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IN HIGHER EDUCATION INSTITUTIONS

by

Ali Reza Khalili Tehrani

A Dissertation Submitted to the Faculty of the
CENTER FOR THE STUDY OF HIGHER EDUCATION
In Partial Fulfillment of the Requirements
For the Degree of
DOCTOR OF PHILOSOPHY
In the Graduate College
THE UNIVERSITY OF ARIZONA

1983

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SIGNED: Ali Ziya Shahbik Tehrani
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ABSTRACT

The purpose of this study was to determine the bases and processes utilized for internal resource allocation in a postsecondary institution. An empirical knowledge of the financial behavior and decision-making process in an institution may guide budget planners and administrators to develop a more operationally realistic approach to budget allocation issues.

Two major and opposing budgetary decision-making models--the politically and objectively rational--were adopted. Each model provided a set of contrasting concepts constituting the conceptual framework used in the study. The embedded concepts in the models were paired in a format that can be viewed as a "counter conceptual dichotomy." An exploratory and semistructured questionnaire was developed as the primary data source. The questionnaire was used to examine and determine the prevalence and range of each concept in the working process of resource allocation. A two-year public institution was selected for an in-depth, case-study analysis. A stratified random sample of those individuals managing a separate budget was obtained. Subjects ranged from department heads to the president. Interviews were conducted, and the perceptions reflecting the bases for budgetary allocations were recorded, rated, and tabulated using means, medians, modes, ranges, standard deviations, and variances. The data were analyzed and synthesized.
The incremental budgeting method inherent in the politically rational budgeting model strongly prevailed in the allocation of resources at the College. The political budgeting approach proved to be viable because of historical practices, particular organizational structures, and state mandated budgetary formulas. Most of the underlying concepts of the political budgeting model were reported to be of great significance, particularly by higher level administrators who contended that the model was a necessity in the budget process. Department heads' acceptance of the model and the embedded concepts was somewhat reserved, uncertain, or confused. Their contrasting apolitical budgetary tendencies, at times, suggested qualities of the "limited-rationality" decision-making model. Nevertheless, the budgetary bases and processes examined were largely in accord with the "politically rational" budgeting model. The slight variations existing in the College budgetary process were no doubt due to its organizational peculiarities, common in higher education institutions.
CHAPTER 1
INTRODUCTION

American postsecondary education appears to be experiencing a relative decline in resources and in the public support it once enjoyed, particularly during the fifties and sixties. The decade of the 1970s witnessed the need to react to changing social, political, and economic conditions that few would have foreseen during the prosperous days of previous decades. Eugene Carter (1980) identified the basic problem of the 70s as a move from a rapid growth environment to a no-growth or at least to a selective-growth policy. The Carnegie Commission in Priorities for Action: Final Report (1973) called the decline a great shock and a change of life creating many new problems. "It marks the first descent into a strange world where future prospects are no longer thought to be limitless" (p. 4).

With the coalescence of various forces, the growth of higher education institutions came to a halt and marked the acceleration of financial difficulty for higher education. According to Leslie and Miller (1974, p. 5), by 1972 the enrollment growth rate had declined to 2 percent per year from the 12 percent of 1965. The Chronicle of Higher Education (September 5, 1978, p. 1) forecast a 19 percent decline in the number of eighteen-year-olds between 1980 and 1990, and Carter and Solmon (1976, p. 37) estimated the decline in college-age cohorts (eighteen to twenty-one year olds) to be approximately 15 percent.
In the early seventies, as federal and state support for higher education diminished gradually, institutional revenues declined substantially. Furthermore, numerous federally sponsored research programs were eliminated (Mortimer and Tierney, 1979). In an historical overview, Cheit's report (1971, p. 10) indicates that, starting in 1968, federal funds committed to colleges and universities increased at a slow rate of 2 percent per year; however, federal funds never showed an absolute decline during that period. Magarrell (1978) indicates that postsecondary education is no longer a high priority among most state chief executives who are seeking alternatives for reducing taxes. A shift in state funding priorities is viewed as a zero-sum game leading to fewer dollars and greater competition for public and private institutions (Berdahl, 1978).

Private, independent institutions experienced similar losses as their endowments diminished with the declining securities market (Carter, 1980). Jenny and Wynn (1970) conducted a survey of income and expenditure growth of forty-eight private liberal arts colleges from 1960 to 1968. The report produced evidence that a gap existed between expenditure and income among institutions and that such a deficit was caused by enrollment changes. Jellema (1971) unveiled new findings about the financial status of private higher education from 1968 to 1971. The findings heralded greater financial decline. The 1973 follow-up study by Jellema suggested a gloomier financial situation than expected. In his survey of forty-one institutions, Cheit (1971, p. 45) found that twenty-nine institutions (or 71 percent) were either
headed for financial trouble or were already in financial difficulty. Cheit's follow-up study (1973) confirmed findings similar to Jellema's follow-up study; the money problem of higher education had grown to become its dominant concern. Cheit calls the problem a plateau of fragile stability.

In response to scarce resources, the major policy concern of higher education institutions is to utilize the available resources effectively and efficiently. Cartter (1975) predicted the decade of the 1980s to be a period of quantitative growth whereby a new management of quantitative growth would provide, among other goals, an effective and efficient allocation and utilization of resources. The principal approach to assigning resources to human purposes is mainly carried out through a set of budgetary methods. To achieve efficiency and effectiveness in the process of resource allocation, it is indispensable to determine first the financial behavior of higher education institutions and its impact on the budget process and the outcomes.

Problem

Despite the numerous budgetary approaches which have been taken to provide the most efficient management of higher education, there is to date no clear and complete understanding of how resources are allocated or reallocated within institutions. Ever since Key (1940) complained about the lack of budgetary theory, public administrators and researchers have sought to establish ways to answer the question: On what basis shall it be decided to allocate X dollars to activity A instead of activity B?
Higher education administrators have often been criticized for not lending themselves to more scientific methods in allocating their resources. Such an attitude may come from the common notion that many techniques useful for industry should be equally effective for higher education. Despite serious efforts of business managers, public administrators, and economists to propose a number of scientifically based budgeting methods for application to higher education, most of such methods have failed to render what their advocates had promised. This is due mostly to the fact that higher education institutions, by their nature and function, are considerably different from those of the private sector (Cohen and March, 1974). For example, the process of decision making as well as the educational process are not yet clearly defined and determined. More obscure is the effect of various fiscal policies upon the educational processes and outcomes. Moreover, the higher education environment deals with many political issues and constituencies that are often nonexistent for the private sector. Faced with scarce dollars, high competition, and serious issues of accountability, the common problem of higher education decision makers is the absence of a well-articulated process of resource allocation within the institutions.

**Background**

There is a lack of consensus in defining a budget. It is most often considered from a technical perspective signifying a variety of interrelated concepts in the resource allocation process. Sometimes it is defined as a financial plan (Heckert and Wilson, 1955; Wildavsky,
1974; Kramer, 1979) and a planning, management, and control system
(Schick, 1966; Jones and Trentin, 1966). Heiser (1959) separates the
passive nature of a budget from the active process of budgeting. Yet
for Pyhrr (1973) budgeting is clearly distinguished from planning.
His distinction identifies planning as the process that describes
anticipated outputs and budgeting as the process that identifies re­
quired inputs.

Jones and Trentin, however, consider it most important to regard
budgeting as a system, since a system implies a continuing process that
serves as a key in any business operation. As a means of allocating
resources, budgeting may represent the most dynamic and sophisticated
functions of management, since it affects all management functions.

Wildavsky (1974, 1975) presents an analysis and a comprehensive
overview on budgeting. He considers budgeting an approach for trans­
lating financial resources into human purposes. It is a tool for plan­
ing and evaluation, since it is a record of the past indicating
victories, defeats, bargains, and compromises. It can serve for future
planning and resource allocation by predicting proposed expenditures
with anticipated future outcomes. Thus budgeting is simply a mechanism
for allocating resources. Since maximized output is normally desired
and funds are limited, budgeting may become an instrument for efficien­
cy. Budgets may become a means for securing economic growth when spend­
ing is a form of investment. Budgets can also be implemented to insure
social justice and economic balance when governments take money in the
form of taxes and give it to those who benefit from the expenditures. Consequently, budgets provide the blueprint for income distribution.

Modern approaches to budgeting can be classified under two major models: politically rational as opposed to objectively rational budgeting models. A detailed discussion of each model is presented and compared in the forthcoming chapter.

Purpose

The purpose of the study is to determine the bases utilized in the internal resource allocation decision-making process at an urban community college in the Southwest. Specifically, the study will attempt to examine current budgetary practices at various institutional levels at Pima Community College in Tucson, Arizona. The major focus of the study will be on the comparisons between the politically rational budgeting model and the objectively rational budgeting model in order to explain their budgetary impact on the allocation of resources in institutions of higher education.

Significance of the Study

The future of higher education according to Cartter (1975) has been based upon quantitative growth, particularly during the past decade. He contends that the general trend will be toward the reordering of priorities and the maintaining of vigorous programs. In order to operate quality educational institutions, decision makers must have a relatively clear understanding as to how resources should be distributed among high and low priorities as well as how to overcome obstacles to
resource allocation. In the absence of abundant resources, quantitative growth will be more of a task in a competitive environment where the public is unforgiving. Therefore, the knowledge of how resources are allocated can help higher education decision makers in the proper allocation or reallocation of resources. The results of the study may help other organizations understand their own financial behavior and initiate needed and desired alterations to their budgetary processes.

Research Questions

The main focus of the research questions will be to examine the bases and process of resource allocation in a postsecondary institution by testing the politically rational budgeting model proposed by Wildavsky in contrast to the objectively rational budgeting model. The research questions are as follows.

1. To what extent does Wildavsky's politically rational budgeting model and the embedded concepts reflect the bases and processes of resource allocation in a postsecondary institution, particularly in contrast to the objectively rational budgeting model and the respective concepts?

2. To what extent do the bases and processes of resource allocation vary between two levels of administration in a postsecondary institution?

Nature of the Study

The study will be a case study, limited in its scope to a two-year public institution in the Southwest. The budgetary practices of
the institution will be examined at two levels: (1) institutional and (2) internal units such as colleges and departments.

Data Source

Budget. Pima Community College budgets will be obtained and studied to identify specific financial behavior.

Interviews. The interview technique will be utilized to collect additional data and information. The interview will focus mainly on how allocation of resources takes place at the institution by seeking the reaction and viewpoints of the administrators involved in the process of resource allocation.

Sample

The sample of interviews consists of two levels of administrators:

1. Top-Level Administrators
   a. The President of Pima Community College
   b. Vice President for Budgeting and Planning
   c. Vice President for Academic Affairs
   d. All other officials influential in the budgetary process.

2. Middle-Management Administrators
   a. Deans
   b. Department Heads
Limitations

1. The major limitation of this study is that it is limited in scope and sample; Pima Community College is representative of only a modest number of higher education institutions in America.

2. The generalizations of the findings will be limited to the personal interpretations of the researcher as well as to that of the representative of the budgetary process rather than of the college itself.

3. The study does not in any direct way take into account external factors influencing the budgetary process.

4. Personal bias may have influenced the interpretation of responses collected by the interview technique.

5. Pima Community College enrollment data may contain inaccuracies. Such problems are known to have existed in many higher education institutions. The extent of the inaccuracies would be expected to be relatively small, given the size and administrative complexity of the college.

6. Pima Community College financial data may also contain inaccuracies.

7. The study will examine only those current funds classified as Educational and General Expenditures.

Definition of Terms

Allocation of Resources. The process of assigning personnel, materials, equipment, space, and funds to specific operating units or
programs in an organization. However, for this study the term is used interchangeably with budgeting.

**Appropriation.** A sum of money given by the state legislature to the institution.

**Average or Unit Cost.** The total cost attributed to an activity or a program divided by the total number of units of output produced by that activity or program.

**Budget.** A statement of proposed expenditures for a fixed period for a specific project or program and the proposed means of financing the expenditures.

**Costs.** That which is foregone to obtain something of value.

**Direct Costs.** Those costs that can be identified specifically with a particular cost objective, such as all instructional costs.

**Expenditures.** Those costs that are incurred to provide goods and services for the operation of an institution.

**Fiscal Year.** The twelve-month period starting July 1 of any year and terminating on June 30 of the following year.

**Fixed Costs.** Those costs that do not change with the level of output.

**Indirect Costs.** Those costs incurred by the institution for a common or joint purpose benefitting more than one cost objective and not readily assignable to the objectives specifically benefitted.

**Internal Units.** Divisions or subdivisions, such as colleges, departments, or centers, operating within an institution.
Investment Revenues. Those incomes generated by various investments, such as stock market or money market investments.

Revenue. Those incomes an institution obtains from state appropriations, federal grants and projects, tuition and fees, investments, and other activities.

Summary

The significant functions and the inherent implications of budgeting in United Stated higher education require a more comprehensive understanding of the resource allocation bases and processes. The need is apparent when many higher education institutions in a search for efficiency are forced to adopt complicated budgetary methods with uncertain results. In regard to the peculiar nature of higher education institutions, a successful implementation of a budgetary process should be based upon a comprehensive knowledge of fiscal behavior of the post-secondary institutions.

Higher education institutions may behave differently financially since the internal and external management styles vary widely. Nevertheless, certain financial behaviors are shared by the majority of the postsecondary institutions. An empirical examination of one institution's budgetary bases and processes may help others in an internal reexamination of their resource allocation process.
CHAPTER 2
REVIEW OF THE LITERATURE

Studies on the bases and processes of resource allocation at work in the postsecondary institutions presently are nonexistent. The existing literature primarily provides an analytical examination of various budgeting methods which originally were developed for the private sector and focuses on their effects and implications, when utilized, in the postsecondary institutional funding system. By and large, these analyses address the issue of resource allocation under two distinct decision-making approaches: the political or traditional approach that has evolved through time and is modeled after certain behavioral patterns of human beings and the modern approach that is objectively based and is developed upon objective guidelines aimed at efficiency. The literature review chapter of this study, accordingly, will direct its focus towards an overview of studies addressing such budgetary methods and their implications, particularly on higher education institutions' resource allocation process. The review will start with a brief definition of concepts and functions of a budget. Studies on budgetary decision-making models will then be reviewed with particular attention given to the politically rational and the objectively rational budgeting models. Various budgeting methods and their respective bases and processes for allocating resources will thus be examined. The conceptual framework section of the chapter will establish the
analytical comparative bases upon which this study is developed and conducted by utilizing the politically and objectively rational budgeting models. A summary section will conclude the chapter.

Background

The concept of modern or systematic budgeting in governments and private organizations is a relatively new one in the literature of resource allocation. Babunakis (1976, p. 3) reports that "a budgetary system apparently was not needed until the nineteenth century when states and the federal government began to establish budgetary practices. The federal government had no formal executive budget until (June) 1921." The new system was established because it was felt that efficiency and accountability were needed (Dawes, 1923). Ever since, in a quest for more comprehensive methods of resource allocation, budgeting has evolved to become an integral part of any organization's fiscal management. Today, many of the underlying managerial functions are frequently defined, implemented, and evaluated under the guidelines of the conceptual framework of a given budgetary method. In turn, most all phases of a modern management process, such as forecasting, planning, allocation, control, and evaluation, have become major components of more recent budgeting techniques and processes.

The term or concept of budgeting has become so inclusive and complex that it often signifies a variety of interrelated concepts in the resource allocation process. It is difficult to define the concept succinctly and comprehensively. Therefore, the literature contains a
variety of definitions. Each definition may be quite accurate given the perspectives of the users. In its simplest form, "a budget is a document or a collection of documents that refer to the financial conditions of an organization, including information on revenues, expenditures, activities, and purposes or goals" (Lee and Johnson, 1977, p. 11). In the most general sense, Wildavsky (1974, p. 1) indicates that "budgeting is concerned with the translation of financial resources into human purposes." Similarly defined by Powell (1980, p. 2), "a budget is a written financial plan covering a future period of specified duration." Many other specific concepts pertinent to budgeting or financial management have been added to establish certain budgetary viewpoints. For example, viewing budgeting from a more technical perspective, Stedry (1960, p. 4) credits Eric Kohler (1956, p. 67) for defining it on a "multiplicity of purposes" basis and incorporating additional concepts such as "an estimate of future costs . . . and a systematic plan for the utilization of man-power, material or other resources." A more comprehensive definition of budgeting reflecting the principal components of modern financial management may become quite complex. Lynch (1979, p. 5) presents the following operational definition: "Budget is a plan for the accomplishment of programs related to objectives and goals within a definite time period, including an estimate of resources required, together with an estimate of the resources available, usually compared with one or more past periods and showing future requirements."
Budgets are also developed as tools to perform certain fiscal or managerial functions, given the perspectives of the users. One of the earliest distinctions of such functions, originally in the private sector, was provided by MacDonald (1939). He maintained that budgets should represent two essential and closely related functions of "Production Planning and Control" (p. 101). But later his view was challenged by Charnes and Cooper (1952) arguing that good planning data and strategies are not necessarily the same as good control data and strategies, thus separating the two functions. As the budgetary concepts became more specific and complex, distinct divisions were made within certain functions of the budget. For example, Robert Anthony (1965) identified two distinct divisions under the control functions of the budget: management control and operational control. Management control assures effective and efficient acquisition and utilization of resources. Operational control warrants that specific tasks are carried out effectively and efficiently. Argyris (1954) reports that one of the much neglected functions of the budget is its representation of a fiscal goal and production challenge in the industry. Thus, budgets can be viewed as great motivating factors. Providing a more modern outlook towards budgeting, Smithies (1955, p. 21) identifies six major budget functions as reflected in the decision-making process. They consist of determination of policy objectives, planning, programming, budget formulation, budget execution, and budget review. In regard to the increasingly new functions associated with budgeting, it seems appropriate to quote Stedry (1968), who viewed the budget not as a homogeneous mechanism but
a collection of processes with a variety of aims and procedures of application.

In the public sector, budgets often imply additional functions. Tied to the political, social, and economic conditions of the federal, state, and local governments, a budget becomes a mechanism for allocating resources (Wildavsky, 1975). The design of the allocation mechanism can be directed towards obtaining desired objectives. Wildavsky (1975, pp. 3-5) discusses numerous objectives gained by properly administered budgetary strategies. But among the most seriously regarded functions of public budgeting, according to Musgrave (1959), is its fundamental role in securing adjustments in the allocation of resources, distribution of income and wealth, and economic stabilization. Burkhead (1965a), Bonnen (1975), Wildavsky (1975), and Raskin (1978) confirm the distributational impact of the budget, arguing that the federal budget reflects which grouping in the society is favored and which suffers from the fiscal choices governments make. Nevertheless, the process of "who gets what, when, and how" constitutes an environment which Wanat (1978) calls "plain and simple politics" (p. 10). Schlesinger (1968), Wildavsky (1975), and Lynch (1979) note that the resource allocation process in a political environment where conflicting objectives exist may have some type of political function. According to Anton (1966) and Bennett and Dilorenzo (1983), the very political impact of the budget may well influence the key budgetary decisions as well as the decision makers in the budgetary process.
Budgetary Decision-Making Models

Public budgeting, as a decision-making process, is indicative of major political, social, cultural, ideological, and economic policies and priorities of a public entity or organization. There are several theories or conceptual models outlining the procedural approaches toward public policy decisions. A careful analysis and understanding of such conceptual models are basic to the application and development of contemporary budgeting practices and reforms.

Budgetary decision-making models can be evaluated for implementation according to their amenability to a specific decision-making environment. As such, budgetary models not in harmony with the decision-making environment may often be inappropriate to the users' budgetary purposes (Lynch, 1979, p. 22). Thus, the success of any budgetary model ought to be judged in the context of the specific environment.

Lee and Johnson (1977) and Lynch (1979) each report three major and commonly noted decision-making models concerning the resource allocation process: incremental, limited rationality, and pure rationality. Each, however, report a fourth model that is rarely cited and reviewed in the literature. The models are mixed scanning and "stages of problem solving," respectively.

In this section, limited rationality, mixed scanning, and stages of problem solving decision-making models first will be briefly reviewed. Due to the focus and nature of the study, incremental and pure rationality models will be discussed in depth later in this chapter.
The discussion will include various methods of resource allocation in each decision-making model.

Limited rationality models discussed by Lee and Johnson (1977), also called satisficing models by Lynch (1979), are a compromise between the incremental/political and pure rational models. The model proposes that decision makers establish a criterion to judge acceptable policy alternatives for a given problem. According to Simon (1961) and Cyert and March (1963), this model recognizes the applicability of pure rationality to complex problems. Decisions are arrived at by a limited and selective search for the first acceptable alternative. However, deliberate search is not considered ineffectual. The reasons for the limited and selective search are primarily time and cost constraints. As such, the standard of the model is the acceptable as distinguished from optimal or maximal. In other words, the ideal is not a prerequisite to policy decisions. The significance of this model lies in its great appeal as the middle ground between the theorists who support incrementalism and pure rationality models (Lee and Johnson, 1977).

The mixed-scanning model of decision making is indeed a compromise between pure rationality and incrementalism. Proposed by Amitai Etzioni (1967), the model is defined as a process which combines elements of rational and incremental models. It is not as utopian in its assumptions as the rational model nor as conservative as the incremental. The process of decision making is based upon a mixed-scanning strategy that differentiates key or fundamental decisions from bit or item decisions. As defined by Etzioni (1968), fundamental decisions are
"made through an exploration of the main alternatives seen by the actor (decision maker) in view of his conception of his goals . . . but de­tails and specifications are omitted so that overviews are feasible" (p. 283). Bit-decisions are made incrementally within the context of fundamental decisions made rationalistically. Therefore, each of the two elements in the mixed-scanning model help neutralize the peculiar shortcomings of the other. Unrealistic aspects of comprehensive rationalism are frequently overcome by conservative bias of bit-incrementalism (Etzioni, 1968). According to Etzioni (1967, p. 385), the mixed-scanning model has two further advantages over incrementalism: (1) it provides a strategy for evaluation and (2) it does not include hidden structural assumptions. But the most significant aspect of the model is the flexibility of the different scanning levels which makes mixed-scanning a useful strategy for decision making in environments of varying stability and by decision makers with varying control and consensus building capacities (Etzioni, 1967). However, incremental decisions over a long period of time may defy the principles of fundamental decisions or establish new contextual decisions (Etzioni, 1968).

"Stages of Problem Solving" decision-making models as proposed by Lynch (1979, p. 24) are quite similar to the rational model. But the starting point in the model is the perception of an existing problem—not the formulation of goals. According to the model, perception of a problem constitutes the possibility of multiple value perspectives. In a formal or informal approach, the decision maker defines the problem,
considers the solution, and analyzes the alternatives in a similar approach to someone using the rational model. The fundamental decision is made by planning to resolve the problem or reexamining the nature of the problem. Once the decision to proceed is made, proper action steps are taken, and the outcomes are evaluated. As also noted by Lynch (1979, p. 23), the reconsideration stages partly distinguish this model from the rational model. At the evaluating stage, the decision maker may replan the action steps to obtain better outcomes or start over by reexamining the nature of the problem.

