38677

Dr. Frank J. Landy
The Pennsylvania State University
Department of Psychology
417 Bruce V. Moore Building
University Park, PA 16802

Dr. Bibb Latane
The University of North Carolina
at Chapel Hill
Manning Hall 026A
Chapel Hill, NC 27514

Dr. Cynthia D. Fisher
College of Business Administration
Texas A&M University
College Station, TX 77843

Dr. Thomas M. Ostrom
The Ohio State University
Department of Psychology
116E Stadium
404C West 17th Avenue
Columbus, OH 43210

Dr. William G. Ouchi
University of California,
Los Angeles
Graduate School of Management
Los Angeles, CA 90024

Dr. Robert Rice
State University of New York at Buffalo
Department of Psychology
Buffalo, NY 14226

Dr. Benjamin Schneider
Department of Psychology
University of Maryland
College Park, MD 20742

Dr. H. Wallace Sinaiko
Program Director, Manpower Research
and Advisory Services
Smithsonian Institution
801 N. Pitt Street, Suite 120
Alexandria, VA 22314

Dr. Eliot Smith
Psychology Department
Purdue University
West Lafayette, IN 47907

Dr. Barbara Saboda
Public Applied Systems Division
Westinghouse Electric Corporation
P.O. Box 866
Columbia, MD 21044

Dr. Harry C. Triandis
Department of Psychology
University of Illinois
Champaign, IL 61820

Dr. Anne S. Tsui
Duke University
The Fuqua School of Business
Durham, NC 27706

Dr. Andrew H. Van de Ven
University of Minnesota
Office of Research Administration
1919 University Avenue
St. Paul, MN 55104

Dr. Sabra Woolley
SRA Corporation
901 South Highland Street
Arlington, VA 22204

END

FILMED

2-85

DTIC