The conceptual framework of this study will be developed later in this chapter upon the two following models of budgetary decision making: the rational or objectively rational and incremental or politically rational budgeting models. As will be discussed, the specific characteristics of each model formulating the bases and processes of resource allocation decision policies will particularly be noted. First, the rational decision-making model will be reviewed. Some major objectively rational budgeting methods will be discussed, and the application and implication of each method to higher education institutions will be reviewed. Then, the incremental or politically rational budgeting model will be considered.

Objectively Rational Decision-Making Model

The objectively rational decision-making model is comprised of a series of ordered, logical steps (Lee and Johnson, 1977, p. 16). Such a decision-making model and indeed most present-day problem-solving
approaches have evolved from John Dewey's (1910) analysis of thinking. His analysis consists of five steps: a felt difficulty, its location and definition, suggestion of possible solutions, development by reasoning of the hearings of the suggestion, and further observation and experiment leading to its acceptance or rejection. Dewey's analysis of rational thinking was later developed and refined by other scholars. Urwick's (1943) analysis of elements of administration and their effects upon decision-making processes in an organization is among the first translations of the rational thinking into the rational management approach. Later Peter Drucker (1954, 1967) somewhat enhanced the process, making some fine changes in it. Also, Drucker's (1966) well-viewed model of an effective executive decision-making process was modeled on the same rational-analytical thinking process with further analyses and interpretations. But perhaps the best and most recent systematic definition of the six steps in the rational decision-making model is provided by Lynch (1979, p. 23).

1. establish a complete set of operational goals, with relative weights allocated to the different degrees to which each may be achieved;
2. establish a complete inventory of other values and resources with relative weights;
3. prepare a complete set of the alternative policies open to the policy maker;
4. prepare a complete set of valid predictions of the cost and benefits of each alternative, including the extent to which each alternative will achieve the various operational goals, consume resources, and realize or impair other values;
5. calculate the net expectations for each alternative by multiplying the probability of each benefit and cost for each alternative by the utility of each, and calculate the net benefit (or cost) in utility units;

6. compare the net expectations and identify the alternative (or alternatives, if two or more are equally good) with the highest net expectations.

The cardinal assumption of the rational model lies upon the availability and manageability of complete and perfect information about all alternatives. Therefore, decision making is only an intelligent choice among the alternatives to maximize objective functions or outputs. In this regard, the rational model is most commonly envisioned as the ideal approach to reach major public policy decisions such as those in public budgeting (Lynch, 1979).

However, the critics of the rational model argue that it has limited applicability. Diesing (1962) maintains that the model is most consistent with assumptions of technical and economic rationality whereby objectives can be set with precision and the range of feasible alternatives is endless. The model is also effective in making accurate predictions of rational behavior in the private sector or future economic trends (Friedman, 1953). Downs (1967) argues that the costs of information are so great that it makes it rational to be ignorant and to make decisions on the basis of limited research and information. Others such as Lindblom (1959), Sharkansky (1969), Wildavsky (1966, 1974, 1975), and Lynch (1979) contend that public policy decisions are frequently made in relation to diverse interest groups and through a bargaining process. Summing up a widely shared opinion, Lynch (1979)
stresses that the rational model is the best tool to comprehend the technical difficulties of analysis but fails to function effectively in the political environment.

The analytical framework of most all modern budgetary approaches is developed on the principles inherent in the rational decision-making model. Some even have interfused stages of "rational analysis of thinking" with the modern managerial and budgetary disciplines. As such, they have provided the bases for determining the budgetary decision-making process. Particularly since Key (1940) sought ways to answer the question "On what basis shall it be decided to allocate X dollars to activity A instead of activity B?" Today, perhaps the most fundamental characteristic of these budgetary approaches is the strictly rational and often mathematically determined and evaluated connection between inputs or dollars and outputs or goals in the budget process. Allocation of resources are decided only in relation to their efficiency and effectiveness to produce the best possible results. Based on such a characteristic, this study will tentatively term these budgetary approaches as the objectively rational budgeting methods.

The approach taken in this part of the literature review will be to focus on three major objectively rational budgeting methods: performance budgeting; planning, programming, and budgeting system; and zero-based budgeting. The review will give particular attention to two basic aspects of budgeting in each method, namely, the processes and bases for budgetary decision making. Also, the compatibility of the
budget process with the decision-making environment, especially at higher education institutions, will be noted.

Performance Budgeting

Performance budgeting, according to Burkhead (1965b, p. 139), has no precise definition. The concepts of performance budgeting, like program budgeting, places greater emphasis on the economy and efficiency aspects of program planning and management. The final policy decisions are made in terms of each program's economy and efficiency. Therefore, the budget is developed with particular attention paid to performance units, and detail evaluation focuses on linking achievements to resources or inputs (Thavaraj, 1971, p. 49).

The development of performance budgeting aimed at bringing greater program data into the budgetary decision-making process is often linked to the first Hoover Commission Proposal in 1949. Others claim that the concept of performance budgeting pre-existed the Commission. Schick (1971, p. 30) reports that the commission did not propose the concept but simply "coined the name." Peterson, Erwin, and Wilson (1977, p. 2) indicate that the origin of performance budgeting dates back as early as the 1912 Taft Commission. But Lee and Johnson (1977, p. 69) argue that in the early 1930s the U.S. Department of Agriculture's Uniform Project System program was the "forerunner to performance and program budgeting." The program's approach was based on viewing financial needs in relation to the goals achieved (Roberts, 1960). In 1938, a similar project was implemented in Tennessee. The proposed new
accounting structure was to record financial data in terms of programs such as flood control or personal services (Kull, 1948).

Performance budgeting is described or defined variously in the literature based on the perspectives of the users. Burkhead (1965a, p. viii) notes the significance of the budget in "the way in which revenues and expenditures are grouped for decision-making." Selecting two different approaches to performance budgeting, Peterson et al. (1977, p. 2) describe the budget as "a budgetary structure that focuses on activities or functions . . . which produce results . . . and for which resources . . . are used." He also describes it as a "process that attempts to allocate resources on the basis of anticipated or past results" (p. 2). Schick (1971) distinguishes the commonly confused performance budgeting from PPB by focusing on its functional aspect. He contends that performance budgeting "pertains to activities, not to objectives. Its principle thrust is to improve work efficiency by means of activity classifications and work/cost measurements" (p. 8).

The common and principal elements of performance budgeting also are variously defined and determined. Therefore, it is generally believed that a lack of universal classification scheme permits each government to create the budget system that is most compatible to its structure and functions. Schick (1971, p. 44) proposes three major components: (1) functional and activity classifications, (2) performance measurement, and (3) performance report. A more detailed and refined set of components of performance budgeting is presented by Seckler-Hudson (1978, p. 86). Seckler-Hudson proposes an eight-step budgeting
process. She contends that one can find the full meaning of performance budgeting only when considered "in the total complex of these interactions" (p. 87).

Functional or activity classifications are the cornerstones for expenditure determination and allocation in performance budgeting. Functions such as health and transportation are "a group of activities for which a government unit is responsible" (Moak and Killian, 1963, p. 15). Activity classifications, or work programs, are defined and developed for one or a group of activities within a defined period of time to achieve specified objectives by identifying the type and amount of resources or costs required. Seckler-Hudson (1978, p. 87) reports that the concept of activity classifications was initially formulated by Harold D. Smith (1945) and adopted by the federal government. The structural specification of each function or activity can be determined separately by each government and in relation to organizational and political considerations.

However, activity classification structure suffers from certain operational limitations. For example, classifying multifunctional activities under one of several classifications becomes arbitrary and based on individual preferences. An additional limitation is caused when budgeters have a range of options as to how the scope of an activity ought to be determined for expenditure classification. Even at best, suitable classification of an activity, which is the basic control unit, may have certain implications based upon whether the activity is defined broadly or narrowly (Schick, 1971, p. 46). Therefore,
maintaining a sound relationship between the activity classification and the organization structure may become questionable.

Performance measurements, as reported by Schick (1971) and Lee and Johnson (1977), are carried out by cost accounting methods and scientific management techniques. Such measurements are usually directed towards determining unit cost or workload or by scientific management techniques linking units of inputs to units or quantities of output. Units of input are relatively distinct and normally can be measured through scientific management or cost accounting alternative techniques. However, output measurements for certain performances such as typing a letter or paving a mile of road are quite difficult to measure, partly because standards of performance are quite difficult to develop or the present standards are developed from historical surveys and not "on optimal levels of performance" (Sherwood, 1954, p. 5). Performance measurement, Schick (1971, p. 47) contends, "is impractical or not useful when the output is heterogeneous, of varying quality or unstable."

Performance reports are evaluative assessments of the accomplished objectives against the allocated resources. Such reports can be either an interim audit or a past audit of objectives and costs. Periodic performance reports are also targeted to identify possible performance deviations and to recommend necessary corrective measures.

The decision-making process in performance budgeting is based upon the decentralization of budget-making responsibilities. That requires budgetary decision making by all participants in the process.
It is particularly emphasized by Sherwood (1955) and Henry and Proctor (1960) that performance budgeting is most effective and successful when operated on a decentralized decision-making structure. Therefore, a realistic process of decision making and policy formulation is expected to initiate from the operating levels where resources are utilized, services are rendered, and work is accomplished. Although it is generally indicated in the literature that the hallmark of performance budgeting is the decentralization of the decision-making process, the opposite may also occur. Unlike the New York experiment (Henry and Proctor, 1960, p. 85) where relative decentralization was achieved, Eghtedari and Sherwood (1960, p. 68) report that performance budgeting in Los Angeles led to high degrees of centralization. However, it is implied that political power struggles may have been the major contributing factor.

The basis for resource allocation decision making in performance budgeting is the unit of input in relation to the quantity of output. However, according to Lee and Johnson (1977, p. 70), "there is little evidence that performance budgeting ever became the basis upon which decisions were made." Despite its potential as a management tool, performance budgeting fails to quantify activities that directly affect the bases and processes of decision making. While activity classifications, work load data, and unit costs are the major bases for budgetary decisions, also required are some breakdowns of expenditures and budget requests based on the object of expenditure in most performance budgeting practices. Thus, there is always a chance, when dissatisfied, to
combine some of the old budget types with some of the principles of performance budgeting. Schick (1971, pp. 52-62) calls it hybridization which, when happening, changes the bases for decision making.

The application of performance budgeting in postsecondary education has been relatively limited. In a survey of state higher education agencies in 1976, Peterson et al. (1977, p. 3) report that only six states—Hawaii, Michigan, South Dakota, Tennessee, Washington, and Wisconsin—indicated "explicit collection and reporting of outcome measures in the budget preparation and review process." Nevertheless, some states indicated an "embryonic development" of performance budgeting (p. 3). According to the same report, the District of Columbia and ten other states showed attempts to implement performance budgeting processes statewide (p. 4).

The recent resurgence of performance budgeting in higher education institutions stems from a revival and a new meaning of public accountability of institutions. State officials and legislators' main focus, Folger (1977, p. vii) contends, is on monitoring the efficiency of resource utilization in public institutions rather than on fiscal standards. Quantitative rather than qualitative funding orientation in the higher education budget process has resulted in calls for support of qualitative measures, such as performance budgeting (Harris, 1977; Peterson et al., 1977).

The implementation of performance budgeting at postsecondary institutions has been basically unsuccessful. The three principal components of performance budgeting—activity classification, performance
measurements, and reports—are generally difficult to define or determine. Caruthers and Orwig (1979, p. 56) indicate that lack of "appropriate performance criteria" is a major factor in the failure of performance budgeting. Activity classification is difficult to define or determine. Attributing a given performance or an outcome to any single organizational unit is often inaccurate if not impossible because often the contribution is made by more than one unit (Peterson et al., 1977, p. 8), for example, the efforts involved in educating an engineering student. Performance measurements are even more obscure. Due to the particular nature of the educational process and the interactions between factors such as students and faculty members, fields of study, individual preferences, methods of teaching and learning, socio-economic impacts on all the participants, etc., correlating outcomes and dollar inputs is not always clearly possible (Peterson et al., 1977, p. 12). Yet, the greatest barrier in the budget process is the performance report. Strict autonomy codes in the higher education community make it impossible to initiate performance reports for the purposes of corrective measures. To date, no methods for the objective and satisfactory evaluation of faculty performance, in such activities as instruction and research, have been developed. Moreover, the code of "freedom of teaching and learning" has rendered the evaluation of faculty performance somewhat unchallengeable. Berdahl (1978, p. 37) argues that performance audits by the state are also improbable because academic freedom and institutional autonomy have historically and judicially been recognized. Moreover, as suggested by Caruthers and Orwig
(1979, p. 54), the time difference between the performance measurement cycle and the budget planning cycle hinders realistic measurements of dollar inputs in relation to the outcomes.

The decision-making process in performance budgeting theoretically fits the organizational decision-making process in a higher education institution. The common denominator is the decentralization aspect of the decision-making process, particularly in higher education (Lawrence and Service, 1977, p. 12). However, because of the aforementioned reasons, performance budgeting "fails to achieve its aspirations and potential" (Schick, 1971, p. 85).

Notable cases of state-level application of performance budgeting are Hawaii and Washington. Performance budget adoption in both states proved to be a slow process if not an impractical one. Peterson et al. (1977, pp. 9-29) conducted case studies and found that state institutions and agencies were still trying to define, determine, and negotiate the appropriateness of some particular measures and program structures even after several years. But perhaps the most noted deficiency in performance budgeting is "the lack of political appeal" (Peterson et al., 1977, p. 31). They report that in both states legislators went beyond the rational, outcome-oriented budget process and pursued their personal interests for the institutions serving their constituencies (p. 31). Further, they add, the complexity and volume of budget materials to be discussed made legislators resent the process.

The Tennessee experiment, initiated by the state coordinating agency, primarily was directed toward establishing and assessing
instructional goals and performance indicators in accordance with each institution's role and mission. The indicators were intended to serve "as a basis for revising formula funding policies to reward performance" (Bogue, Harris, and Troutt, 1976, p. 17). The overall success of the Tennessee experiment is yet to be finally assessed at the time of this writing.

Planning, Programming, and Budgeting (PPB)

Planning, programming, and budgeting, or PPB, was originally developed in industry in the early part of the century. Novick (1973, p. 19) credits Swayne and Brown (1924) for reporting the early forms of PPB as management tools to have been developed first by DuPont sometime around World War I and then by General Motors as early as the 1920s. The application of PPB was later expanded to Ford Motor Company and Chrysler Corporation through both manpower and management methods of General Motors (Novick, 1973, p. 19). The developmental process of management concepts and methods of PPB in industry are not published.

As early as 1939, basic forms of PPB had been used in the United States government budget documents. PPB, in a more advanced variation of forms and techniques, first was employed by government in the Department of Defense in 1961 in association with the Rand Corporation (Kramer, 1979, p. 37; Lee and Johnson, 1977, p. 86). In 1965, President Johnson formally adopted PPB as the United States Government budgetary technique, which led to a nationwide budget reform endeavor throughout the levels of government (Merewitz and Sosnick, 1971, p. 4). By the
early 1970s, most federal agencies had installed PPB in some form and to some degree. According to Lee and Johnson (1977, p. 107), PPB had "a modicum of success" in the 60s which was "replaced with pessimism and skepticism in later years." Some government agencies found the system too complicated to install, and other reexamined their future commitments to PPB.

PPB, or program budgeting, like performance budgeting, lacks a standard definition. As described by Wildavsky (1974, p. 181), the general concept of PPB is that "budgetary decisions should be made by focussing on output categories like government goals, objectives, and end product instead of inputs like personnel, equipment and maintenance." Developed primarily on cost benefit analysis, PPB emphasizes estimating the total cost of accomplishing the intended objectives. Kenworthy (1973, p. 19) maintains that "program budgeting is a managerial technique designed to merge the planning process with the allocation of funds by making it impossible to allocate funds without planning." Pyhrr (1973, p. 149) states that PPB is "a macro-economic, centralized, top-down policy and long range planning tool." The National Association of College and University Business Officers (NACUBO) describes it as "a planning device that ultimately leads to a conventional departmental budget for operation and control" (1974, p. 158). Toler (1977, p. 3) believes that "PPB is first and foremost a planning technique." Elaborating on the analytical approach to PPB taken by Clark and Huff (1972), Lawrence and Service (1977, p. 35) indicate that program budgeting is an approach that employs various analytical tools, such as
Resource Requirement Prediction Models (RRPM), to transform a line-item budget into a method of budgeting that links resource costs to programmatic outcomes.

The principal elements formulating the process of program budgeting are variously defined in the literature review. However, perhaps two of the more comprehensive descriptions of PPB are provided by Novick (1973, p. 5) and Parden (1971, pp. 203-208). While each provides a ten-step process to describe program budgeting, Parden bases his description and analysis on the higher education environment and institutions. To stay within the focus of the study, only Parden's approach to PPB will be reviewed. The ten steps are as follows:

1. **Establish Objectives and Goals.**
   Based on an institution's goals and objectives PPB comparatively evaluates alternate programs to identify the most compatible one in regard to the objectives and available resources. Then numerical levels of achievement are developed and attributed to goals for future evaluation.

2. **Develop Alternate Programs Which Will Accomplish Goals.**
   To attain its goals or objectives, an institution must choose and implement certain strategies, such as the number of degree programs offered, the degree level provided, the combination of large or small sections, high or low faculty-student ratios etc. In each program, activities are clustered in a specific format so that each can be identified by the allocated resources and the expected outcomes. Such programs determine the alternative means of attaining institutional goals.

3. **Estimate Resource Requirement for Each Alternative.**
   Simply defined, resources are all of the supports required for a program to function effectively, such as salaries, space, supplies, equipment and other needs in terms of dollar equivalents.

4. **Estimate Benefits to be Gained from Each Program Alternative.**
   Program benefits must be identified and linked to the required resources. Then, analysis may follow. However,
identifying and, then, correlating program benefits to resources are perhaps the most difficult procedure in program budgeting, particularly in the higher education environment. A lack of acceptable and standard measures of input and output in the higher education environment makes the cost-benefit analysis concept of program budgeting useless partly because not all educational outputs are mathematically quantifiable.

5. Develop an Operating Plan by Selecting from Among Alternatives.
In accord with the institution's goals and objectives, and within the resources available, the best satisfying combination of programs must be classified and given a priority ranking. Priority ranking of programs is carried out concerning whether resources allocated generate the best possible results and also their overall effects on institution's long range objectives and fiscal policies. For example, alternative programs of undergraduate scholarship assistance. Of three A, B, and C program alternatives, Program A will support 150 students and cost $110,000, Program B will support 270 students and cost $185,000, and Program C will support 400 students with a cost of $410,000. The more money allocated for scholarship, translates into perhaps higher tuition for all students. Therefore, program priority rankings can be changed to achieve best overall satisfaction, but their total costs must remain within the resources available.

6. Test the Long-Range Fiscal Implication of the Plan.
Generally most of the fiscal decisions have long term effects on resource allocation policies in an institution. For instance, while enough resources are available to start a new academic program this year, enough funds must be secured for the following years to keep the various levels of the program viable. Thus, resource allocation decisions and their long range fiscal implications must be particularly noted and recorded.

7. Compile the Annual Budget.
The testing of the long-range fiscal implications of the programs selected is to create a matching combination of programs and resources in the near future. A five- to ten-year projection strengthens planning activity and permits precision in the next year's budget.

8. Evaluate the Success With Which Program Benefits Are Achieved.
Evaluation of programs must determine whether or not they achieved intended goals. Such an evaluation can be implemented through course evaluation by alumni, faculty evaluation by students, examining strategies in cost reduction, etc.

Planning, programming, budgeting and evaluation must be an on-going process. Continuous assessment of the projected costs and benefits of the proposed alternative programs must be carried out carefully. For the purpose of predicting the consequences of future fiscal decisions, a standard data file must be either developed or borrowed from others. Existing data files must be updated and refined based on past experience.


The primary role of program budgeting is to create a rational decision-making process and to improve the overall organizational policy-making procedures. As discussed in a research paper titled "Program Budgeting in States and Local Governments: The Practitioner's View" (1972, p. 2), the main objective of program budgeting is to improve the rational process of allocation of tax dollars that will have a maximum impact on achieving the defined goals. "Collective rationality" (Schick, 1973, p. 201) is the major common denominator of the budget process in program budgeting. Babunakis (1976, p. 23) states that program budgeting refines the quality of the rational decision-making process because it establishes systematic information for better analysis and, thus, better economies and efficiencies.

Unlike performance budgeting, program budgeting has the potential to centralize the authority and the decision-making process. Program priority ranking and the final selection of the most satisfying
alternatives are frequently done by top-level executives or administra-
tors. Merewitz and Sosnick (1971, p. 5), in their analysis of program
budgeting, indicate that PPB has "demonstrated tendency to centralize
authority."

As discussed earlier, the bases for decision-making in program
budgeting are developed through program priority rankings. They are
often determined by utilizing such methods as data-gathering and data-
processing techniques, cost-benefit, cost-effectiveness, and marginal
analysis. Such analytical techniques are usually associated with highly
complicated mathematical formulas attributed to program budgeting.
But Novick (1973, pp. 12-13) and Gross (1969, p. 115) maintain that
program budgeting is not built upon complex mathematical models or
computer analyses. Even when utilized, they must not replace human
rational judgments as the ultimate bases for budgetary decisions.

However, it is generally believed that PPB in the federal
government failed to live up to the expectations of its advocates. In
June 1971, the U.S. government quietly abandoned its support and appli-
cation of PPB (Merewitz and Sosnick, 1971, p. 301). In an analytical
study of sixteen federal agencies using PPB, Harper, Kramer, and Rouse
(1969, p. 624) found that "the planning, programming, budgetary func-
tions are not performed much differently in most agencies than they
were before the introduction of PPBS." The survey showed that only five
agencies had relative success with PPB. Six factors were attributed to
their success: (1) a sufficient number of analysts, (2) well qualified
analysts, (3) direct and structured communication between the analysts
and the heads of agencies and program managers, (4) informal relationships between the aforementioned individuals, (5) strong support of analytic effort by agency heads, and (6) a positive attitude towards the analytic effort as one primarily benefiting the agencies.

The critics of PPB enumerate various reasons for PPB's failure. Perhaps the most significant shortcoming of PPB in the federal government was its inability to present the results in a quantifiable manner, particularly in most social programs (Botner, 1970, p. 424). Lee and Johnson (1977) indicate that most civilian agencies had difficulty in implementing PPB. In the Department of Defense, PPB was based upon the limited rationality model of the decision-making process utilizing incremental decisions to adjust multi-year plans through a mission-oriented program structure. But PPB in civilian agencies "came to mean the use of analysis rather than a reformation of the entire decision-making process" (p. 97). Niskanen (1971, p. 42) argues that since most of the government programs contain multiple objectives, it is impossible to develop a meaningful program structure. Hoos (1972) criticizes the accountability of the PPB decision-making process. She describes the specialists and analysts employed by the government to structure the PPB process as inadequate and unqualified (p. 66). She also objects to the use of outside consultants in government because it removes the responsibility of decisions made both from public officials and consultants. Thus, "the arrangement shields everyone from criticism" (p. 57). Schick (1969) calls PPB a budgetary system caught in a widespread confusion with minimal results. "The publicity has outdistanced the
performance by a wide margin. In the name of analysis, bureaus have produced reams of unsupported, irrelevant justification and description. . . . Plans have been formulated without serious attention to objectives, resource constraints, and alternative opportunities" (p. 149). Mosher (1969, p. 160) states that PPB has been oversold and misrepresented by its own advocates. Excessive emphasis on quantifiably defined objectives and results gives PPB an oversimplified view of the world. Churchman and Schainblatt (1969, p. 178) call PPB a contest between experts and politicians. Wildavsky (1969, p. 192) regards PPB as a new procedure that aims at new policies and deep-rooted changes. "The deeper change does into the bowels of the organization, the more difficult it is to achieve." Wildavsky (1966) also contends that PPB was doomed to fail because its focus was against some important American political values (p. 298). According to Wildavsky, the bargaining and incremental aspects of budgeting provides both expression and representation opportunities to diverse political interest groups which are largely neglected in the rational process of PPB. Schick (1973, p. 148) defends the nature of PPB but believes the demise of PPB was caused more by a hostile environment and attitudes than inherent inadequacies. PPB died of multiple causes, any of which was sufficient. PPB died because of the manner in which it was introduced, across-the-board and without much preparation. PPB died because new men of power were arrogantly insensitive to budgetary traditions, institutional loyalties, and personal relationships. PPB died because of inadequate support and leadership with meager resources invested in its behalf. In higher education, a basic form of PPB was first used to compute and analyze the unit costs of instruction by curriculum in a
nationwide study. Adams, Hankins, and Schroeder (1978, p. 62) give credit to McNeely (1938) to report the first application of PPB in 1935 by the National Committee on Standard Reports. However, the first application of PPB to higher education resource allocation decision-making process based on outputs was by Williams (1966). PPB was transformed to and developed for higher education by the Western Interstate Commission for Higher Education (WICHE) and later by the National Center for Higher Education Management Systems (NCHEMS). With the involvement of states with PPB, many state-controlled higher education institutions implemented program budgeting. Thompson (1971, p. 685) states that these institutions were "ordered to adopt the PPB format." But Newton (1972, p. 1) indicates that the need to establish accountability and to reinstitute public confidence persuaded many other institutions to implement PPB.

The focus of program budgeting in the higher education environment was, in most cases, directed towards prevalent institutional activities rather than output measurements. Weathersby and Balderston (1972, p. 12) indicate that "in virtually every case this conflict between an objective oriented program structure and an activity oriented program structure has been resolved in favor of the activity structure." Based on proxy "output measures" of instructional activities, such as student credit hours, number of students, etc., NCHEMS has organized a comprehensive classification of those instruction activities—the Program Classification Structure (Gulko, 1972).
There is another resource allocation technique which is based on identifying and analyzing output measures and not instructional activities. One implemented technique is student output measurements. Astin (1970) proposes a model that incorporates student inputs with institutional-educational environments as they affect student outcomes. However, Astin's model does not provide a formal structure for the allocation of resources. Elfner (1978) presents a model for planning and resource allocation decision making using factors such as student inputs, institutional-environmental characteristics, and student outcomes to define and administer programs and activities in relation to carefully identified goals and objectives. His model is designed to incorporate resource constraints, resource requirements, and cost-benefit analysis in a continuously evaluative process. In a broader approach, Micek, Service, and Lee (1975) suggest an "Outcome-Oriented Planning, Management, and Evaluative Cycle" model in which planning the programs of an institution is developed according to the objectives, defined as outcomes. Evaluation is carried out to measure program effectiveness rather than efficiency. The model, as expressed by the authors, may not be effectually operational due to its disregard for resource constraints particularly in periods of financial exigency. Clark, Huff, Haight, and Collard (1973) utilize NCHEM's Program Classification Structure along with Faculty Activity Analysis proposed by Manning and Romney (1973) and the Resource Requirement Prediction Model to constitute cost projections for resource allocation and cost
information exchange. Micek, Service, and Lee (1975) have provided a manual for "outcome measurement."

Programmatic budgeting applications in higher education institutions did not produce, in most cases, a total satisfaction. Benacerraf et al. conducted an institutional case study of Princeton University and concluded that the programmatic budgeting was inappropriate for the school. Although the process provided better awareness of the total costs of different activities at the University, it failed as a total budgeting system. Balderston and Weatherby's (1972) documentation of the University of California's experience with program budgeting from 1966 to 1971 indicates that it was implemented only to a limited degree in the process of resource allocation decision making both institutionally and statewide. Andrew (1973) studied the implementation of program budgeting at the University of Utah and indicated that its success was due to utilizing extensive analytical measurements called "enrichment analysis." The main focus of the analysis was to keep the outputs of the budgetary process in line with the long-range planning strategies and anticipated objectives. The analysis was also administered through effective communication to demonstrate the central administration's commitment to program budgeting resource allocation process. Kenworthy (1973) argues that programmatic budget allocation yields better results within the normal governing structure of small colleges than in a typical university (p. 20). Hardy (1970), an advocate of PPB, contends that program budgeting is not the ultimate solution to higher education budgetary problems.
Others contend that the postsecondary education environment is not conducive to the principles of program budgeting as a financial decision-making process. For example, it is a difficult task to identify and define program objectives. In most cases, separate types of forms may have to be developed for the various types of programs. Dressel and Simon (1976, p. 20) believe that it is "not even clear what a program is at a departmental level. Any degree program requires collective efforts of several departments and the utilization of university resources." Howard Bowen (1977) criticizes program budgeting as a process that puts excessive value on quantifiable measurements. He argues that "academic planning worth anything will take into account all the benefits whether or not they are readily quantifiable, and will consider all the costs whether or not they are quantifiable" (p. 2). On the other hand, Morrell (1969, p. 289) indicates that the application of program budgeting to higher education can only be successful when adequate means for measuring quality are devised and effectively used. Fielden (1973) and Neff (1971) maintain that university environments are inherently political. The incompatibility of program budgeting with political realities in resource allocation causes its demise. Wildavsky (1974, p. 203) criticizes program structures in PPB as "pernicious" and contends that "the structure turns out to be a sham that piles up meaningless data under vague categories." Dilly (1966) considers PPB to be costly in both time spent by administrators and in dollars.
In the higher education environment, the process that transforms input factors into educational outcomes is defined by Cohn (1975, p. 236) as the "production function of education." Based on such a definition, many contend that the PPB process can be successfully implemented in the higher education environment since the process focuses on input/output factors. But Farmer (1970, p. 133) maintains that despite considerable research and analysis on the higher education process, quantifiable measures of resource requirements for a unit of output are yet to be determined. Therefore, PPB is generally considered to be ineffectual because production functions for higher education are not fully resolved.

Zero-Base Budgeting (ZBB)

Zero-base budgeting, or ZBB, is variously defined based on the perspectives of the users. According to Taylor (1977, p. 33), "in the most literal sense, zero-base budgeting implies constructing a budget without any reference to what has gone before, based on a fundamental appraisal of purposes, methods and resources." A broader definition is provided by the Office of Management and Budget in its Bulletin 77-9 describing ZBB in 1977. The definition indicates that "zero-base budgeting is a management process that provides for a systematic consideration of all programs and activities in conjunction with the formulation of budget requests and program planning." Charles Wilson, in a House Congressional hearing presented a more objective definition of ZBB. He stated that
Zero-base budgeting is a management tool ... a method of more efficient use of limited resources in the pursuit of specified goals. The goal, as with any planning-budgeting process, is to identify the output desired, and the input resources required to obtain it. This need not involve a reduction of expenditures. An increase, if it is efficiently contributed to the attainment of the desired goal, might be an alternative (1977, p. 2651).

Pyhrr (1973, p. 23) defined ZBB as "a system whereby each governmental program, regardless of whether it is a new or existing program, must be justified in its entirety each time a new budget is formulated." Therefore, based on the intended objectives, ZBB may signify various concepts in budgetary management, a tool, a process, or a system. Due to such a flexibility and a lack of standard definition, Wilson (1977) maintains that "zero-base budgeting must be defined according to the methodology used and the structure to which it is adapted, given the general conceptual framework of the comprehensive budgeting" (p. 2652). Wilson quotes the Comptroller General of the United States, Elmer Staats: "zero-base budgeting is a kind of uncertain term, depending on how intensive an evaluation you do" (p. 2654).

According to Taylor (1977, p. 33), a sort of zero-based budgeting was attempted in the U.S. Department of Agriculture for the fiscal year of 1964. It was generally regarded as a failure. However, ZBB, as it is known and practiced today, originally was developed by Peter A. Pyhrr at Texas Instruments, Inc. during 1969 (Pyhrr, 1978, p. 253). The State of Georgia, under the governorship of Jimmy Carter, was the first public organization to implement zero-based budgeting operationally in 1973. Schick and Keith (1976, p. 5) report that ZBB in Georgia became
a highly developed budgetary process and gained national attention. By
the 1976 Presidential campaign, ZBB was considered to be an outstanding
case of governmental application of zero-base budgeting (Lauth, 1980,
p. 114). As the President of the United States, Carter initiated the

The concept of zero-base budgeting is to link planning, budget­
ing, review, and operational decision making and to incorporate them
all into a single process. Thus, in the zero-base approach to budget­ing, it is essential that each organization evaluate and review all pro­
grams and activities systematically. It is required that activities
be reviewed on the basis of cost in relation to output or performance.
Such a procedure may bear significant variations to fit the particular
needs of an organization. In the private sector, for example, budgets
must be justified from the base, or last year's dollar amount. Each
fiscal year, new or existing programs or activities contend for the
available resources by justifying their relevance, efficiency, and
effectiveness. In the public sector, it is widely indicated that such
a justification starts from "ground up" or from "scratch." Sarant
(1978, p. 4) maintains that such a definitional conception is "errone­
ous" and "inappropriate." While the majority of public programs and
activities may have to be justified from the "ground up" each year,
there are some programs authorized by the legislature, such as unem­
ployment benefits or federal pensions, that cannot be approached through
zero-base budgeting.
The process of zero-base budgeting is comprised of four distinct steps. As described by Pyhrr (1978, p. 255), they are as follows:

**Identifying "Decision Units."** Programs or activities in an organization are to be identified and defined by the individuals who initiate the decision packages so that they can be isolated for analysis and decision making. It is recommended by the U.S. Office of Management and Budget (1978, p. 309) that the content of basic decision units should neither be so low in the organizational structure as to require excessive paper work and review nor should they be so high as to incorporate important considerations and hinder meaningful review of the contents. Decision units must be formulated at the proper organizational or program level when the amount of resources and the scope, direction, and quality of each program are determined. It is also recommended that normally a decision unit "should be included within a single account, be classified in only one budget subfunction, and to the extent possible, reflect existing program and organizational structure that have accounting support" (p. 309).

**Preparation or Analysis of Each Decision Unit in a Decision Package.** A decision package is a document that provides distinct identification and description of a given activity or program. It is considered as the building block of the zero-base process of budgeting (Pyhrr, 1978, p. 256). The information displayed on each decision package must be properly formulated so that the decision makers can (1) evaluate the package and rank it against other decision units under the same category of funds and (2) based on the merits of the unit,
decide whether to approve or disapprove it. The content and format of a decision unit, as determined by Pyhrr (1978, p. 257), must provide the following information:

- Purpose/Objective
- Description of Actions (what are we going to do, and how are we going to do it?)
- Costs and Benefits
- Workload and Performance Measures
- Alternative means of accomplishing objectives. All significant alternatives for an activity or a program must be identified, evaluated, and included in the decision package for ranking and selection.

- Different levels of effort of performing the operation. Once the best method of performing the operation is selected from among other evaluated alternatives, then alternative levels of effort and funding to accomplish the operation must be identified and evaluated.

However, identifying, measuring, and evaluating different levels of effort, if possible, may not be a well-defined and agreed upon analytical process. Pyhrr (1978, p. 257) indicates that it "is probably the most difficult aspect of the zero-base analysis, yet it is one of the key elements of the process."

Thus, as connoted above, a decision package may be defined as one of several incremental or decremental levels of a decision unit. Therefore, several decision packages can be developed for each decision unit. The ranking of decisions is made on these incremental or
decremental levels. Each manager determines a minimum level of effort in terms of required resources to attain anticipated performances. It is upon this basis that additional increments in the form of separate decision packages are developed. As such, then, several operational alternatives for allocating resources are made available to top managers for final decision making. Such alternatives described by Pyhrr (1978, p. 258) are (1) elimination, if no decision package is approved; (2) reduced level, when only the minimum level of decision package is approved; (3) current level, to maintain the same level of effort when the minimum level plus one or two incremental levels are approved; and (4) increased levels, when one or more increments above the current level is approved.

Determining a minimum level of effort also is quite complicated and arbitrary. Each operation may require a different minimum level which must be identified by the respective manager. Pyhrr (1978, p. 258) defines the minimum level as "that critical level of effort, below which the operation would be discontinued because it loses its validity of effectiveness." Schiering (1976, p. 175) reports that zero-based priority packages used in the State of New Jersey demanded packages at these levels of current funding—0, 50, 75, 100, 125, and above 125 percentages. In New Mexico, according to LaFaver (1978, p. 253), the funding levels suggested were "70 percent of current budget, 95-100 percent of current budget, and separate units for each major request above the current budget."
Ranking Process. Ranking is the process through which all decision packages are reviewed by a manager who establishes their relative priority. The level of priority is determined by concentrating on basic questions such as "How much should be spent?" and "Where should it be spent?" A ranking table is, thus, prepared listing all the decision packages in descending value or benefit to the organization. The ranking procedure should include detailed identification of benefits to be realized at each level of expenditure. Also, the consequences stemming from disapproving additional decision packages ranked below that expenditure level must be provided. Pyhrr (1978, p. 262) indicates that "the ranking process establishes priorities among the incremental levels of each decision unit" (i.e., decision packages). The rankings, therefore, display a "marginal analysis." In the review process, decision packages are submitted to the manager at the next organizational level thereby producing a new aggregate ranking for all packages presented to him/her. Such a process continues until final rankings are completed at the departmental level. Then, similar procedures are followed at the higher organizational level. However, the review process of decision packages may vary given the size and characteristics of an organization.

Preparing the Detailed Operating Budget. In the public sector, the budget requests developed by each organization are reviewed and modified in some forms by the legislature. Under ZBB, the decision packages and rankings specify the type and level of changes to be made. But, if for example a 5 percent arbitrary reduction is requested, an organization can utilize its rankings to adjust the overall reduction by
eliminating the packages with the lowest priority. But under tradition­
al budgeting techniques significant budget reductions may force the agencies to "recycle their entire budgeting effort to determine where the reductions should be made" (Pyhrr, 1978, p. 264).

The decision-making process in the zero-base approach of budget­
ing is heavily decentralized. The core of decisions is made by the managers through their preparation of decision packages "down in the gut level of each organization" (Pyhrr, 1973, p. 12). Although the budget preparation and decision-making processes are initiated from the operational units up to the top-level administrators, the overall budget content is confined within the general guidelines and requirements set by the top managers. Mueller (1981, p. 36) indicates that "regardless of the scheme chosen for determining priorities, ZBB is forcing all levels of management to make critical decisions concerning their activ­
ities." Draper and Pitsvada (1978, p. 10) quote President Johnson suggesting that ZBB, unlike other budgetary methods, does not disregard the "very special staff of experts" in preparing and determining the content of the budget. They also cite Pyhrr (1973) advocating the de­
centralized aspect of ZBB and that "a large centralized administrative staff defeats the intent of ZBB" (p. 10). The bases for budgetary decisions, as discussed earlier, are "decision units," "decision pack­
ages," and "priority ranking procedures."

A successful implementation of zero-base budgeting, according to Pyhrr (1973, p. 25) is based upon three general requirements: (1) the support of the top-level administrators in an organization, (2) an
effectively designed system incorporating all the needs of the user organization, and (3) effectively administered processes of the system. But based on the review of the literature, zero-base budgeting operationally has been rarely effective, even when the three requirements theoretically were present. In a survey of the status of ZBB in Georgia, Lauth (1980, p. 117) reports that the zero-base approach of budgeting was abandoned for "an approach to budget preparation that is characteristic of the incremental approach to decision-making."

According to the survey, most budget officers indicated that their major guide in either constructing or evaluating their budget was the last year's budget. Mueller (1981, p. 53) indicates that the application of ZBB in Pima County, Arizona may suggest some marginal effects on cost reduction in some categories of expenditures. However, the study strongly implies a tendency to "the incrementalism of budgeting in Pima County" while the system was in operation (p. 60). Hyde (1978, p. 75) cites Schick's evaluation of ZBB at the federal government as basically an "incremental financial statement." Fauntleroy (1978, p. 11) maintains that a lack of "historical cost data for specific products and hazards within the budget program [that existed]" in the budget process were among major pitfalls of ZBB.

Other types of problems inherent in the preparation and implementation process of ZBB are reported in the literature, some of which are as follows. In New Jersey, implementation of ZBB was encountered by staff resistance since a lack of understanding of the basic concepts of zero-base budgeting existed. As a result, the quality of the
information generated was rather unsatisfactory (Schiering, 1976, p. 289). Also, some agencies indicated a basic difficulty in developing "decision units" because their program activities were so interrelated. Miles (1978, p. 43) questions the manageability of the zero-base budgeting decision-making process. He indicates, "We have reduced the 175 programs to 200 decision units at the secretarial level. However, this is still more decision units than a secretary and the top policy staff can be expected to handle." Schick (1978, p. 179) is critical of the ranking mechanism of ZBB as a process in which "more ingenuity has been invested in ranking scheme than in any other zero-base budgeting activities." Miller (1978, p. 9) questions the survivability of a rationally based budget approach such as ZBB in the bureaucratic environment of the government. He contends that "first, there is the sheer joy of beating the system, and second, since most federal staff believe strongly in their programs, they will do their utmost to secure the most dollars possible to support that program." Zero-base budgeting in Wilmington, Delaware, according to Singleton, Smith, and Cleaveland (1976, p. 29) had a significant disadvantage foremost of which was "the large increase in the time and paper work," and considering all the initial costs, there was "a net increase of 100 percent in the cost of preparing the budget." And Anthony (1977) considers ZBB basically an unmanageable budgeting system and indicates that the process is simply a fraud.

Based on the review of the literature, the higher education community has had a limited experience with zero-base budgeting. One of the more recent experiences with ZBB, outside a statewide implementation
of the system, such as Georgia, has been at McMaster University. According to MacFarlane, assistant vice president of the university (1976, p. 31), ZBB application produced mixed experience. On the one hand, it brought about a greater awareness of the overall mechanism as to how the university functions, led to a more aggressive management style, and similar to the public sector experience, facilitated some cost reductions without excessively negative feedback. On the other hand, again similar to the public sector experience, it required an incredible amount of paperwork, was overly time consuming, and it was difficult to determine priorities (pp. 31-32). Nevertheless, it can be concluded from MacFarlane's analysis that the most difficult aspect of ZBB is perhaps the adoption procedures of the system (1976, p. 32).

But Gaither and Johnson (1979, p. 11) maintain that McMaster University's experience may be an exception. In a monograph analyzing the nature of budgeting in the university environment, Robins (1973, p. 12) reports that ZBB in the University system of Georgia is used in combination with formula budgeting. Dressel and Simon (1976, p. 21) suggest that the application of ZBB in higher education will be seriously limited simply because educational commitments already made demand continued support. As indicated by Gaither and Johnson and supported by Fincher's report of the University system of Georgia (1976), a successful application of ZBB may be carried out only in the support areas because of the flexibility of such activities (1979, p. 10). Morgan (1978, p. 20) argues that the centralized aspect of the decision-making process in higher education institutions, particularly
at the top administrative and legislative levels, which permits the disapproval of the decisions made by deans or department heads, is detrimental to the viability of ZBB. Harvey (1977, p. 39) suggests that ZBB may never succeed as a budgetary system in the postsecondary environment. Both Morgan (1978, p. 23) and Harvey (1977, p. 39) express a desire for the concept of frequent program review as a process linking cost benefits to the broad institutional objectives in higher education.

Based on the review and analysis of budgetary methods within the rational approach to the process of decision making, it can be concluded that the focus of this approach is primarily on the theoretical aspect of the budgetary decision-making process. Some budgetary methods, such as ZBB, presume no limits on human capability to process information, analyze it, and commit precise resources. Others, such as PPB, present a sophisticated scheme for all financial decisions assuming almost no environmental effects on the quality of the decision-making process. And some, like Performance Budgeting, presume that man and his social system are adequately consistent to perform tasks in an effective or efficient manner. These budgetary methods are overly rational and systematic. They cannot conform effectively to the environmental forces and the frequently irrational process of decision making present in the real world. They all share a common deficiency: they all exclude man and his irrational tendencies.
Politically Rational Decision-Making Model

This model suggests that the process of making decisions which impact on the formulation of public policy is, in large measure, neither guided nor controlled by the principles inherent in the objectively rational decision-making model. According to this model, Lee and Johnson (1977, p. 17) imply that the real process of decision making is primarily shaped by incorporating principles such as views, needs, demands, etc. raised by significant interest groups in relation to a given public policy decision. Therefore, decision making is not conscious or based on pure rationality. Status quo is the accepted norm. Feasible alternatives usually are not taken into consideration unless brought to the attention of the decision-making process by the respective interest groups. As a result, to establish or reestablish a consensus among the conflicting interest groups, the process incorporates only incremental adjustments to the existing public policies. No planned research is normally required to identify, determine, and evaluate the existing alternatives, and, if any, it is only marginal. The political process of decision making, thus, provides the interest groups the opportunity to express their expectations. As a result, the final decisions represent a "political power-oriented bargaining process" (Lee and Johnson, 1977, p. 17). Therefore, political viability is the cardinal principle in this model, which determined the rational bases for the decision-making process. Paul Diesing's (1962, pp. 198-228) analysis of a political-rationality approach to decision making indicates that
Political rationality is the fundamental kind of reason, because it deals with preservation of improvement of decision structures, and decision structures are the source of all decision. . . . The political problem is always basic and prior to the others. . . . This means that any suggested course of action which corrects economic or social deficiencies but increases political difficulties must be rejected, while an action which contributes to political improvement is desirable even if it is not entirely sound from an economic or social standpoint. In a political decision . . . action is never based on the merits of a proposal but always on who makes it and who opposes it. The best available proposal should never be accepted just because it is best; it should be deferred, objected to, discussed, until major opposition disappears. Compromise is always a rational procedure, even when the compromise is between a good and a bad proposal.

Aaron Wildavsky (1974) maintains that although one of the principal tasks of the political machinery is to set goals and objectives, yet "it is impermissible to treat goals as if they were known in advance" (p. 191). As such, goals may come to existence through interaction among key participants in the process rather than some "deus ex machina." Wildavsky also indicates that

Once the political process becomes the focus of attention, it is evident that the principal participants may not be clear about their goals. What we call goals or objectives may, in large part, be operationally determined by the policies we can agree upon. The mixture of values found in complex policies may have to be taken in packages, so that policies may determine goals at least as much as general objectives determine policies. In a political situation, then, the need for support assumes central importance. Not simply the economic, but the political costs and benefits turn out to be crucial (1974, p. 192).

The basic understanding and concern for the political system as well as political costs constitutes "the range of requirements for political rationality" (Wildavsky, 1974, p. 192). Disregarding the principles of political rationality may impact the political structure and affect the distribution of power.
In defining and analyzing the process of budgeting in the public sector, principles of political rationality must be seriously taken into consideration. According to Wildavsky (1974, p. 126), "perhaps the study of budgeting is just another expression for the study of politics." Budget preparation in the federal agencies is partly guided by the specific political situation of the time. Political strength or weakness of a certain power group may affect the size and content of a given budget associated with them. All public agencies are well aware that their financial support structure closely follows any possible changes within the political system. Wildavsky (1974) contends that

The national political situation is also taken into account by agencies in deciding how much to try to get. Are there apparent reasons for increasing or decreasing spending? Is control over the national government split between the parties with resulting competition for credit for support of particular programs or for holding the line? . . . Has the concept of the balanced budget become a symbol in the political wars so that drastic efforts will be made to achieve it (p. 28)?

Ott and Ott (1977, p. 34) in an analysis of the federal budget review process by the Office of Management and Budget (OMB) suggest that among the most important factors related to the approval of a budget is the relationship between each agency and the OMB and particularly the OMB examiners assigned to it, since the OMB recommendations to the President are considered seriously.

Based on conceptual and empirical evidence, Wildavsky maintains that most of the objectively praised and efficient budgetary approaches fail to function effectively, simply because they are all expected to perform in a political environment. The underlying reason for favoring new objective budgetary methods by their advocates implies a greater
need for changing the budgetary atmosphere, improving analysis, and
developing more rational decision-making guidelines. Such new methods
have surely succeeded in changing the present budget atmosphere, but
they could not be adapted to the political test and challenge. As
Kramer (1979) observes,

Performance budgeting—tying workload measures to various
governmental activities—was supposed to be the answer in
the fifties. Planning Programming and Budgeting Systems de­
vised by the economists were to be the way of the sixties.
Management by Objectives was to pick up the pieces of earlier
budget reform failures in the early seventies. Zero-Base
budgeting is today's answer, and a variant of all these forms,
Mission Budgeting, is on the horizon (p. 3).

Criticizing the cost-benefit formula approach to public budget­
ing, Wildavsky (1966, p. 298) indicates that such a formula may not
always be in accord with political realities; thus, "we can expect it to
be twisted out of shape from time to time." Williams and Evans (1978,
p. 382) suggest that the evaluation of federal large-scale programs is
equally linked to the elements of the political system and judged pri­
marily according to political rationality. In a review of the political
implication of the objectively rational budgeting approach, Hammond and
Knott (1980, p. 10) indicate that in regard to the objective rationality
of ZBB which requires clarified goals, such goal classification in the
political process may result in losing political support which ensures
the success of a government program. Schick (1971, p. 194) and White
(1978, p. 406) argue that political implications appear to be the rea­
sons for the minimal political interest or opposition to budget and
management science reform. Wildavsky's (1974) view of a budget reform
is one that is developed within the politically rational framework. He believes that one cannot speak of "better budgeting without considering who benefits and who loses, or demonstrating that no one loses" (p. 133). Therefore, according to the advocates of the politically rational budgeting model, a plausible budgetary approach is one that has been proved effective over time, is politically flexible, and broadly accepted. Wildavsky (1975, p. 5) describes the politically rational budgeting as "attempts to allocate financial resources through political processes to serve differing human purposes."

The major method of resource allocation utilized in the political budgeting approach is incrementalism since it provides the flexibility required in the political decision structure. As such, the politically rational budgeting model is called "incremental budgeting model" or "incremental change model" (Lee and Johnson, 1977, p. 17). Lindblom (1959) has coined the term muddling through approach to describe incremental/political budgeting. Braybrooke and Lindblom (1963) call the process "disjointed incrementalism." And Sharkansky (1969, p. 50) indicates that perhaps the most significant peculiarity of incremental budgeting approach is that budgetary decisions are necessarily political.

In the higher education environment, budgetary decisions frequently are guided or affected by the interaction of powers in a complex political behavior. Tonn (1978, p. 576) contends that power politics is an inevitable aspect in every organizational setting. Zaleznik (1970, p. 48) indicates that political behavior exists at every level
of the hierarchy, and its magnitude increases with the significance of decisions. Due to a lack of perfect knowledge required by the objectively rational budgeting model, according to Thompson (1971, p. 86), an approach of compromise controlled by the powers-at-work substitutes the rational approach in the decision-making process. Morgan (1979) comments that depending too heavily upon refinement of the goal-based decision-making process may result in overemphasizing only the less attractive alternatives.

The concept of rationality in the budget process, according to Schmidtlein and Glenny (1977), lies in the bargaining process through which questions concerning technical or allocative analysis of the budget process emerge. The rationality of a bargaining budget process is even more valuable when the outcomes are expected to be vague or forensic. "Outcomes result from this multilateral bargaining process not from comprehensive analysis and decisions by a central decision maker" (1977, p. 30). Wergin (1976, p. 109) proposes a political model for evaluating organizational policies which incorporate internal and external political strengths and pressures. Therefore, political considerations constitute a considerable measure in formulating the policies. Millet (1974, p. 121), based on his observation of the Ohio Board of Regents, contends that among more basic functions of the Board was to indicate to the state government the politically desirable and plausible policies concerning higher education. Peterson's survey of the political impact on the state higher education appropriations policies in the public institutions in fifty states showed significant impacts from
political variables (1976, p. 536). Nowlan (1976, p. 62) discusses the political controlling power of state lawmakers in Illinois on higher education policies. Hines and Hartmark (1980) indicate that political determinants affecting the general policies in higher education are produced by all levels of federal, state, and local governments; institutional accountability and autonomy; and inter-institutional relationships.

**Conceptual-Analytical Framework**

The conceptual and analytical framework of this study will be based upon two distinct resource allocation models: the objectively rational as opposed to the politically rational budgeting models. The concepts and bases for resource allocation in the objectively rational budgeting model are developed in this study based upon two principles: (1) the principles inherent in the objectively based budgetary methods and processes such as those discussed in performance budgeting; Planning, Programming, and Budgeting; and zero-base budgeting; (2) the opposing budgetary concepts and bases to those defined by Wildavsky in his politically rational budgeting model.

In the politically rational budgeting model, Aaron Wildavsky's approach to political budgeting, as is discussed in his book, *The Politics of the Budgetary Process* (1974), will be adopted. His approach is developed upon an empirical assessment of the budget process as
practiced in the Congress. Therefore, Wildavsky's model, which is behaviorally based, suggests that the budget's size and content is directly connected to numerous political considerations. He contends that in the political process of budgeting, Congressmen utilize certain budgetary concepts as the bases for distributing resources. These concepts, as connoted, have evolved in regard to the principle of political rationality and determine the political budgetary bases, structure, behavior, and requirements.

This study will assess the concepts embedded in the objectively rational and politically rational budgeting model as the basis for the analytical framework. The following sections elaborate upon the concepts embedded in the politically rational and objectively rational budgeting model.

Incremental/Non-Incremental

Wildavsky (1974, pp. 13-16), in his politically rational budgeting model, contends that the largest determining factor of the size and content of this year's budget is the last year's budget. Previous decisions, he adds, make up most of the budget. That is, each year only a narrow range of increases or decreases ordinarily are considered; the rest is automatically reenacted every year unless there is a strong reason to challenge them. Thus, previous budgetary decisions are long-term commitments, and this year's share is taken out of the total and included as a part of the annual budget. This concept is called incremental budgeting or incrementalism.
On the other hand, in an objectively rational budgeting model, the allocation of resources primarily takes place based upon desired goals and objectives, well-documented needs assessment, and through mathematical guidelines. Inputs and outputs in such a process are closely measured and evaluated in relation to each other so that any inefficient or ineffective aspect of the process can be precisely identified and thus resolved. As a result, this year's budgetary appropriations are independent of the last year's. Incremental budgeting is secondary.

**Fairshare/Need-Based**

The politically rational budgeting model also proposes that any possible increases or decreases in the requested funds will be distributed somewhat equally across all the pertinent programs. Thus, Wildavsky (1974, pp. 16-17) argues that singled-out or unexpected budget cuts are often evaded. An agency's previous year's budget ordinarily becomes an established base for this year's budget. The concept of fairshare indicates that no unit will receive disproportionately more of any increases or decreases than any other unit.

"Fairshare" means not only the base an agency has established but also the expectation that it will receive some proportion of funds, if any, which are to be increased over or decreased below the base of the various governmental agencies. Fairshare, then, reflects a convergence of expectations on roughly how much the agency is to receive in comparison to others (1974, p. 17).

The counter concept from the traditionally rational model operates according to a need-based formula. An agency's share of available
funds reflects only its needs based upon appropriate data and justifications.

Simplified/Non-Simplified

As noted by Wildavsky (1974, pp. 11-12), the politically rational budgeting model holds that when faced with some degree of complexity in allocating resources, Congressional budget officials tend to simplify the decision-making process by ignoring the complicated matters about which they know little and by seeking simple indicators.

Similarly, when handling highly technical and specialized items in the budget, for example computer centers and technical-vocational programs, higher education budget officials are likely to examine personnel travel budgets, quantities of supplies purchased, or number of secretaries employed. In this manner, budgeting is often simplified.

The opposite concept in an objectively rational budgeting model maintains that the allocation of resources ought to be based upon thorough, meticulous attention to all program costs, even those programs that are very complex. Simplification of the process is secondary to securing accuracy in the estimation of true needs.

Experiential/Objective

Also embedded in the politically rational budgeting model is the concept of experiential budgeting, which states that when approaching problems of great significance, one makes rough estimates of budgetary needs while letting cost experience accumulate. Then, when the results of the various budgetary decisions are observed, appropriate
modifications can be made. When a unique or unprecedented educational program is started, budget officials are more likely to be responsive to the needs of anyone involved since there are no sound bases for determining the extent of the needs. Whether funds are over- or under-allocated is judged over time through a trial and error approach.

On the other hand, the objectively rational budgeting approach is to allocate resources primarily on an objective, well-documented needs-assessment basis. Trial and error method is secondary to an objective process.

Specialized/Non-Specialized

Budgeting issues and processes in Congress, as noted by Wildavsky in his politically rational budgeting model, are handled through multiple levels of specialization. Subunits such as the House and Senate Appropriation Committees and their various subcommittees plus the many specialized authorizing committees and subcommittees each are in charge of a specific area. For example, most of the budgetary decisions of the House Appropriations Committees are taken up in its specialized subcommittees. The Committees and the individuals involved are experts in their respective subject areas; they become specialized in that field. Thus, budgeting, according to Wildavsky (1974, p. 57), is specialized.

Similarly, in higher education institutions, comparable multiple levels of specialization can be identified. That is, the basic budgetary decisions essentially are made by the faculty and dean of each
college as programs and staff changes are considered. Higher level administrators normally react to the proposed demands and ordinarily make a few changes in requests made. Resource requests normally are approved or disapproved on their relative merits as opposed to being sent back for rethinking. To the extent that this view is valued, it may be correct to perceive higher education budgeting as specialized.

But in an objectively rational budgeting model, specializations are not necessarily needed to understand and manage the process. Since the process is extensively micro-oriented and detailed guidelines often are provided in this model, non-specialized individuals can comprehend and participate in the mechanical processes of resource allocation. In other words, generally well-informed individuals can function satisfactorily in the process according to this model.

Historical/Independent
From Past Practices

According to Wildavsky (1974, p. 58), Congressional budget officials on the appropriations committees usually serve in Congress for several years including a period of apprenticeship before they gain their influential status and make themselves heard. He argues that as a result Congressional members have years of experience in managing their special subject areas, and the results of their past moves and experiences in dealing with budgetary issues and calculations are often applied to new circumstances. Thus, Wildavsky, in his politically rational budgeting model, contends that an historical approach is
frequently utilized in making budgetary decisions. In other words, budgeting is partly historical.

On the other hand, in an objectively rational budgeting model, a budget building process is primarily independent of past budgetary practices; money is obtained only through quantifiable demonstration of true needs. In this model, budgeting is essentially based upon some needs and cost analyses methods and is often formulated through detailed mathematical guidelines. Consequently, past budgetary trends or past experiences of individuals are disregarded in the budget process.

Satisfice/All or None

As indicated by Wildavsky (1974, p. 12), in the budgetary calculations Congressional budget officials may simplify the politics of budgetary procedures by shying away from optimum, but controversial, solutions. Instead, he notes, they attempt to "get by," "to come out all right," "to avoid trouble," or "to avoid the worst." Within such an approach, he argues, the Congressional budget officials do not attempt to maximize but instead to satisfice, that is, to satisfy and suffice the recipients of the resources being allocated. In other words, a budgetary decision that does not generate too many loud complaints for too long may be a measure of success in the politics of the budgetary process. Besides, Wildavsky adds, outstanding weaknesses can always be resolved as they arise, especially since the budget is reviewed every year and usually is partially adjusted.

The objectively rational budgeting model, on the other hand, provides the counter concept in which the main objective is to obtain
a no less than optimal solution for the budgetary issues and problems. The proposed solutions are based upon assessed needs, stated mathematical guidelines, and desired goals. Satisficing budgeting is not acceptable because essentially it does not address itself to solving efficiently budgetary problems.

Fragmentary/Wholistic

Also, as noted by Wildavsky (1974, p. 59), in Congress budgets are made in fragments. That is, each subcommittee is mostly concerned with a limited area of the budget and operates relatively as an autonomous body. Thus, subcommittees, he stresses, do not review all the items in the budget; instead, they carefully study only cases of increases or decreases over the previous year for those items under their jurisdiction. Such a fragmentation becomes even greater, Wildavsky argues, when the Senate Appropriation Committee focuses its attention on items that are appealed from House decisions. In such cases, the Senators mostly deal with fragments which are already fragments of a fragment of the budget.

Budgets in higher education institutions appear to be comparably built up by bodies or committees consisting of faculty members and deans of colleges who enjoy considerable autonomy in determining the size and content of their budgets. Such bodies also appear somewhat independent in their decision making, and their budgets are separate. Requested budgetary items are often reviewed piece by piece, focusing on items such as a new typewriter, a word processor, or a full-time faculty/staff position for a particular department.
But in an objectively rational budgeting model, a meaningful and effective budgetary decision has to be based upon a balanced relationship between all the components of a budgetary package. Mathematical guidelines create a relation between the parts, and any unbalanced adjustment may lead to unproductive budgetary decisions. Thus, budgeting, in this model, is not fragmentary but wholistic.

Repetitive/Solved
Once and For All

In his politically rational budgeting model, Wildavsky (1974, p. 60) argues that budgetary decisions in Congress are often made based on the general understanding that at each step of the process only a few problems have to be "solved" once and for all. Thus, he adds, those involved in the process are well aware that a problem may be dealt with over and over again. Neglected issues are usually taken up in the coming years or are amended in the supplementary actions during the same year. Further, Wildavsky argues that budgetary problems are not so much solved as they are worn down by continuous modifications over the years until they have lost their magnitude or are overshadowed by other problems. Based on such observations, Wildavsky suggests that budgeting is often repetitive.

On the other hand, in an objectively rational budgeting model, any problem, regardless of its magnitude, is to be solved once and for all in order to attain goals. Unresolved problems could have a considerable negative impact upon the well-balanced guidelines basic to this model. Serious effort is made to solve all the budgetary problems
before the process is put into operation, and repetitive budgeting is
discouraged.

Sequential/Simultaneous

Congressional budgeting, Wildavsky (1974, p. 60) explains, also
is sequential. Budgetary committees, such as appropriation committees,
do not concentrate their efforts in solving every problem at once. On
the contrary, he adds, they do not deal with many problems in any
specific year. Problems that are dealt with often are those surfacing
in different places and at different times. As a result, Wildavsky
argues, many decisions made in the previous years are left unchanged
or are changed only slightly. Even the attended problems are divided
up and appointed to the subcommittees and their specialists. Over the
years, the subcommittees focus their attention on one and then another
problem. Such a process makes budgeting sequential.

The counter concept, in an objectively rational budgeting model,
holds that any required budgetary changes and improvements must be
carried out simultaneously prior to the implementation of the budgetary
decisions. Based on assessed needs, stated mathematical guidelines,
and desired goals, the substance of the budgetary decisions, as well as
the operational procedures, must be prestated, laid out, and followed
closely. Once done, no further alteration can be imposed at any stage
of the process; otherwise, the whole process will be disrupted and
efficiency will be diminished.
Non-Programmatic/Programmatic

According to Wildavsky (1974, p. 60), budgeting also is treated by Congressional officials as if it were non-programmatic. Nevertheless, he adds that this should not be interpreted as an indication that appropriations committees are imprudent or unconcerned about programs or do not fight for or against some programs; on the contrary, they do. What it really means, Wildavsky explains, is that Congressional officials view their actions as only marginal monetary adjustments to existing programs. Thus, the desirability of most programs is considered only occasionally. Most budgetary adjustments among budgetary officials stem from money rather than from a difference in philosophy, although personal philosophy of each individual involved in the budgetary decision-making process may affect their decisions as far as allocation of resources is concerned. Nevertheless, when dealing with budgetary issues, the main concern of most individuals seems to be money. Thus, Wildavsky contends that budgeting often is non-programmatic.

On the other hand, in an objectively rational budgeting model, the existence of all programs directly depends upon their ultimate desirability. Based upon the fundamental concepts of efficiency and effectiveness, undesirable programs are not supported but are eliminated. The budgetary approach is primarily programmatic in its fundamental nature, particularly since personal philosophy of each individual involved in the budgetary decision-making process may effect the bases of their decisions as far as allocation of resources is concerned.
As contended by Wildavsky, budgeting is primarily political by nature. Wildavsky (1974, pp. 4-5) argues that if politics is generally regarded as the process through which the federal government allocates resources in response to significant problems and budgeting is the process for this allocation, then budgeting is a political process. The process of budgeting and the federal budget, he explains, are both a representation of the national conflicts over various interest groups' preferences and the outcome of such political struggles. In other words, he adds, the federal budget reflects all the victories, defeats, compromises, bargains, and agreements in terms of the role of the federal government in our society. As a result, he concludes, the budget truly lies at the heart of the political process.

The counter model, containing an objectively rational budgeting process, holds that budgetary decisions must be apolitical. They must be based only upon how effectively and efficiently the strategy responds to specific budgetary needs not upon the preferences of opponents and proponents of such decisions. Such proposed budgetary solutions ought to be built on assessed needs, stated mathematical guidelines, and desired goals. Thus, under this model, decisions are made by considering a problem on its own terms and by judging the proposed solutions according to their likely efficiency and effectiveness. Political budgeting is regarded often to be objectively ineffective and inadequate in determining and responding to real budget needs.
Summary

This chapter presented an overview of budgeting processes and methods and their implications, particularly on higher education's resource allocation process. In the background section, various concepts and functions of budgeting were reviewed. The decision-making models section reviewed limited rationality, mixed scanning, stages of problem solving, objectively rational, and politically rational decision-making models. Particular attention was paid to the two latter decision-making models, their decision-making process as well as their respective budgetary methods. The objectively rational based budgeting methods discussed were performance budgeting; planning, programming, and budgeting; and zero-base budgeting. Each budgetary method was discussed in-depth, and studies addressing such budgetary methods and their implications specially when used in higher education environment were reviewed. The politically rational budgeting approach, incremental budgeting, also was reviewed, and its budgetary implications were discussed. The conceptual-analytical framework section of the chapter was developed upon two distinct budgetary models: the objectively rational as opposed to the politically rational. The embedded budgetary concepts in the models were paired in a "counter conceptual dichotomy" format, and each set of concepts was discussed.
CHAPTER 3

METHOD AND DESIGN

In this chapter, the research questions, the design of the study, instrumentation, and the plan of analysis are described. Research questions are discussed in the context of the conceptual framework. The section devoted to the design of the study and the instrumentation discuss field studies, interviews, and document analysis. The plan of analysis section describes the method of data interpretation. A summary section concludes the chapter.

Research Questions

The working process of resource allocation is rarely studied comprehensively. Most budget studies address allocation by focusing primarily on how the process should be formulated in keeping with prescribed guidelines, optimal efficiency considerations, and objective measures. Many personal and environmental forces affecting the process of resource allocation are not foreseen in the objectively rational budgetary decision-making process (Lindblom, 1959; Wildavsky, 1966, 1969, 1974, 1975).

In his pioneering study, Aaron Wildavsky (1974) described the budgetary process in the Congress of the United States. His analysis was based on two basic questions: How does a Congressman or an executive budget bureau official determine how much should be allocated to
an agency in a particular year? And on what bases are such budgetary decisions reached particularly when there is disagreement?

The results of the study indicated that the Federal process of resource allocation was frequently based minimally on objectively rational guidelines and objective evaluation procedures. Instead, the process of resource allocation and the ensuing decisions were initially formed with an awareness of the contemporary climate of opinions, needs, and environmental conditions. In other words, as Paul Diesing (1962) argues and Wildavsky (1974) interfuses, political considerations were always basic and in priority to others. Such political rationality is contended to be the fundamental basis of all decisions (Diesing, 1962, pp. 198-232; Wildavsky, 1974, pp. 189-194).

The results also indicated that budgetary calculations carried out by the appropriations committees are complex. Budget calculations are in accord with the complexities of life. In response to the complexity and politics of the budgetary process, appropriate committees have developed certain generalized approaches to financial decision making. These generalized approaches are the concepts that were fully discussed in the previous chapter.

Most Congressmen and Senators are knowledgeable only in a few areas of the budget; therefore, in most cases, they accept the budgetary recommendations of the various appropriations committees. They intervene just often enough to keep themselves in touch with the issues and keep the committees in line. To do so, Congressmen and Senators, like the appropriations committees, have developed certain generalized
approaches or working concepts in dealing with the budget and deciding how much should be appropriated to a given agency. These concepts, too, have been discussed above.

The main thrust of this study was to examine empirically the bases and processes of resource allocation in a postsecondary institution by utilizing Wildavsky's politically rational budgeting model in contrast to the objectively rational budgeting model. Explicitly stated, the research questions asked

1. To what extent does Wildavsky's politically rational budgeting model and the embedded concepts reflect the bases and processes of resource allocation in a postsecondary institution, particularly in contrast to the objectively rational budgeting model and its respective concepts?

In a call for more efficiency, many higher education institutions have attempted to keep pace with the private sector and government agencies in implementing sophisticated and objective methods of budgeting despite their demand for "a significant commitment of resources with an uncertain return" (Hussain, 1976, p. 128). The uncertain results of utilizing the objective methods of resource allocation have been widely attributed to the structural and organizational differences peculiar to higher education institutions. To succeed in developing and implementing an effective budgetary method, it is imperative to identify the bases upon which the process of resource allocation ordinarily takes place. However, the actual bases for the decision-making process of
resource allocation at work in the higher education environment are yet to be fully determined.

2. To what extent do the bases and processes of resource allocation vary between the levels of administration in a postsecondary institution?

It is assumed that the bases and processes of resource allocation may vary somewhat from one level of administration to the next. A comparative examination and analysis of the budgetary perceptions of each level of administration in a higher education institution may reflect such possible variations.

Design of the Study

The approach taken in this research was based upon the principles of a field study. To determine the bases and processes of resource allocation at work in one higher education environment, it was indispensable to appraise administrators' perceptions of the budget process. The field study is viewed by Kerlinger (1973) as an appropriate means of measuring the perceptions of individuals or groups in investigating a social or institutional situation.

The field study undertaken herein was exploratory. Searching for significant variables is a legitimate use of field studies (Festinger and Katz, 1953). The exploratory field study was selected because, as Kerlinger (1973, p. 407) reports, it has realism, significance, and strength in identifying variables. Among methods of data collection, exploratory field study is most closely akin to real life
situations. According to Kerlinger (1973, p. 407), field studies may identify matters of great social significance and are highly heuristic. However, they may result in misinterpretation of variables due to noise in the communication channels. They also may lack scientific vigilance and precision in the measurement of the variables.

The case study, a one-sample subset of the case study method, was deemed most appropriate. The strength of the method in in-depth exploration of complex variables in their natural setting was the major reason for its selection.

Thus, a two-year public institution in the Southwest, Pima County Community College, was selected for the case study. The selection was made on the bases of proximity of the institution and the support for the study by the College leadership. The type, bases, and the process of resource allocation at the institution were not factors in the selection.

Pima College

Pima Community College was officially opened in the fall of 1970. The following are excerpts depicting the College as reflected in the College catalogue 1982-1983 and the Five-Year Master Plan (1981-1986). The multicampus College district serves a population of 532,000 people—through three campuses and some seventy off-campus locations. A community services program offers additional non-credit courses at thirty locations. In addition, Pima College offers classes in neighboring Santa Cruz County, which currently does not have a community college.
College credit programs include university parallel or transfer studies representing the freshman and sophomore levels and job-oriented technical-occupational studies of various lengths. Approximately one thousand courses are offered by the district. The College enrolls approximately twenty-one thousand students in credit programs. The College faculty body is comprised of about two-hundred sixty members.

The Pima County Community College District Governing Board is a five-member, publicly elected governing body. The Board is legislatively directed to provide certain mandated executive duties as well as to establish long-range plans and policies and the approval of the annual budget.

The organizational structure of Pima Community College (see Appendix A) is developed upon three major structural parts: the board of governors; the top administrative level composed of the vice presidents and executive deans; and the President's Office as the connecting link between the Board and Administrators, as well as between certain specialized staff functions, such as the Board and the rest of the College. The General Institutional Services component includes the services and resources provided by the Board of Governors, the Office of the President, and the functional areas under the authority of the Executive Assistant to the President and the functional areas under the Vice-President for Administrative Services. Many of the latter areas have corresponding functions under the authority of each executive dean.

Pima College is supported primarily through Pima County taxes and state aid. According to the proposed budget for the fiscal year
1981-1982, the annual budget of the College is slightly over forty million dollars (see Appendix B). The percentage of major revenue sources are district tax levy 31.6; state aid 18.5; tuition and fees 15.2; and grants, contracts, gifts, and endowments 14.6.

**Instrumentation**

Instrumentation consisted of two different methods of data collection: interview and simple examination of documents. The interview technique was used to assess the administrators' overall perceptions of the bases and processes of resource allocation at work in the institution. Documents were reviewed in order to examine the stated perceptions. The examination process is discussed in the Document Examination section of this chapter. It was assumed that by employing the two methods, a realistic assessment of the budget process could be made. A discussion of each technique and its significance in the research design follows.

**Interview**

The interview was selected as the major instrument of data collection. In order to appraise the administrators' perceptions of the bases and process of resource allocation, it was essential to employ a direct and exploratory approach. Festinger and Katz (1953, p. 329) describe the interview technique as a successful method of data collection and examination of "the attitudes, perceptions, and behavior of people in work situation." Kerlinger (1973) and Isaac and Michael (1978) contend that the interview technique is the most efficient and
effective approach of data collection in the field of behavioral research.

The interview was considered most appropriate because of the complex nature of the study and the political implications of the topics to be discussed. The interview permitted probing into the complex concepts and theories. It served as an efficient tool in identifying individual administrator's budgetary practices in contrast with official institutional policies. It also offered an opportunity to discuss budgetary issues with each administrator individually and confidentially. The subjects' vocal tones, facial expressions, and the general manner of responding when discussing facts, opinions, and beliefs was observed and noted throughout the interview process. These elements were very essential to the findings of the study. McCallon and McCray (1975, p. 5) argue that "the flexibility of interview enjoys maximum potential in exploratory studies where the area of concern needs to be organized as the investigation progresses."

The study employed a semistructured interview format. This format was used because it was considered most appropriate to the nature of the study. On the one hand, certain consistent information was selected from each respondent. This is a common use of interview. As Richardson, Dobrenwent, and Klein (1965, p. 34) also point out, interviewers may be expected "to deal with precisely the same subject matter and differences or similarities between respondents and not differences due to the questions they were asked."
The interview was also designed to allow for probing in-depth through a conversational approach which would give the respondents freedom to discuss various aspects of the budget process. The interviewer needs the freedom to adapt to the situation and ask probing questions when necessary. It was important to the study that the respondents would talk freely about certain issues, particularly since most topics were quite sensitive and confidential in nature. Thus, as McCallon and McCray (1975) suggest, the interviewer followed an interview guide which contained the topics to be covered during the course of the interview but allowed for frequent probing and departure from the interview guide.

Hence, most of the interview schedule was open-ended and designed to elicit free responses. That is, the respondents had the freedom to respond in their own terms and frame of reference. But, the questions and their order were consistent as recommended by McCallon and McCray (1975) in order to present a standardized format. Nevertheless, the interviewer had the liberty to restate the questions, if needed, or to persuade further elaboration by using non-directive probes such as "Why?," "How?," "To what extent?," "Please comment," "Tell me more," or "You feel that," etc. in an unstructured format (see Appendix C).

Open-ended questions were utilized largely because they permitted flexibility, in-depth answers, and clarification. They allowed the interviewer to assess the degree of the respondents' sophistication and knowledge (e.g., Isaac and Michael, 1978) and candidness. Thus,
the open-ended questions were fundamental to determining the extent of variations in the bases and processes of resource allocation. Furthermore, it was expected, as suggested by Kerlinger (1973, p. 484), that "unexpected responses would reveal significant information not anticipated in the research design." The interview is a strong tool "when the problem involves the exploration of a process or of an individual's formulation of an issue" (McCallon and McCray, 1975, p. 10).

There were several interview questions aimed at each major issue addressed. This not only increased the validity of responses but added considerably to the depth of understanding obtained. The questions were designed to narrow in on the topic as the inquiry progressed. The "semi-funnel" approach used in the study was less rigid in structure than that suggested by Kahn and Cannell (1957).

The interview technique, however, may have several limitations. Borg and Gall (1971) and Isaac and Michael (1978) argue that the adaptibility characteristics of interviews gained by an interpersonal situation may result in subjectivity and bias. Festinger and Katz (1953) and Miller (1970) contend that the interviewer may distort the results of the study by lack of proper communication of certain facts or by overemphasizing his/her personal, social, economic, or ethnic biases. Additional sources of bias, Jermy and Barbaresi (1972) suggest, can be the verbal and non-verbal behavior of the unskilled interviewer, improper probing or rewording of the interview questions, and failing to record the respondents' prominent non-verbal cues. These dangers were constantly in the mind of the interviewer.
Open-ended questions generally bear similar limitations. They are equally subject to biasing influences. It is more difficult to record the responses to open-ended questions accurately and sufficiently. They also require greater interviewer skill in obtaining depth, clarification, and in probing (Isaac and Michael, 1978).

The interview questions were developed based on two separate views to the resource allocation process: Wildavsky's politically rational and the objectively rational budgeting models. Lines of questioning were developed around each of the concepts of these models. These concepts were matched to establish a comparative frame of reference. An example is Wildavsky's concept of incrementalism versus non-incrementalism.

Each pair of concepts constituted a distinct topic under which several questions were carefully developed. The focus of each group of questions was to encourage the respondents to express their personal perceptions, feelings, opinions, or experiences about the respective topics either at their unit or institutional level. The questions under each topic were designed to narrow down slightly but progressively, or to represent the topic under different lights by using examples or hypothetical situations. In this manner, the interviewees' extent of knowledge and accuracy could be determined, particularly when comparing the perceptions of administrators of different levels.

The questions were developed and written under extensive supervision by the dissertation director. Each question was examined carefully for possible shortcomings or hidden bias. Then, a pilot study
was conducted to determine (1) the overall effectiveness of the interview questions in examining the research questions, (2) whether a question would lead the respondents to conclude that the interviewer would find one reply more desireable than another, (3) whether the questions demanded any knowledge that the respondents generally did not possess, and (4) whether the questions demanded any personal or sensitive information that the respondents would seriously resist providing. Necessary alterations were then made.

In selecting the sample, all administrators involved in the process of resource allocation at the various levels of the institution were identified. This pool of administrators was then divided into two levels: department heads and higher level administrators. In the latter group, there were all those administrators who were managing a separate budget. Then, a stratified random selection of the pool was made, and pilot interviews were conducted; results were reviewed by the dissertation director and changes made.

All administrators were interviewed individually, and responses were taped. The purposes of using a tape recorder were multifold. It was important to be able to study the responses for scaling, analysis, and comparison. Also, it was deemed useful to include exact quotations later when documenting the budgetary perceptions. But, equally important was, as Borg and Gall (1971) indicate, the need to reduce the biases of the interviewer. Repeated listening reduced the possible tendency for the interviewer to make unconscious selections of particular data. However, taping has its disadvantages too. McCallon and
McCray (1975) argue that the presence of a tape recorder often creates a formal atmosphere and restrains free discussions. Also, respondents' facial expressions, body movements, and certain mannerisms cannot be captured. They recommend that significant non-verbal responses be separately recorded.

Each interview session started with an introduction of the interviewer, the purpose of the interview, and assurance of strictest confidentiality and anonymity of the respondent and his or her respective unit (see Appendix C). Garrett (1943), Young (1963), Gorden (1969), Borg and Gall (1971), and Tuckman (1978) all contend that only when confidentiality is established do beneficial results accrue. After the introduction, the interview was then conducted according to the schedule.

Document Examination

Documents were examined as a supplement to the interviews and as a validation technique. The basic function was to provide some factual data about the institution's method of resource distribution over the past several years. Best (1977) specifies document analysis as a systematic exploratory approach to describing the prevailing practices or conditions in an organization. The documents served also to validate the respondents' overall perceptions.

Two types of documents were obtained from the College. These documents were the Budget Profiles and the Financial Report and the Five-Year Master Plan.
The prevailing budgetary concepts indicated by the interviewees were contrasted with the budgetary records as reflected in the above documents. However, some of the prevailing political concepts such as the experiential, specialized, historical, sequential, and non-programmatic concepts were difficult to assess by document examination. Concepts such as the incremental, fairshare, and repetitive concepts were more assessible by measuring the percentage of increases or decreases in the budget amount of a given unit or through the frequency of budget requests for a given item.

The Budget Profiles consisted of Budget Development Guidelines 1982-1983 and the Proposed Budget for fiscal year 1981-1982. The Budget Guidelines document contained specific information on the budget calendar, tuition and fee schedules; special focus on guidelines for enrollment, staffing and compensation; fund balances, revenues, and expenditures. The Proposed Budget contained the detailed proposed budgets for all funds estimated to be available for the use by the College. The proposed budgets were specified by function, object, and revenue source. Additional information was obtained from the Second Quarter Financial Report. This document presented various budgets maintained by the College as well as their status. This pool of information was examined closely to compare the apparent bases for the budgetary allocations against the respondents' perceptions of the budget process.

The Five-Year Master Plan, 1981-1986, was studied to acquire an overall perspective of the institution's plan for budgetary methods
and policies. Current budgetary practices and the future developmental plans for the institution were particularly relevant. The organizational structure of the institution, as stated by the Master Plan and its overall effects on the budgetary policies and process at all operating levels and units, were examined, analyzed, and compared with the interview results.

**Analysis Plan**

There were four distinct stages in the analysis plan. They were as follows: examining the taped information, rating the responses, calculating and presenting the statistical profiles through tables and figures, and interpreting the results.

All the information captured by the tape recorder was typed in detail for analysis. However, to ensure confidentiality and anonymity, and also to reduce any bias, each group of tapes was masked by a color code replacing the individual's name. Top-level administrators—executive deans and higher—were identified with an additional color code. Such a distinction was made because these responses required a much closer analysis and evaluation. Moreover, to understand the results fully, it was often necessary to separate their comments and perceptions. The author also juxtaposed on the tape his personal notes reflecting each respondent's significant non-verbal cues and facial expressions.

Responses to each set of questions were rated on a scale. The scale was divided equally on a continuum to measure points from +10 to
-10. The positive end of the scale was to represent perceptions reflecting Wildavsky's politically rational budgeting model and its embedded concepts. The negative end was to indicate the objectively rational budgeting models and their corresponding concepts. As is recommended in Miller's Scale (Miller, 1970, p. 96), no predefined statements or adjectives were developed for each division on the continuum. Respondents' perceptions were carefully measured against the defined elements of the models, and the numerical weights reflect the statements' relation to each other. The numerical weights and the position on the scale were determined by six factors. They are as follows:

1. If the responses of the respondents favored one or the other of the two concepts being examined, the individual was placed in the positive or negative side of the scale.

2. Depending upon the number of the question respondents answered positively or negatively about the concepts, the total responses were weighted either more or less positively or negatively.

3. Depending upon how emphatic the responses were, the answers were also weighted more positively or negatively.

4. Depending upon the observation and evaluation of the respondents by the interviewer, the answers were weighted more or less positively or negatively.

5. If the responses of the respondents indicated a lack of knowledge, a zero weight was placed on the scale.
6. The total weight of the responses and the evaluations were transposed into a positive or negative point on the scale.

While rating the responses, utmost caution was used to guard against what Borg and Gall (1971, p. 237) and Isaac and Michael (1978, p. 59) call "error of leniency," "error of central tendency," "error of halo effect," and "post hoc error." An error of leniency happens when the observer tends to assign the same rating to the majority of the subjects or their responses. The error of central tendency is caused when the observer tends to rate the subjects mostly at the middle of the scale. An error of post hoc is when the observer baselessly assumes that there is a certain cause-and-effect relationship between two variables and when such an assumption effects the outcome of the rating. The error of halo effect is the observer's early impression of the subject as particularly insightful or wise. Masking the identity of the respondents was partially to reduce such errors.

To obtain the statistical profiles, the numerical values were grouped under two headings: the level of administration and the concepts under examination. Then the necessary calculations were carried out to obtain the means, medians, modes, ranges, standard deviations, and variances for the concepts as perceived by the levels of administration.

The results were presented in tables and figures in a comparative format by the level of administration. The comparative statistical profiles and frequency distribution of responses are illustrated in figures. The figures provide a better basis for direct comparison.
Interpretation of the results was done through two approaches: analysis and data syntheses. In the analytical approach, the statistical profiles were examined to determine the extent to which each concept was prevalent as the basis of institutional resource allocation. The negative values indicated a perception of the concepts in the objectively rational budgeting models. Afterwards, differences between the levels of administration and their significance were identified partially by looking at variables such as the means, standard deviations, and variances.

The syntheses were of two types. First were the interviewees' syntheses of all the concepts as reflected in their selection of Wildavsky's politically rational or the objectively rational budgeting models. This supplementary approach was implemented to introduce a fresh look at the same data. The final syntheses were based on the author's overall assessment of the process of resource allocation at the institution. The assessment was made by reflecting upon data such as the interviewees' significant behavioral cues, the patterns of budgetary communications, the organizational and administrative structure, and College documents.

Summary
This chapter presented a discussion of research questions, the design of the study, instrumentation, and the analysis plan. Briefly reviewed were the highlights of the conceptual frameworks from which the research questions were developed. The design of the study was structured on a field/case study. This was deemed to be an effective
approach since primarily administrators' perceptions of the bases and processes of resource allocation had to be appraised. Interview techniques and document examination were used in the study. The interview technique was the main instrument of data collection because it provided the best approach to examining the interviewees' perceptions of the budget process. A semi-structured interview format, coupled with an open-ended form of questioning was used. Document examination was used as a supplementary and validation approach and focused on specific information that could be obtained through the interviews. Documents such as budget profiles and a five-year master plan were studied and analyzed. The analysis plan was to review the taped information, rate the responses, calculate and present the statistical profiles through tables and figures, and to interpret.
CHAPTER 4
FINDINGS

This chapter is organized into two major sections. The first section will present some statistical profiles of each concept embedded in Wildavsky's politically rational budgeting model or, alternatively, concepts of the objectively rational budgeting model. The data analysis, which is based on the format used in the analytical framework, was to determine the extent to which each concept is prevalent or in play in the budgetary decision-making process as perceived by department heads and higher level administrators at Pima Community College. Department heads and higher level administrators' perceptions and statistical profiles for each concept are examined in relation to each other.

Section two of the chapter will synthesize the data for each of the concepts in section one. This section is comprised of the interviewees' syntheses of all the concepts as reflected in their selection of the politically versus objectively rational budgeting model. Interviewees' perceptions of the concepts will also be examined comparatively, and major implications will be discussed.

Conclusions and discussions are withheld for the upcoming chapter except where some discussion is essential for clarification. This chapter will be concluded with a summary section.
Incremental/Non-Incremental

The concept of incremental budgeting proved to be the strongest force in the budgetary process, as perceived by the administrators at Pima Community College. The higher level administrators, however, perceived a stronger working of incremental budgeting than did the department heads. Overall, 95 percent of the interviewees' responses suggested that the budgetary process was incremental. Only three department heads perceived the process as being based at least moderately upon the need analyses characteristic of an objectively rational budgeting system.

Responses of higher level administrators disclosed a greater intensity and uniformity than did responses of the department heads. As shown in Table 1, the mean ($\bar{X}$) value for administrators' responses on a scale of -10 to +10 was +5.23 which was considerably above the comparable department head's value of +3.15. The positive values indicate a perception of incremental budgeting as opposed to needs assessment method in allocation of resources.

The standard deviation and variance were less for the higher level administrators, being 1.18 and 1.40, respectively, compared to 2.95 and 8.68, respectively, for department heads. In other words, there was greater variability or less consistency in the responses of the latter.

Figure 1 illustrates the frequency distribution for each group. Not only are the higher values for higher level administrators evident,
Table 1. Statistical Profile of Responses to the Concept of Incremental/Non-Incremental Budgeting

<table>
<thead>
<tr>
<th>Measures</th>
<th>Department Heads</th>
<th>Higher Administrators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels</td>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td>Department Heads</td>
<td>3.15</td>
<td>4</td>
</tr>
<tr>
<td>Higher Administrators</td>
<td>5.23</td>
<td>5.5</td>
</tr>
</tbody>
</table>

*Scale: -10 to +10. Positive Scores Indicate a Perception of Incremental Budgeting; Negative Scores Indicate a Perception of Non-Incremental Budgeting

Table 2. Frequency Distribution of Responses to the Concept of Incremental/Non-Incremental Budgeting

<table>
<thead>
<tr>
<th>*Scale Levels</th>
<th>-10</th>
<th>-9</th>
<th>-8</th>
<th>-7</th>
<th>-6</th>
<th>-5</th>
<th>-4</th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dept. Heads</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td></td>
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</tr>
<tr>
<td>Higher Admin.</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>9</td>
<td>14</td>
<td>3</td>
<td></td>
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</tr>
</tbody>
</table>
Figure 1. Distribution of Department Heads and Higher Level Administrators' Perceptions Regarding the Concept of Incrementalism in the Budget Process

Department Heads

Higher Level Administrators
but the lesser variability of higher level administrators' responses is clear. The range is only half that of the department heads.

Table 2 provides another means of viewing the data. Here frequency of responses at each value are tabled. Again positive scores indicate a perception of incremental budgeting, and negative scores indicate budgeting on the basis of need. Note that only three administrators perceived the latter condition.

Figures 2 and 3 depict the means, medians, modes, frequency distributions, and generalized curves of each group. Again the sharp contrast is apparent.

Administrators' responses very strongly favored the politically rational concept of incremental budgeting over the objectively rational concept of need-based in determining budget increases or decreases. Only three department heads perceived the process as objectively rational and mechanical. A few selected statements will prove illustrative.

In the majority, most administrators articulated similar views concerning an incremental approach to budgeting. Some simply stated that "it is incremental." Most, however, gave some detail in explaining their views of incrementalism. One top administrator argued, "For us to start from scratch every year would be like reinventing the same wheel, because there is not much we can do to change what we have already locked in." Another top-level administrator philosophically reasoned

I strongly believe our future to some degree is dictated by our past. We are a human organization. Besides, the philosophy and mission of education do not change that rapidly.
Figure 2. Configuration of the Concept of Incrementalism as Perceived by Department Heads

Mean

Median

Mode
Figure 3. Configuration of the Concept of Incrementalism as Perceived by Higher Level Administrators

Mean
Median
Mode
Thus, if the budget is an expression of the institution's behavior, it should not change that rapidly at all. Incrementalism, to me, is the best way to respond to that behavior.

But a few administrators—the minority—had a different judgment. One interviewee reported, "I believe any budget increase is based only upon three major factors: (a) anticipated FTE, (b) average class size, and (c) a good balance between full-time and associate faculty ratio. Any other approach is basically unacceptable." Another interviewee arguing in favor of need-based budgetary increases predicted strong faculty resistance if budget increases were not based upon some "rational and explainable reasons that, as analyzed, such and such department needed so many dollars regardless of what they had last or previous years."

The concept of incremental budgeting was strongly perceived by the interviewees to be operating at Pima Community College. Higher level administrators presented stronger views than did the department heads, who often implied that some attention was given to the objectively rational model in the budgetary process. Nevertheless, when pressed, all agreed to the likelihood of some regard to incremental budgeting at the College.

Fairshare/Need-Based

The concept of fairshare was viewed to be a strong force in the budgetary process at Pima Community College, as reflected by the administrators. The results, however, were more mixed than was the case for incremental budgeting. Although the majority of responses indicated fairshare to be a strong concept in the budgetary process, five department heads and nine higher level administrators viewed the process as
functioning upon the need-based analyses method of the objectively rational budgeting system.

Responses were quite consistent by administrative level on the concept of fairshare. The department heads' responses suggested a slightly stronger perception of the concept and were more uniform than the responses of the higher level administrators. Table 3 indicates that the mean (X̄) value for department heads' responses was +2.23 (scale -10 to +10), which was slightly higher than the value of +1.84 for higher level administrators. The positive values signify a perception of fairshare as opposed to a need-based approach to allocation of new or diminished funds.

The standard deviation and variance for the department heads were 3.91 and 15.31, respectively, again slightly less than those for the higher level administrators, 4.40 and 19.38, respectively. Thus, there was slightly more variability in responses of the higher level administrators.

Figures 5 and 6 depict the means, medians, modes, frequency distributions, and generalized curves of each group. Similarity is again apparent.

Overall, administrators favored the politically rational concept of fairshare over the objectively rational concept of need-based approach in formulating budget increases or decreases. All the interviewees indicated strong expectations of fairshare or equal fiscal treatment—even those who personally favored the need-based method of
Table 3. Statistical Profile of Responses to the Concept of Fairshare/Need-Based Budgeting

<table>
<thead>
<tr>
<th>*Measures</th>
<th>Department Heads</th>
<th>Higher Administrators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td></td>
<td>2.23</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>1.84</td>
<td>4</td>
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</tbody>
</table>

*Scale: -10 to +10. Positive Scores Indicate a Perception of Fairshare; Negative Scores Indicate a Perception of Need-Based Budgeting

Table 4. Frequency Distribution of Responses to the Concept of Fairshare/Need-Based Budgeting

<table>
<thead>
<tr>
<th>*Scale Levels</th>
<th>-10</th>
<th>-9</th>
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<th>-6</th>
<th>-5</th>
<th>-4</th>
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<tbody>
<tr>
<td>Dept. Heads</td>
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<td></td>
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</tr>
<tr>
<td>Higher Admin.</td>
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<td></td>
<td></td>
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*Scale: -10 to +10. Positive Scores Indicate a Perception of Fairshare; Negative Scores Indicate a Perception of Need-Based Budgeting
Figure 4. Distribution of Department Heads and Higher Level Administrators' Perceptions Regarding the Concept of Fairshare in the Budgetary Process

Department Heads

Higher Level Administrators
Figure 5. Configuration of the Concept of Fairshare as Perceived by Department Heads
Figure 6. Configuration of the Concept of Fairshare as Perceived by Higher Level Administrators

Mean
Median
Mode
budgeting. The following statements illustrate selected perceptions by the administrators.

In the majority, about 70 percent of the administrators voiced agreement with the operation of the fairshare budgeting principle. Most articulated, "I am getting my fairshare" or "I think my budget increases or decreases are more or less in accordance with other comparable units. I have no complaints." One top-level administrator argued, "I think by and large we are as equitable as possibly it can be. Some areas are overfunded, and some areas are underfunded; some are overstaffed, and some are understaffed. We are trying to balance that out. Instances like that are quite isolated."

But some interviewees indicated a strong perception of the need-based concept: "It is need-based; the idea of fairshare is not considered at all. Only if you need something do you get something." Or as one interviewee argued, "Each area is treated differently, since there are different but specific formulas designed by the state. Highly technical areas can get more equipment, and more funds than general education areas. Yet the allocation of funds is based upon FTE." One top-level administrator rejected the entire concept of fairshare budgeting arguing that, "For example, this year we are allocating more funds to the Community Campus for our new course for Pima College Institute." Some of the affected administrators agreed that the "objective" concept was operating but indicated that this was inappropriate. One such administrator reported, "I am not getting my fairshare this year; my programs have been cut to support other programs." Other
administrators cited distance from the district office, changes in priorities, and lack of sensitivity on the part of the fiscal office as reasons for the lack of fairshare at the College.

Most of the administrators who did not view the fairshare concept of budgeting in operation also indicated that if one is demanding and persistent, additional funds can be obtained from the College. One top-level administrator stated that

> It is not fairshare, but squeaky wheel. For example, since our east campus has moved to the new location, we had a tremendous demand for computer courses, and the administration started to pump up all the resources they could think of into that area as if the demand would never ease off or slow down. On the other hand, our math and engineering departments have not had any budget increase for the past eight years. So, as you see, it is the squeaky wheel approach. They have not been squeaking enough.

This observation was shared by another top-level administrator who contended, "There is a range from a solid programmatic approach in resource allocation to squeaky wheel. It tends to differ; there is no continuity or consistency in the way the budget is distributed from one layer down to the next."

The concept of fairshare was strongly conceived by the majority of administrators to be working at Pima Community College. The department heads and higher level administrators' responses indicated an equitable and fairshare approach to fiscal treatment at the College. Yet, about 26 percent of the interviewees' responses suggested a need-based approach to resource allocation. The department heads' responses were slightly more in agreement in perceiving the operation of the fairshare concept than were those of higher level administrators. All
interviewees, however, strongly felt that the concept of fairshare should operate in the budgetary process. All strongly resented any but equitable and fairshare fiscal treatment of all the units within the College.

Simplified/Non-Simplified

The concept of simplified budgeting was perceived as being a major force in the budgetary decision-making process at Pima Community College. The majority of administrators, about 74 percent, viewed the process as simplified, as opposed to a more complex analytical method. There were, however, seven department heads and seven higher level administrators who viewed the process in the latter way: they perceived extensive and complicated analyses often being utilized in resource allocation. On the whole, however, higher level administrators indicated a much greater perception of simplified budgeting than did the department heads.

As Table 5 indicates, the mean value for department heads was +.63, a much lower value than the +2.17 found for the higher level administrators. The positive values suggest that the simplified budgeting concept was perceived more commonly over more complex approaches such as cost-benefit analysis in resources allocations at Pima College.

The standard deviation and variance for the department heads were 4.51 and 20.35, respectively, which were considerably higher than 3.49 and 12.21, respectively, for higher level administrators. Based on these figures, department heads' responses were considerably less
Table 5. Statistical Profile of Responses to the Concept of Simplified/Non-Simplified Budgeting

<table>
<thead>
<tr>
<th>Levels</th>
<th>Measures</th>
<th>Mean</th>
<th>Median</th>
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<th>Range</th>
<th>Standard Deviation</th>
<th>Variance</th>
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<td>4.51</td>
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<td>Higher Administrators</td>
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<td>3/4</td>
<td>12</td>
<td>3.49</td>
<td>12.21</td>
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*Scale: -10 to +10. Positive Scores Indicate a Perception of Simplified Budgeting; Negative Scores Indicate Attention to the Complexities in Needs Assessment

Table 6. Frequency Distribution of Responses to the Concept of Simplified/Non-Simplified Budgeting

<table>
<thead>
<tr>
<th>Levels</th>
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<tr>
<td>Higher Admin.</td>
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<td>1</td>
<td>2</td>
<td>9</td>
<td>9</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*Scale: -10 to +10. Positive Scores Indicate a Perception of Simplified Budgeting; Negative Scores Indicate Attention to the Complexities in Needs Assessment
consistent than those of higher level administrators, although the range of responses in both groups is approximately equal. Table 6 presents the specific frequency distributions.

Figure 7 illustrates the frequency distribution of responses for each group. In Figures 8 and 9 the means, medians, modes, frequency distributions, and generalized curves are contrasted for the groups. As shown, higher level administrators' responses indicate a considerably greater agreement with the concept that budgeting is simplified as well as much greater uniformity, particularly at the positive end of the scale. Department heads' responses reflect substantially less perception of the simplified budgeting concept—in sharp contrast with the higher level administrators.

For the most part, the majority of the administrators perceived the concept of simplified budgeting as a force in resource allocation. Only about 26 percent of the interviewees viewed the process as nonsimplified and built upon a more complicated technique such as cost-benefit analysis. These fourteen persons, however, did acknowledge that the process has elements of the simplified approach.

The following statements describe the perceptions of some interviewees. In the majority, the perceptions ranged rather widely. Some interviewees perceived the budgeting process at Pima College as possible only when in tune with the simplified budgeting approach. This, they said, was because of the nature of the administrator's professional responsibilities. As one described

Well, it cannot work otherwise. I must admit that I do not understand all the fields in the College to be able to judge
Figure 7. Distribution of Department Heads and Higher Level Administrators' Perception Regarding the Concept of Simplified in the Budgetary Process

Department Heads

Higher Level Administrators
Figure 8. Configuration of the Concept of Simplified Budgeting as Perceived by Department Heads

Mean

Median

Mode
Figure 9. Configuration of the Concept of Simplified Budgeting as Perceived by Higher Level Administrators

Mean

Median

Mode
their needs. At the same time, I cannot devote all my time analyzing each and all of the requests. It is not practical. I also have other responsibilities to tend to. So, as you see, it is the only functional way; trust the individuals, and act upon their expert views and demands.

Another higher level administrator voiced a similar perception by saying, "I guess I would trust the individuals involved in the field. I do not think I would spend much time on it to investigate myself. I would tend to simplify the process as much as possible." One top-level administrator supported such perceptions firmly yet saw the process more broadly: "As a point of observation, I would say they take the simplest way to arrive at a decision. But again political factors play an important role here. If it enjoys political support, money is being allocated for that regardless of the cost. But if no political support exists, it does not have any chance." Another higher level administrator responded in an entirely different light and yet was in tune with the others:

We do not identify the real cost of a program. It tends to be purely political. It depends which program is politically more important. We are not given the authority to develop information that would allow a more specific formula, so that if you have got a high cost program and the enrollment grows, you receive an X percent plus a weighted amount of dollars because of the high cost program. That is the reason we find some departments are overfunded and some are underfunded. The process is not addressing the unique operating conditions under different programs.

The opposite perceptions were equally strong. Some interviewees indicated briefly that "they should go the hardest non-simplified way to find out about the cost of a program." Others stated that "they usually go for a relatively solid and factual study to determine the
"level and degree of need." A few suggested, "We go according to the advisory committees. To determine the cost of a program, the administration takes a thorough way and does a considerable amount of study to find out the cost of a program for the reason of accountability."

And finally one higher level administrator argued:

I think that's where program budgeting comes in and that's where its value is. Our institution, I think, would take a long and complex approach, and a thorough feasibility study and cost-analysis; and then, be reviewed by our Curriculum Committee. But the proposal is primarily based upon what the experts would demand.

Operation of the concept of simplified budgeting was strongly perceived by the Pima College administrators. The department heads' perceptions, in this regard, though in agreement, were weaker than those of higher level administrators. It was the researcher's appraisal that the minority did not disagree with the majority perceptions but that resource allocation was viewed as being more on true need in cases where analysis of needs was complex.

Experiential/Objective

Overall, the concept of experiential budgeting was perceived as being a strong force in the budgetary decision-making process at Pima Community College. The majority of all administrators, about 76 percent, viewed budgeting as being conducted more on an experiential basis. Only 24 percent of the administrators--most of these being department heads--perceived the process of budgeting as being primarily administered according to objective methods, such as a thorough study or a needs assessment. On the other hand, higher level administrators,
on the whole, indicated a much stronger perception of experiential budgeting than did department heads.

The mean value of -0.57 for department heads, as shown in Table 7, was a much lower value than the +2.91 found for the higher level administrators. The negative value for department heads indicates a perception of objective budgeting against the positive value for the higher level administrators who viewed it strongly as an experiential one.

The standard deviation for the department heads and higher level administrators, however, compared very closely, being 3.38 and 3.28, respectively. The variances for the two groups also compared closely, 11.47 and 10.81, respectively. As these figures indicate, department heads' responses were very slightly less consistent than those of higher level administrators. Despite greater frequencies in positive responses, higher level administrators had also a considerably greater range in their responses. The disparate view of department heads is shown in Table 8 where a mode of -4 indicates their perceived agreement with the objective approach. Yet, approximately 50 percent of department heads' responses fell in the lower end of the positive scale, resulting in a bimodal distribution.

Figure 10 illustrates the frequency distribution of responses for each group. The bimodal distribution of department heads' responses is in sharp contrast with that of higher level administrators, whose responses indicate a distinct negative skewness.
Table 7. Statistical Profile of Responses to the Concept of Experiential/Objective Budgeting

<table>
<thead>
<tr>
<th>Levels</th>
<th>Measures</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
<th>Standard Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Heads</td>
<td></td>
<td>-0.57</td>
<td>1</td>
<td>-4</td>
<td>10</td>
<td>3.38</td>
<td>11.47</td>
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<tr>
<td>Higher Administrators</td>
<td></td>
<td>2.91</td>
<td>4</td>
<td>4</td>
<td>14</td>
<td>3.28</td>
<td>10.81</td>
</tr>
</tbody>
</table>

*Scale: -10 to +10. Positive Scores Indicate a Perception of Experiential Budgeting; Negative Scores Indicate Objective Budgeting.

Table 8. Frequency Distribution of Responses to the Concept of Experiential/Objective Budgeting

| Scale Levels | -10 | -9 | -8 | -7 | -6 | -5 | -4 | -3 | -2 | -1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------|-----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|---|
| Dept. Heads  | 1   | 1  | 5  | 1  | 1  | 3  | 4  | 3  |    |    |   |   |   |   |   |   |   |   |   |   |   |
| Higher Admin. | 1   | 1  | 1  | 1  | 3  | 3  | 5  | 9  | 4  | 4  | 2 |   |   |   |   |   |   |   |   |   |   |

*Scale: -10 to +10. Positive Scores Indicate a Perception of Experiential Budgeting; Negative Scores Indicate Objective Budgeting.
Figure 10. Distribution of Department Heads and Higher Level Administrators' Perception Regarding the Concept of Experiential Budgeting

Department Heads

Higher Level Administrators
Figures 11 and 12 depict the means, medians, modes, frequency distributions, and generalized curves. Higher level administrators, as illustrated, show a considerably greater perception of experiential budgeting. Department heads' responses, on the other hand, show two opposite perceptions. Almost one-half of the department heads judged the process as being based upon well assessed needs, whereas slightly more than one-half indicated a perception of experiential budgeting.

Overall, the majority of administrators perceived the process of budgeting at Pima College as experiential. Fifty-three percent of department heads' responses and 87 percent of higher level administrators' responses indicated a perception of the concept of experiential budgeting at work. Further, the majority of those remaining, when asked about how, financially, they would manage unique or unprecedented programs in the absence of cost data, agreed that experiential budgeting might be the only reasonable approach.

The following quotations are illustrative of the perceptions of some interviewees. Most of the interviewees simply expressed that, "I think we tend to use a trial and error approach" or "It is purely political and thus experiential." But one top-level administrator was more thoughtful; he said

Even if you look at all sources of information, no matter how accurate your projection is and how well you put the study together, you have to depend upon an experiential approach, particularly in occupational areas where equipments are state of the art and their prices soar every year.

Another administrator indicated a similar perception by viewing the process as one in which the administrators "put some money into it"
Figure 11. Configuration of the Concept of Experiential Budgeting as Perceived by Department Heads

- Mean
- Median
- Mode
Figure 12. Configuration of the Concept of Experiential Budgeting as Perceived by Higher Level Administrators

Mean

Median

Mode ___.__
given program $I$ as a guess-estimate and adjust it $\int$ the cost $I$ later as needs arise." Even those administrators who showed some desire for a need-based budgeting approach also perceived the process, to some degree, operating through an experiential method. One top-level administrator indicated that

We would ask the budget developer to come up with an estimate himself/herself as to what is needed. Our approach would be both specific (based on need assessment) and experiential, trial and error over time. We would review the budget half way through or by the end of the fiscal year to identify the required changes or alterations.

And finally another administrator had a different perspective that could only be described as broadly political. He argued that, "If a program wins favor, we toss money at it without any detailed specifications or any plan-performance or output standards. And no evaluation is implemented to measure if it has delivered what it said it would do."

In the minority, most of the perceptions indicated a balanced perception of both concepts. That is, although most interviewees in this group seemed to place an emphasis on the objective approach, they also indicated experiential budgeting may be implemented, especially where needs are obscure. One department head said

There are usually programs that are predominantly dealing with theories: blackboard and chalk. In such cases, by using the advisory committee and a thorough need assessment study, you pretty much tell in detail what are your basic needs, and what are their related costs. But for a more complex program, such as in occupational areas, I would say the administration would also rely on experiential approach in setting up new programs.

Another department head argued, indicating that "in case of lack of any data, they higher level administrators $I$ use a trial and error
approach. It cannot be totally objective." But a few interviewees viewed the process primarily as an objective one. One higher level administrator maintained that, "We do expect quite extensive research, and it cannot be based upon experiential or trial and error method."

And finally one department head expressed that "extensive study should be done first, that is going out and talking to the people in the area. I call it missionary work or a basic research to determine the technical and academic needs and the costs attached for that program. It cannot be done otherwise."

A close majority of the administrators at Pima Community College perceived experiential budgeting in operation in their budgetary process. Higher level administrators' responses indicated a much stronger perception, which is in sharp contrast with the responses of department heads, who were split almost equally in their perceptions. However, only a few who viewed budgeting as an objective process indicated that it was totally devoid of experiential approaches.

Specialized/Non-Specialized

The concept of specialized budgeting was agreed to very strongly by the administrators as a major element in the budgetary decision-making process at Pima Community College. All of the administrators, except one, stated very firmly that in order to ensure a meaningful and productive budget, the process of budgeting has to be responsive to each program's specialized needs. Being diverse, program needs are, in many cases, unique and are usually well comprehended only by the experts in the subject area. Not surprisingly, department heads' perceptions of
the concept were slightly stronger than those of the higher level administrators. Even so, only one member of the latter group perceived the process as mechanical and not requiring specialized understandings.

The mean value for department heads, as indicated in Table 9, was +3.84, which is slightly higher than the +3.61 found for the higher level administrators. The positive values suggest that the concept of specialized budgeting was strongly perceived by the administrators at Pima College. The standard deviation for department heads' responses was 1.26, which is slightly lower than the 1.81 for higher level administrators. The variance for department heads' responses was 1.58; for higher level administrators it was 3.27. These figures indicate that department heads' responses were more consistent than those of higher level administrators. This is in part because the range of responses for the former group was less than half that of the latter group. Table 10 provides the specific frequency distributions.

Figure 13 presents the frequency distributions of responses for each group. In Figures 14 and 15, the means, medians, modes, frequency distributions, and generalized curves are contrasted for the groups. As illustrated in Figure 15, higher level administrators' responses are skewed negatively suggesting a strong perception of specialized budgeting.

All the interviewees--except one--but particularly department heads maintained emphatically that the only realistic approach to budgeting is to have the budget formulated by the experts in each subject area. Higher level administrators similarly argued that their own
Table 9. Statistical Profile of Responses to the Concept of Specialized/Non-Specialized Budgeting

<table>
<thead>
<tr>
<th>Levels</th>
<th>Measures</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
<th>Standard Deviation</th>
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<td>1.81</td>
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*Scale: -10 to +10. Positive Scores Indicate a Perception of Specialized Budgeting; Negative Scores Indicate a Perception of Non-Specialized Budgeting.

Table 10. Frequency Distribution of Responses to the Concept of Specialized/Non-Specialized Budgeting

<table>
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</table>
Figure 13. Distribution of Department Heads and Higher Level Administrators' Perception Regarding the Concept of Specialized Budgetary Process

Department Heads

Higher Level Administrators
**Figure 14.** Configuration of the Concept of Specialized Budgeting as Perceived by Department Heads

- **Mean**: 
- **Median**: 
- **Mode**: ...
Figure 15. Configuration of the Concept of Specialized Budgeting as Perceived by Higher Level Administrators

Mean

Median

Mode
respective areas of responsibility were considerably different from other areas and that their expert knowledge and analysis was required to identify needs and problems in the budgetary process.

The following statements are indicative of the perceptions of the interviewees. In support of the concept one top-level administrator said, "Is specialization needed? Well, conceptually no; but practically yes, because there are specific technical aspects that are very specialized. We ought to be told what they need. Idealistically, they should be making the budget, because they are the experts." Such a view was shared by a higher level administrator indicating that, "Yes, it is specialized. To be able to produce a good evaluation of the budget, one should first know what is happening in the subject area." A department head similarly stated that, "Real budget experts are in the subject areas. These are the people who know the need and the cost of the programs." In response to the question that if the interviewee could evaluate the budget of other units, one higher level administrator argued, "No. I would not feel comfortable to look at somebody else's budget to evaluate it for the simple reason that I could not think a professor can come and evaluate my budget fairly, because he does not have the feel for what I do, and I do not have the feel for what he does." The majority of the administrators, however, while recognizing aspects of a specialized budgetary process, felt that the concept was not fully in operation at Pima College. The following quotation illustrates a widely shared feeling among most administrators who also
maintained that such a budgetary policy has not always been implemented at the College. The interviewee explained:

Well, it is specialized. I do not think unfamiliar people can understand the needs and problems of a given unit. I think it is specialized, but our biggest problem is that the fiscal office is determining who needs how much, which is not an efficient and effective way of budgeting. They do not know how much it really costs to run a given unit, and that's why they have to reallocate money from overfunded units to underfunded units. But they usually blame the mid-managers.

The only interviewee who perceived the process as a non-specialized one indicated that, "It is not specialized at all. There are special principles that one can look at and analyze the budget." The interviewee seemed to have been contemplating the analysis rather than preparing a budget at the various levels of an institution.

The concept of specialized budgeting was strongly perceived by the administrators at Pima College. Department heads' responses indicated a slightly stronger perception than those of the higher level administrators. Many of the interviewees, however, felt that the concept was not being fully implemented at the College.

Historical/Independent From Past Practices

The concept of historical budgeting at Pima Community College as a commonly utilized approach in budgetary decision-making processes was very strongly perceived by the administrators. The majority of interviewees, 91 percent, indicated that an historical approach was normally in practice. Nine percent of the administrators, however, suggested the opposite perception—that basically budgeting at the College was
independent of historical budgetary trends. Higher level administrators stated a stronger perception of historical budgeting than did the department heads, but the disparities were relatively minor.

As shown in Table 11, the mean value for department heads' responses was 2.47, which was lower than the 3.41 calculated for higher level administrators. Negative values indicate a perception of budgeting that is independent of past budgetary practices; positive values illustrate a perception of an historical approach to budgeting.

The standard deviation for department heads' responses was $+3.29$, which was slightly higher than the $+2.39$ for higher level administrators. The variance was 10.81 for department heads' responses and 5.70 for higher level administrators' responses. While other values such as medians, modes, and ranges of the two groups are almost the same; the difference in the variance values can be attributed to the difference in sample sizes proportionate to the relative number of negative responses. Table 12 shows frequencies for the two groups.

Figure 16 illustrates the frequency distribution of responses for each group. The two distributions are relatively similar; the degrees of negative skewness are also similar.

Figures 17 and 18 indicate the means, medians, modes, frequency distributions, and generalized curves. As shown, for the higher level administrators the mean and mode are very similar, whereas for department heads the values are disparate.

For the most part, the majority of administrators perceived the budgetary process at Pima College to be historical. Eighty-four percent
Table 11. Statistical Profile of Responses to the Concept of Historical/Independent from Past Practice Budgeting

<table>
<thead>
<tr>
<th>Levels</th>
<th>Measures</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
<th>Standard Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
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<td>11</td>
<td>3.29</td>
<td>10.81</td>
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<tr>
<td>Higher Administrators</td>
<td></td>
<td>3.41</td>
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<td>3</td>
<td>11</td>
<td>2.39</td>
<td>5.70</td>
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</table>

*Scale: -10 to +10. Positive Scores Indicate a Perception of Historical Budgeting; Negative Scores Indicate a Perception of Independent from Past Practice Budgeting

Table 12. Frequency Distribution of Responses to the Concept of Historical/Independent from Past Practice Budgeting

<table>
<thead>
<tr>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels</td>
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<tr>
<td>-------</td>
</tr>
<tr>
<td>Dept. Heads</td>
</tr>
<tr>
<td>Higher Admin.</td>
</tr>
</tbody>
</table>

*Scale: -10 to +10. Positive Scores Indicate a Perception of Historical Budgeting; Negative Scores Indicate a Perception of Independent from Past Practice Budgeting
Figure 16. Distribution of Department Heads and Higher Level Administrators' Perception Regarding the Concept of Historical Budgetary Process

Department Heads

Higher Level Administrators
Figure 17. Configuration of the Concept of Historical Budgeting as Perceived by Department Heads

Mean

Median

Mode

0 1 2 3 4 5 6 7
Frequency of Response

-5 -4 -3 -2 -1 1 2 3 4 5 6
Figure 18. Configuration of the Concept of Historical Budgeting as Perceived by Higher Level Administrators

- Mean
- Median
- Mode
of department heads and 94 percent of higher level administrators indicated a perception of historical budgeting at the College.

To illustrate a few quotations from the interviewees' perceptions, one administrator stated that, "The historical perspective is very important in building and understanding the budget requests" and another that, "It is historical, and I feel uncomfortable to let a person build my budget as long as the person does not have enough historical orientation and perspective of the institution." The common response to a question inquiring whether the interviewees would even allow a person with no historical knowledge of the institution to build the budget of the respective unit for that year was a firm "No." Moreover, most interviewees often set specific time periods for such a person to acquire adequate historical perspective. The periods ranged between two and four years. As one higher level administrator explained, "No. That person is not knowledgeable enough about the total picture of the institution and what we need. It is historical, because things go in circle. Some things do not happen every semester or year. The person should be here at least for a couple of years." A department head expressed his view by saying that "Time is needed to acquire any knowledge about specific needs of a program as well as the relation of a given department with the College and the complicated issues. You should get to know people and their preferences as far as budgetary decision making is concerned." One higher level administrator pictured a broad view by saying that

As a manager, that recently employed person would not know all the linkages of how you would want to make trade-offs in
the budgets down the next year. I think one of the important things of the informal process of budgeting is knowing the linkages that you can make with other colleagues throughout the institution so that you can augment mutual goals. I do not think that person would know that, but I know it in my head, because that is a part of the meetings, associations, values, trends, or thrust that we have. I would feel more comfortable if the person was here at least for three or four years.

And Finally one top-level administrator described a broader view of the concept, indicating that

The person needs to know about the public position of the college as far as budgeting and financial management is concerned versus the real activities, because the environment is political. One needs orientation with the operating structure of the institution. You have to have a feel for it budgetary process or policy rather than being able to just acquire the knowledge from people's declared plans on that. It is very sticky; what we are doing is not well described. You need time to get a feel for where they are going so that you plan a budget to keep up with wherever it is they are going. We do not have a good, solid master plan where you can get good direction of the administration's movement and development. Here you must only develop feels for them.

Among the minority response group, one expression was that, "Historical knowledge is not needed or important." Another said, "Well, it is not historical, because there are checks and balances. It is more what you can justify for this year regardless of what you had last year." One department head argued, "I think it budgetary process is so mechanized that it would not make much difference. Besides, the dean would get and chop it anyway. Historical knowledge may be of some help assuming the process is political, which it is not. I think the system is pretty much mechanistic."

A majority of administrators at Pima Community College indicated a strong perception of historical budgeting being at work in their
budgetary process. Overall, higher level administrators' perceptions of the concept were stronger than those of department heads. There were only two interviewees of the latter group and three of the former group whose perceptions were in disagreement with the majority.

Satisfice/All or None

The concept of satisficing budgeting was perceived to be at work by the administrators at Pima Community College. Sixty-eight percent of the administrators' responses suggested that the concept of satisficing budgeting was being implemented. Thirty-two percent of the administrators, however, indicated a view of a budgetary process that tends to reach for an optimum solution to resource allocation issues and problems. These latter administrators indicated that satisficing solutions were rejectable while awaiting more favorable financial conditions that would allow addressing needs more sufficiently. Overall, higher level administrators' responses suggested a slightly stronger view of the satisficing concept than did those of the department heads.

The two groups' responses, as illustrated in Table 13, were similar. The mean value for department heads was +1.10, which was only slightly lower than the mean of +1.38 for higher level administrators. The positive values indicate a perception of satisficing budgeting at the College.

The standard deviation for the two groups' responses also compared very closely, being 4.52 for department heads and 4.06 for higher level administrators. The variances for the two groups were 20.43 and
Table 13. Statistical Profile of Responses to the Concept of Satisficing/All or None Budgeting

<table>
<thead>
<tr>
<th>Levels</th>
<th>*Measures</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
<th>Standard Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Heads</td>
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<td>5</td>
<td>12</td>
<td>4.52</td>
<td>20.43</td>
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<tr>
<td>Higher Administrators</td>
<td>1.38</td>
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<td>5</td>
<td>11</td>
<td>4.06</td>
<td>16.48</td>
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</tbody>
</table>

* Scale: -10 to +10. Positive Scores Indicate a Perception of Satisficing Budgeting; Negative Scores Indicate a Perception of All or None Budgeting

Table 14. Frequency Distribution of Responses to the Concept of Satisficing/All or None Budgeting

<table>
<thead>
<tr>
<th>*Scale Levels</th>
<th>-10</th>
<th>-9</th>
<th>-8</th>
<th>-7</th>
<th>-6</th>
<th>-5</th>
<th>-4</th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
<th>1</th>
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<th>10</th>
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</thead>
<tbody>
<tr>
<td>Dept. Heads</td>
<td></td>
<td>3</td>
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<td>2</td>
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</tr>
<tr>
<td>Higher Admin.</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

* Scale: -10 to +10. Positive Scores Indicate a Perception of Satisficing Budgeting; Negative Scores Indicate a Perception of All or None Budgeting
16.48, respectively. Medians and modes were the same in both groups, and the range of department heads' responses was twelve points—only one point more than that of higher level administrators.

In Table 14, specific frequencies for each group are illustrated. Thirty-seven percent of the department heads' responses and 30 percent of those of higher level administrators are on the negative end of the scale.

Figure 19 illustrates frequency distribution of responses for each group. As shown, both groups have bimodal distributions, but higher level administrators' responses, overall, stress a view more suggestive of satisficing budgeting.

Figures 20 and 21 depict means, medians, modes, frequency distributions, and generalized curves. Both figures indicate roughly similar patterns of distribution for the two groups' responses.

A considerable majority of the administrators perceived the process of budgeting at Pima College as satisficing: 63 percent of the department heads and 70 percent of higher level administrators. In response to the questions addressing the issue of satisficing budgeting, most interviewees expressed their perceptions regarding the process of the College as well as their own personal opinions which, for the most part, were in disagreement. In fact, it is noteworthy to mention that none of the interviewees supported the concept of satisficing budgeting. On the contrary, a great majority of the interviewees expressed strong dislike of such a process even though most admitted that it was often in operation at the College.
Figure 19. Distribution of Department Heads and Higher Level Administrators' Perception Regarding the Concept of Satisficing in the Budgetary Process

Department Heads

Higher Level Administrators
Figure 20. Configuration of the Concept of Satisficing Budgeting as Perceived by the Department Heads

Mean ————
Median ————
Mode ——.——
Figure 21. Configuration of the Concept of Satisficing Budgeting as Perceived by Higher Level Administrators

Mean
Median
Mode
The following quotations are illustrative of the perceptions of some interviewees. When two equally attractive programs are for funding, but sufficient resources for both programs are unavailable, usually the existing funds are "split in half" or "the pie is often cut in half to keep everyone busy and happy." As one higher level administrator expressed, "Probably they would keep everybody happy by splitting the money down in half. We have had such occurrences at the institution." Another higher level administrator said, "In most instances, it would be probably splitting the money in half. We have had such cases several times." One higher level administrator indicated that such a concept was in operation mostly because, "We try to avoid to rock the boat as much as we can. The name of the game is to play the political game of keeping everyone happy." Another higher level administrator argued that the concept was at work since they had "to keep everyone, even the taxpayers, happy by keeping, as much as they can, all the programs going." But one administrator noted, "I would fund both only to respond to the need, not keep somebody happy."

The satisficing concept, as was often noted, could appear in the form of various policies and political maneuvers. For example, the administration might try to get "both of them funded but not in one year. But equity will be observed within a political framework." Or as one department head explained, "They ask one unit to get less money this year and more money next year. This has happened more than once. They try to compromise. I know they have. The compromise is to keep them happy and not necessarily the programs running under
the best financial conditions." In describing the administration's moves in creating a satisficing environment, one higher level administrator said:

We usually provide some money for both programs. But just giving half to each does not solve anybody's problem. Some time there is going to have to be a decision, choosing one of them. That's where politics comes in, and the decision would be politically motivated. When one program wins, the other wins next time. Often the one closer to the administration may not get the money since the administration may think they can work with that person better and smoother.

A further explanation of the process of satisficing budgeting was provided by a top-level administrator who indicated, "We give priority to each campus based on each year. That is, each year, one campus gets the higher priority of getting further fiscal and non-fiscal considerations. Any necessary trade-offs should be initiated and carried out by the campus deans and not the district office." But there were many unsatisfied administrators who criticized the practice of satisficing budgeting at the College. One higher level administrator complained:

We often split the money in half. This equal breakdown is the worst choice that has been exercised at the College. I'd rather see any program, regardless of adversary relations, be sufficiently funded than both be funded under acceptable levels. Unless a program is adequately funded, it should not be offered. But the usual practice of the College is to fund both programs. But the cutting point is usually determined by squeaking wheel theory and policy.

Another higher level administrator expressed his disappointment by saying that, "We should support one program and not both. We have been doing that federal meaniality $\left[ \text{sic} \right]$ for too long. I do not want anything less than optimum and sufficient. But our policy is nothing but that meaniality."
Some perceptions indicated a strong commitment to optimization in allocation of resources for a program regardless of political forces. One higher level administrator argued, "I would find some justifications to support one program over the other, since none can go half way with less than optimum amount of money. But if I have to make waves by making a better decision, I would do it regardless of my position."

One other higher level administrator stressed that, "I believe in quality. I think doing two programs half way is not effective. In such cases, I would try to identify differences and decide which one has to go. I do not care if I please anyone with such a decision, and I think the College is very much after efficiency than political games." The same view was shared by another higher level administrator who indicated, "It seems to me to support both programs at a lesser level of allocation would endanger both programs. I would expect someone would decide which program to be funded. I would fund one and not the other."

And finally one top-level administrator provided a broader view of the process by explaining that, "The program which has a stronger political support, or enjoys greater favor would get the money. One program is usually funded and the rejected program often does not get a second chance. A toss of coin could be used if no decisions can be made on the merits of the programs."

A majority of administrators at Pima College perceived satisficing budgeting in operation in their budgetary process. Both groups' responses suggested a split perception of satisficing budgeting, as well as a preference for an optimum and efficient method in resource
allocation. Overall, higher level administrators showed a slightly stronger perception of the satisficing concept, but almost all interviewees were critical of satisficing budgeting as a wasteful and ineffective approach to resource allocation whereby real needs are almost always ignored.

Fragmentary/Wholistic

The concept of fragmentary budgeting was perceived by the administrators as a general approach in the budgetary decision-making process at Pima Community College. Sixty-three percent of the administrators' responses indicated that fragmentary budgeting was widely implemented within the decision-making process. Not surprisingly, department heads' responses indicated a stronger perception of fragmentary budgeting than those of higher level administrators, whose perceptions were more inconsistent.

Overall, the responses of the two groups again indicated close similarities. As shown in Table 15, the mean value for department heads' responses was +1.84, being slightly higher than the mean of +1.21 found for higher level administrators. The positive values suggest that the method of fragmentary budgeting was at work at Pima College. The two mean values are low because the administrators were diverse in identifying the prevalent budgetary method at the College. Perceptions ranged from program budgeting to incremental budgeting. Those whose perceptions were that program budgeting or some similar method was in operation viewed the process either as wholistic or as less fragmentary than did others.
Table 15. Statistical Profile of Responses to the Concept of Fragmentary/Wholistic Budgeting

<table>
<thead>
<tr>
<th>Levels</th>
<th>Measures</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
<th>Standard Deviation</th>
<th>Variance</th>
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<td>12</td>
<td>4.21</td>
<td>17.73</td>
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</table>

*Scale: -10 to +10. Positive Scores Indicate a Perception of Fragmentary Budgeting; Negative Scores Indicate a Perception of Wholistic Budgeting

Table 16. Frequency Distribution of Responses to the Concept of Fragmentary/Wholistic Budgeting

<table>
<thead>
<tr>
<th>Levels</th>
<th>-10</th>
<th>-9</th>
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<th>-7</th>
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<tr>
<td>Higher Admin.</td>
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</table>

*Scale: -10 to +10. Positive Scores Indicate a Perception of Fragmentary Budgeting; Negative Scores Indicate a Perception of Wholistic Budgeting
The standard deviation for department heads' responses was 3.74, which is lower than the 4.21 for higher level administrators. Variances were 14 and 17.73, respectively. Medians and modes were the same for both groups, and higher level administrators had a slightly greater range in their responses to the concept. Table 16 illustrates the specific frequency distribution. Only 26 percent of department heads' responses and 33 percent of those of higher level administrators indicated a perception of wholistic budgeting.

Figure 22 shows the frequency distributions of responses for each group. As illustrated, department heads' responses are skewed negatively, strongly supporting the concept of fragmentary budgeting. But higher level administrators' responses were distributed somewhat bimodally, suggesting two separate views. This difference may be explained by the fact that the higher level administrators were more heterogeneous, consisting of all administrators above the rank of department head. Those administrators who are closer organizationally to department heads generally perceived the budgetary process as primarily fragmentary, resulting in the bimodal distribution (one higher level administrator declared a perception of neither fragmentary nor wholistic approach in the budgetary process at the College). In Figures 23 and 24, the means, medians, modes, frequency distributions, and generalized curves are depicted for the groups.

Seventy-four percent of department heads' responses and 67 percent of those of higher level administrators observed fragmentary budgeting in the form of various committees reviewing segments of the
Figure 22. Distribution of Department Heads and Higher Level Administrators' Perception Regarding the Concept of Fragmentary Budgeting in the Budget Process

Department Heads

Higher Level Administrators
Figure 23. Configuration of the Concept of Fragmentary Budgeting as Perceived by Department Heads

Mean

Median

Mode

---
Figure 24. Configuration of the Concept of Fragmentary Budgeting as Perceived by Higher Level Administrators

Mean
Median
Mode
budget of a given unit or campus. But overall, the researcher found it very difficult to establish a consensus of perceptions and opinions among the interviewees as far as budget review committees were concerned. Many of the perceptions were contradictory. Some interviewees were totally unfamiliar with the next budgeting level. Based on the responses provided by the interviewees, the researcher could identify three types and levels of budget review committees for different programs and divisions of the institution. As reported, these committees were (1) Budget Review and Advisory Committees for various programs, (2) Campus Review Committees, examining the budget for each of the four campuses, and (3) A College Review Committee, which consisted of representatives from various levels and divisions of the total institution. Yet, other interviewees disagreed that such committees existed or, if they did, that their functions and effectiveness were seriously questioned.

The following statements are indicative of the various perceptions of the interviewees. One top administrator explained, "We examine the budget both as a whole and on a unit by unit basis. Units are each department. The unit by unit review is done by campus and associate deans. But top administrators look at it as a whole. Campus and College Review Committees view the budget as a whole." One department head similarly described that, "For the campus deans, it is unit by unit; for the district office, it is a total overall view. There are Campus Budgeting Committees. But for each area, the respective department body and a group of people either from
the College or the community review the budget of the department."
Another higher level administrator said, "I would say the budget is viewed as a whole at the district level. Lower levels look at it on a unit by unit basis. We have our own budgetary review committee from the community."

Some interviewees indicated some puzzlement as to the function and existence of any budget review committees. To illustrate, one higher level administrator said, "We have had the so-called committees, but I am not sure of their function in their budgetary process." Another higher level administrator indicated, "There are supposed to be campus level committees that look at the budgets allocated to campuses. But how effective that is is a matter of question just like budget review committees." One higher level administrator explained, "We say that there are budget committees on each campus, but they really do not participate, if at all, effectively in decision making process. Any kind of monitoring is usually carried out by the top administration which is usually ineffective because most of the decisions are predetermined."

Another higher level administrator expressed his widely shared perception by saying that

These review committees are a joke. They are just there to only listen. The budget of the College is presented and the committee is comprised of people from each section of the College. Coffee is served in the reviewing sessions and a few questions and changes posed by the committee members. Most of them do not understand accounting procedures at all. The committee is positively a political gimmick, and the purpose is to keep the representatives of each campus and section of the College happy. The process does not take more than a few minutes. That's all.
Responses indicating a wholistic approach to budgeting were generally either from top-level administrators who dealt with the budget in its entirety or by administrators who said that the budgetary method of the College was program budgeting. One top-level administrator said, "I see the budget as a whole. At the executive dean level and below, they view the budget on a unit by unit basis. My problem is to raise enough money on the revenue side to match the total expenditure. I do not believe that there are any committees to look at the budget for the College." And finally, one department head argued that

I think it is wholistic. I think at any level the administration looks at the budget as a whole, since we are using program budgeting where budget requests are in packages. Each package has its fixed ingredients put together by the faculty. Either the packages get funded or rejected. Whatever the choice, the approach is wholistic. Moreover, we do not have any budget review committees of any form in the College.

For the most part, the concept of fragmentary budgeting was perceived by the administrators at Pima College. Department heads' responses, however, were slightly stronger in this regard than were those of higher level administrators. As generally indicated, top-level administrators, such as vice presidents, viewed the budget wholistically. Nevertheless, it was interesting to note that some particular budget items were reviewed, though unroutinely, by the top administrators. These were generally high cost items that were requested by various units in one fiscal period. From the executive dean level down, budgets were reviewed piece by piece. These administrators stressed that their basic attention was mostly to the scale of
increases and to unusual budgetary items. Very rarely did their review include the entire budget of a unit. For the most part, it was difficult to determine if any budget review committees were participating effectively in the budgetary decision-making process. Overall, a great deal of confusion seemed to exist in the College as far as the budget review process was concerned.

Repetitive/Solved
Once and For All

The concept of repetitive budgeting was perceived differently by the administrators at Pima Community College. Higher level administrators had a strong view of repetitive budgeting whereas department heads' responses indicated, for the most part, a split perception. Overall, 77 percent of the administrators' responses suggested a perception of repetitive budgeting at the College. Only 23 percent of the interviewees expressed a perception of a process within which budgetary issues are often solved once and for all.

Table 17 illustrates the groups' responses. As shown, the mean value for department heads was -.47, which was very much lower than the mean of +3.53 for higher level administrators. The negative value for department heads' responses indicates a perception of nonrepetitive budgeting, but the positive value for higher level administrators suggests repetitive budgeting.

The standard deviation for department heads was 4.37, which is much greater than the 2.36 for higher level administrators. The variance for department heads was 19.15, again much greater than the 5.59
Table 17. Statistical Profile of Responses to the Concept of Repetitive/Once and for All Budgeting

<table>
<thead>
<tr>
<th>Levels</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
<th>Standard Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Heads</td>
<td>-0.47</td>
<td>-2</td>
<td>-6/3</td>
<td>12</td>
<td>4.37</td>
<td>19.15</td>
</tr>
<tr>
<td>Higher Administrators</td>
<td>3.53</td>
<td>4</td>
<td>4/5</td>
<td>11</td>
<td>2.36</td>
<td>5.59</td>
</tr>
</tbody>
</table>

*Scale: -10 to +10. Positive Scores Indicate a Perception of Repetitive Budgeting; Negative Scores Indicate a Perception of Once and for All Budgeting

Table 18. Frequency Distribution of Responses to the Concept of Repetitive/Once and for All Budgeting

| *Scale Levels | -10 | -9 | -8 | -7 | -6 | -5 | -4 | -3 | -2 | -1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------------|-----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|---|
| Dept. Heads   |     | 3  | 1  | 3  | 2  | 1  |    |    |    |    |   |   |   |   |   |   |   |   |   |   |   |
| Higher Admin.  |     |    | 2  |    |    |    |    |    |    |    |   |   |   |   |   |   |   |    |   |   |   |

*Scale: -10 to +10. Positive Scores Indicate a Perception of Repetitive Budgeting; Negative Scores Indicate a Perception of Once and for All Budgeting
for higher level administrators. There was also a sharp difference between the medians for the two groups, which both had multiple modes. The range of department heads' responses was twelve points—only one point more than that of higher level administrators.

In Table 18, specific frequencies for each group are provided. Fifty-three percent of department heads' responses, compared to only 6 percent of those of higher level administrators, were on the negative end of the scale.

Figure 25 presents the frequency distribution of responses for each group. As illustrated, the distribution of higher level administrators' responses were skewed negatively. But department heads' responses distributed more evenly and bimodally, indicating inconsistent sets of perceptions.

Figures 26 and 27 depict means, medians, modes, frequency distributions, and generalized curves. Both figures indicate sharply contrasting patterns of distribution for the two groups.

Overall, the majority of administrators perceived the process of budgeting at Pima College as repetitive. Ninety-four percent of higher level administrators and 47 percent of department heads indicated a perception of repetitive budgeting. The quotations below are illustrative of some of the interviewees' perceptions.

Generally, there were three types of views: (1) the majority, who stressed the view of repetitive budgeting; (2) a middle group, who indicated that only budgetary requests with either solid justifications or from high priority areas get funded the first time; and (3) a few,
Figure 25. Distribution of Department Heads and Higher Level Administrators' Perception Regarding the Concept of Repetitive Budgeting in the Budget Process.

Department Heads

Higher Level Administrators
Figure 26. Configuration of the Concept of Repetitive Budgeting as Perceived by Department Heads

Mean

Median

Mode
Figure 27. Configuration of the Concept of Repetitive Budgeting as Perceived by Higher Level Administrators

Mean
Median
Mode
who viewed the process ordinarily as nonrepetitive. Among the majority, most simply stated that the process was repetitive. One higher level administrator said, "Yes, it is repetitive. If we get a no answer, we are generally persuaded to repeat our request again." One top-level administrator indicated that

I should say the process is repetitive. For example, in the past year, as well as this year, we have had a lot of requests for word-processor machines by different charge centers. Since the College cannot meet all the requests in one year, what we do is, based on the urgency of the requests, we provide one or two word processors this year and ask the others to rerequest for them next fiscal year. In the meantime, we try to see if more than one charge center can share a word-processor machine.

The time period for the approval of a given request, however, varied significantly from one unit to the next. One higher level administrator said, "It is repetitive. But sometimes you get it the first time, and sometimes you have to wait for some long periods." Very much frustrated by the process, one interviewee complained that, "If you live long enough and fight long enough, you finally get what you want." Another higher level administrator added, "Yes, the process is repetitive, and sometimes too much of it too many times one request must be submitted for final approval too."

Other interviewees provided a broader view of the concept. One department head indicated, "It depends on the person's own priorities. Sometimes you get it with the first request, and sometimes it is never funded. The priority of the dean is important as well." Sharing the same view, a higher level administrator added, "It is repetitive, but it also depends upon the request itself, the view of the administration,
the political force behind it, etc." As one to-level administrator explained:

If a request enjoys a high visibility and the favor of the College, mainly all requests will be met with no questions asked, like a blank check. And no evaluation process is followed. There are, however, some back-door-ways to get what you want. One must be creative and alert. Quite a bit of this is going on at the College.

Another higher level administrator argued, "If you can demonstrate a substantial need, you get it the first time. But your second and third requests do usually become less emphatic and meaningful to the administration. If you are on the right track, you get it the first time, but most often you are not."

In the second group, most interviewees argued that a solid justification or rationale for a request is often a prerequisite for first request funding. One administrator said, "If you have justified it strongly and in detail, you get it the first time as a general procedure." Another interviewee indicated that, "There needs to be a proper justification for it. However, I am not too sure that the criteria for justification is [sic] spelled out very clearly, and if that information is available to the units." Another administrator described that, "With proper justifications, I have made outrageous requests and got it [sic] the first time." Other interviewees in this group explained that some areas in the College usually get what they request the first time mainly because they are viewed favorably by the administration or because of the complexity of the subject area. One such administrator said, "I got what I needed the first time, and I think it is
typical in technical, specialized, or vocational areas since it is easier to justify."

The third group of the interviewees indicated a perception of a nonrepetitive process of budgeting from the requesters' point of view, regardless of subject areas, justifications, or political favors. This group represented a small minority among all interviewees. One interviewee said, "For me, the first request is enough. In all these years I have been here, only once I was told that my request will be met next year." Another higher level administrator indicated, "I have had no problem as far as rerequesting is concerned." And finally one higher level administrator added, "It is not repetitive; I either get it or not."

The majority of the administrators at Pima College perceived repetitive budgeting in operation in their budgetary decision-making process. Higher level administrators' responses indicated a much stronger perception of the concept than did the department heads. The latter group had a split perception. Those who perceived the process as nonrepetitive were usually from high priority subject areas, such as technical, specialized, or vocational programs; or, as was frequently indicated, they played the game well and often did their homework flawlessly.

Sequential/Simultaneous

Operation of the concept of sequential budgeting was perceived strongly by the administrators at Pima Community College. Eighty-three percent of the administrators' responses suggested that the concept of
sequential budgeting was being implemented. Only 17 percent of the administrators indicated a view of simultaneous budgeting. Higher level administrators' responses demonstrated a considerably stronger perception of sequential budgeting than did those of department heads.

Table 19 illustrates the groups' responses. The mean value for department heads' responses was 1.21, which was considerably lower than the 3.29 calculated for higher level administrators. Positive values indicate a perception of sequential budgeting.

The standard deviation for department heads' responses was +4.25, which was much higher than the +2.87 for higher level administrators. The variance was 18.06 for department heads, compared to 8.27 for higher level administrators. Other values such as medians and modes are the same for both groups, but the range is slightly higher for higher level administrators.

Table 20 indicates the specific frequency distribution of responses for each group. Thirty-one percent of the higher level administrators indicated a perception of simultaneous budgeting.

Figure 28 shows the frequency distribution of responses for each group. Department heads' responses distributed bimodally and are relatively scattered, suggesting a split perception of the process while the distribution of higher level administrators' responses are negatively skewed, indicating a strong perception of sequential budgeting.

Figures 29 and 30 depict the means, medians, modes, frequency distributions, and generalized curves. The two figures demonstrate the sharp contrast.
Table 19. Statistical Profile of Responses to the Concept of Sequential/Simultaneous Budgeting

<table>
<thead>
<tr>
<th>Levels</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
<th>Standard Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Heads</td>
<td>1.21</td>
<td>4</td>
<td>4</td>
<td>11</td>
<td>4.25</td>
<td>18.06</td>
</tr>
<tr>
<td>Higher Administrators</td>
<td>3.29</td>
<td>4</td>
<td>4</td>
<td>12</td>
<td>2.87</td>
<td>8.27</td>
</tr>
</tbody>
</table>

*Scale: -10 to +10. Positive Scores Indicate a Perception of Sequential Budgeting; Negative Scores Indicate a Perception of Simultaneous Budgeting

Table 20. Frequency Distribution of Responses to the Concept of Sequential/Simultaneous Budgeting

| Levels         | -10 | -9 | -8 | -7 | -6 | -5 | -4 | -3 | -2 | -1 | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |
|----------------|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Dept. Heads    |     | 1  | 4  | 1  |    |    |    |    |    |    | 2  | 1  | 6  | 4  |    |    |    |    |    |    |
| Higher Admin.  | 1   | 2  |    |    | 1  | 6  | 15 | 6  | 3  |    |    |    |    |    |    |    |    |    |    |

*Scale: -10 to +10. Positive Scores Indicate a Perception of Sequential Budgeting; Negative Scores Indicate a Perception of Simultaneous Budgeting
Figure 28. Distribution of Department Heads and Higher Level Administrators' Perception Regarding the Concept of Sequential Budgeting in the Budget Process

Department Heads

Higher Level Administrators
Figure 29. Configuration of the Concept of Sequential Budgeting as Perceived by Department Heads

Mean 
Median 
Mode
Figure 30. Configuration of the Concept of Sequential Budgeting as Perceived by Higher Level Administrators

<table>
<thead>
<tr>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
</tr>
</thead>
</table>

-6 -5 -4 -3 -2 -1 1 2 3 4 5 6
The majority of the administrators perceived the budgetary process at Pima College to be sequential. Ninety-two percent of higher level administrators' responses indicated a perception of sequential budgeting; 61 percent of department heads agreed.

Following are some statements illustrating the perceptions of some of the interviewees, who voiced three kinds of perceptions: (1) the majority suggested a perception of sequential budgeting, (2) some indicated a simultaneous process in budgeting, and (3) others based their views on an actual fiscal crisis that had occurred at the College three years before the interviews were done.

The majority of the administrators stated that they would expect the administration, at any given level, to deal with the budgetary problems on a priority basis. One higher level administrator indicated, "I think they would have to establish priorities, and some of the problems are given to departments or committees for further study." Some of the interviewees' perceptions can be summed up in this explanation: "Problems of higher concern will be addressed this year, and the less urgent ones later" or "I see them put some of them off for the years to come. They would usually take care of those problems that have more long-lasting effects." One top-level administrator further explained, "I think they would delay as many as they could. There is always a list of problems that must be addressed with new money. So, the minute you try to respond to those problems, you have got to put them into some kind of priority order. It is overwhelming to address them all." A few of the
interviewees expressed their views of the basis used for assigning priorities at the College. One higher level administrator indicated, "I think they would deal with the most politically sensitive issues first. They prioritize the issues based upon political rationality." Another higher level administrator described

We would deal with problems in sequence. That is, one or two at a time. We would get political decisions based upon individual preferences and biases, but also upon the kind of pressures we may be getting from various constituencies or the board. We tend to respond to political and community pressures. But sometimes, we are not rational in terms of responding to the greatest need rather than the loudest need.

The second group—those administrators who indicated a perception of simultaneous budgeting at the College—often had two very closely related perceptions of the process. One view was expressed as follows: "The administration always solves them fiscal and budgetary issues all in one shot; no priority" or "On paper, they may attempt to make a list of priorities, but that is only on paper. They do not carry out their plans. The political farce usually dictates which way they might go" or "In case of significant problems, they have a history of getting at each other's throat, getting anxious, and lose their control, and they try to solve all the problems at the same time."
The other view of the process was slightly different. As one higher level administrator put it, "They usually hide all the problems. But when they cannot hide them any longer, the board dictates all the solutions for all the problems simultaneously, and they do a lousy job... They try to do all at the same time and together, and consequently, they make a mess."
The third group—those whose perceptions were based upon the financial crisis the College experienced a few years earlier—had another view. One higher level administrator reported that, "In cases like that, as we had it three years ago, they freeze everything, and they do not do anything at all." Another interviewee said, "They freeze everything, as they have done it." One top-level administrator provided a broader point of view by explaining that:

Two things may happen. First, they deny that any problem exists. Second, they overreact. But what generally happens is an overall freeze rather than a careful evaluation. They freeze vacancies, stop the purchase of capital equipment or travel. This is more or less a typical response or reaction of government agencies faced with financial crisis. That's what happened about three years ago when it got really bad around here. . . . We do not attempt to try to stay "lean" and get rid of troublesome areas over years, we just cap everything, hurting everything rather than dealing with problem areas.

The majority of administrators at Pima College expressed a clear perception of a sequential budgetary approach. Higher level administrators' responses indicated stronger agreement with this perception than did those of department heads. There were two other perceptions: first, there were those who viewed that the budgetary process was simultaneous, and second, there were those who viewed the process in terms of a freeze that had been invoked some years before. It should be noted that none of these latter responses supported such policies and that the sequential concept of budgeting was often highly regarded.
The concept of non-programmatic budgeting as a commonly implemented approach to budgetary decision making was strongly perceived by Pima College administrators. The majority of interviewees, 78 percent, indicated that a non-programmatic approach normally was utilized. Department heads' responses, however, suggested a slightly stronger perception of the concept than did those of higher level administrators.

As shown in Table 21, the mean value for department heads' responses was +1.52, slightly higher than the +1.32 found for higher level administrators. Positive values suggest a perception of a budgetary process that is based more upon monetary concerns than philosophical aspects of programs.

The standard deviation for department heads' responses was 3.82, being only slightly lower than the 4.14 calculated for higher level administrators. The variance for the former group was 14.60, also being lower than the 17.19 for the latter group. But other values such as medians and modes were higher for department heads' responses.

Table 22 illustrates specific frequencies for the two groups. Six department heads and nine higher level administrators expressed a perception of programmatic budgeting being utilized at the College.

Figure 31 shows the frequency distribution of responses for each group. Although the two distributions are relatively similar in range and intensity, department heads' responses do indicate a greater intensity and a slightly sharper skewness. Figures 32 and 33 depict the
Table 21. Statistical Profile of Responses to the Concept of Non-Programmatic/Programmatic Budgeting

<table>
<thead>
<tr>
<th>Measures</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
<th>Standard Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Heads</td>
<td>1.52</td>
<td>4</td>
<td>4</td>
<td>11</td>
<td>3.82</td>
<td>14.60</td>
</tr>
<tr>
<td>Higher Administrators</td>
<td>1.32</td>
<td>3</td>
<td>3</td>
<td>12</td>
<td>4.14</td>
<td>17.19</td>
</tr>
</tbody>
</table>

*Scale: -10 to +10. Positive Scores Indicate a Perception of Non-Programmatic Budgeting; Negative Scores Indicate a Perception of Programmatic Budgeting

Table 22. Frequency Distribution of Responses to the Concept of Non-Programmatic/Programmatic Budgeting

<table>
<thead>
<tr>
<th>*Scale Levels</th>
<th>-10</th>
<th>-9</th>
<th>-8</th>
<th>-7</th>
<th>-6</th>
<th>-5</th>
<th>-4</th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dept. Heads</td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Admin.</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 31. Distribution of Department Heads and Higher Level Administrators' Perception Regarding the Concept of Non-Programmatic Budgeting in the Budget Process

Department Heads

Higher Level Administrators
Figure 32. Configuration of the Concept of Non-Programmatic Budgeting as Perceived by Department Heads

Mean

Median

Mode
Figure 33. Configuration of the Concept of Non-Programmatic Budgeting as Perceived by Higher Level Administrators

Mean
Median
Mode
means, medians, modes, frequency distributions, and generalized curves for the two groups.

The majority of the administrators perceived the budgetary process at Pima College to be more non-programmatic. Seventy-four percent of higher level administrators and 68 percent of department heads' responses suggested the non-programmatic concept to be at work at the College.

The majority of interviewees, however, indicated that the process of decision making at the College was usually a combination of both programmatic and non-programmatic approaches. Nevertheless, monetary concerns were perceived to be, for the most part, more important than the personal philosophies and preferences characteristic of the programmatic approach.

To illustrate with a few quotations from the interviewees' perceptions, among the majority, one top-level administrator's view is particularly representative. He said, "I think it is basically money. Programs are going as long as there is money available. Money is usually the major factor." And one administrator specially stressed that, "The fundamental reason is usually the money. I'd be surprised if they include any philosophical attitude to it." Another top-level administrator, describing the process more broadly, explained:

In government, you do not make real decisions. What you do is, you stop deciding. Budget officials spread the dollar equally, not based on the value of a program. All programs will grow equally if the dollar is available, or all the programs will be constrained if there are not the dollars. It is not a conscious decision about the program itself.
Although most of those who viewed the process as programmatic indicated that both factors were important, they emphasized that the philosophical aspects carried more weight. One higher level administrator commented, "It is a combination of two. But it is more likely to be philosophical." And one department head explained, "It is philosophy. One's views towards one specific program expressed in budgetary behavior. The views may reflect personal beliefs and philosophy or may derive from social or political reasons." One higher level administrator judged the process as programmatic because, as he described, "At Pima, it is more philosophy. There is enough money around, not a lot, but enough not to cut a program, unless they do not like it." A department head viewed the process similarly by saying that

It is more a difference in philosophy. Cost is not the final criteria in making a decision. Cost is rarely a fundamental reason. This District has always had enough. This year we had roughly a four million dollar surplus--carry-over--to the next year, and every year there has been that kind of monies available. So, the cost is rarely a valid factor. The District can do anything it wants to do, as the administration has often acknowledged.

The majority of the administrators' responses indicated a perception of non-programmatic budgeting implemented in the budgetary process at Pima Community College. Department heads' perceptions of the concept were relatively stronger than those of higher level administrators. Most of the interviewees, however, stated that the process was usually one of a combination of both factors: monetary concerns and philosophical values. Neither of the factors, they indicated, could be considered alone.
Political/Non-Political

Political budgeting, as was fully discussed in the prior chapter, is not a concept but a model by itself, encompassing all the concepts analyzed in this chapter. Thus, this section examines the political model of the budgetary process as the synthesis of all separate, subordinate concepts constituting the political model.

The model of political budgeting was perceived by the majority of the administrators at Pima College to be a very strong force in the budgetary decision-making process; however, higher level administrators' perceptions were in a much greater agreement than were those of department heads. Overall, 83 percent of the administrators' responses indicated that the concept of political budgeting was being widely utilized at the College. Only 17 percent of the interviewees suggested that a non-political approach to budgeting was at work.

Table 23 illustrates the groups' responses. As shown, the mean value for department heads was +.47, which was considerably lower than the mean of +5 for higher level administrators. The positive values indicate a perception of political budgeting at the College.

The standard deviation for the two groups also compared rather sharply, being 4.04 for department heads' responses and 2.65 for higher level administrators. The variance for department heads was 16.37 and was 7.06 for higher level administrators. Medians and modes for higher level administrators were higher than those for department heads.

In Table 24 specific frequencies for each group are illustrated. Thirty-seven percent of department heads' responses compared to only 6
Table 23. Statistical Profile of Responses to the Politically/Objectively Rational Budgeting Model

<table>
<thead>
<tr>
<th>Levels</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
<th>Standard Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Heads</td>
<td>.47</td>
<td>2</td>
<td>3</td>
<td>15</td>
<td>4.04</td>
<td>16.37</td>
</tr>
<tr>
<td>Higher Administrators</td>
<td>4.97</td>
<td>6</td>
<td>6</td>
<td>12</td>
<td>2.65</td>
<td>7.06</td>
</tr>
</tbody>
</table>


Table 24. Frequency Distribution of Responses to the Politically/Objectively Rational Budgeting Model

<table>
<thead>
<tr>
<th>Scale Levels</th>
<th>-10</th>
<th>-9</th>
<th>-8</th>
<th>-7</th>
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<th>-5</th>
<th>-4</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dept. Heads</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>1</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Admin.</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>4</td>
<td>4</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

percent of those of higher level administrators are on the negative end of the scale, suggesting a non-political approach to the budgetary process at the College.

Figure 34 demonstrates frequency distribution of responses for each group. As indicated, department heads' responses distribute bimodally with a slightly greater intensity in the positive section of the scale. On the other hand, higher level administrators' responses are skewed negatively, indicating a comparably strong perception of political budgeting. Figures 35 and 36 illustrate means, medians, modes, frequency distributions, and generalized curves for the two groups.

A majority of the administrators perceived the process of budgeting at Pima College as political in nature. Ninety-four percent of higher level administrators' responses and 63 percent of those of department heads expressed a perception of political budgeting. Most of the interviewees whose views suggested a non-political approach to budgeting also pointed out that the process has some elements of political budgeting. The political budgeting model, however, was not generally regarded highly by most of the administrators, who often defended themselves and their units as detached from such activities. The term political budgeting often had a negative connotation among the interviewees. Even those who indicated that the process was primarily political were generally apprehensive about the model and its application.

For the most part, within the majority view, there were two distinct perceptions: (1) those who judged the process basically as
Figure 34. Distribution of Department Heads and Higher Level Administrators' Perception Regarding the Politically Rational Budgeting Model in the Budget Process
Figure 35. Configuration of the Politically Rational Budgeting Model as Perceived by Department Heads

Mean

Median

Mode
Figure 36. Configuration of the Politically Rational Budgeting Model as Perceived by Higher Level Administrators

Mean

Median

Mode ___.___.
political, with varying strength of feelings according to the level and function of the individual or his/her unit and (2) those whose perception suggested a political process at work but only outside their own academic or administrative units. The following quotations are a few examples of the interviewees' perceptions of the process. One top-level administrator provided two distinct processes at Pima College. He explained

There are two processes at Pima College. First, there is one that is publicly announced, and theoretically followed by the institution. That process is Program Budgeting, and/or probably a variation of Zero Based Budgeting. And secondly, there is one that is real and is being practiced. That is almost purely political. The real allocation of resources is made by the upper level management based on the political concerns.

Another top-level administrator also explained, "It is a political process. People come to the table to negotiate their budget. One who can present and argue better than others in terms of his/her needs is probably more successful than others in getting what is needed. Nothing is more political than the budgeting process."

One higher level administrator strongly suggested that political budgeting was a dominant factor in the budgetary process at the College. He argued that, "There is always politics in any governmental agencies. There are a lot of politics involved. I do not think there is any way around it ever." And another top-level administrator similarly argued that the process was political while identifying the administrative levels involved in such activities. He said

Yes, the process is political at higher level administration, the president, and the boards. It is political at two different levels: external and internal. The board
usually deals with the external political process. The top administrators and the executive deans deal with the internal political process. It is also political at the departmental level, but not as much.

Describing the motives leading to the political budgetary process and also the reasons for the various political degrees at different levels of the institution, one top-level administrator examined the situation as follows:

I think most of human actions are politically motivated, especially in an organization which has all kinds of hidden agendas, and other motives and purposes. To that extent, I would say the budgetary process is politically motivated. I use political maneuvers to achieve what I like, and I ask for what I actually need. I always evaluate and analyze my environment, colleagues, and forces around me. . . . I do not think that the intensity of politicalness necessarily varies at a level in any organization, but I think it varies from one unit to the next. One department may have to be more political than another department for various reasons. I think the level of intensity of politicalness is relatively the same at each level, but the magnitude of it might become greater or less. For example, when a dean is speaking for one hundred and forty-five faculty members versus another dean who is speaking for fifty faculty members, the former dean has to be a bit more intense and aggressive in his political maneuvering than the latter one has to be.

Some administrators, however, indicated that the process was political but only outside their academic or administrative units and that they were not acting in a political way. One higher level administrator expressed that

A certain amount of trade-offs go on in the College, but not in our areas. We cannot control our budget; we watch our budget. But sometimes some departments may find themselves with some extra monies; they may give them to other needy departments. That is more or less worked out among department heads or units. That is the extent of political horse tradings going on here. Most of the political games are outside our unit.
One department head viewed the process as one in which "There is a lot of politics going on at the top level administration. Depending on the wishes of the committees, individuals, or the boards, the allocation of resources, in general, is a product and shifting of all those factors. But at our level, there is very little we can do. We try to holler and scream with no avail in many cases." And finally the same view was shared by a higher level administrator who said, "On my level, I do not see much political relationships. We are told how much we have, and how it should be divided. At my level, I depend upon my boss. So, there is not much political activities going on here. But I am sure beyond my level, there is some kind of political relationship."

The perception of the minority, however, described a non-political approach to budgeting. Most of these perceptions came from department heads. As one explained, "I have seen it (the process) as strictly mechanical for the past three years. I do not see any politics in the process of building the budget, particularly at the top-level administration." Another higher level administrator said, "I think it tends to be mechanical. I know there has been some attempts to create measurable means of allocating the money; it is not purely mechanical, but more mechanical than political. It (the budgetary process) cannot function within that framework." And finally one department head indicated a strong belief that the budgetary process was primarily non-political. He argued

It is of no use if someone tries to gain anybody's good will so that greater budgetary allocations can be gained. I do not think there is politics involved in the budgetary process. If people think the process is political, it is
because they are rocking the boat heavily . . . . I think if you get a cut, it is because an evaluation is being done and they have found that the money is being needed far more to serve the students in some other area.

**Syntheses**

This section will synthesize the statistical profiles for each concept and for the political budgetary model. The focus is the interviewees' syntheses of all the concepts as indicated through their selection of the politically rational versus objectively rational budgeting models as most fitting the Pima Community College budgeting system. This section is itself in two parts. First are the concepts and the models, which are graphed in pairs and are studied comparatively. Second, the concepts and the budgeting models are rank-ordered, based on the mean values of the concepts as perceived by department heads and higher level administrators. Each of the concepts also is analyzed comparatively. Detailed analysis will mainly focus on concepts at the extremes of the rank-orders distribution. This section also will incorporate some of the interviewees' comments highlighting the budgetary issues and problems at the College.

Figure 37 illustrates all of the concepts and the political budgeting model as perceived by department heads and higher level administrators. As shown, the prevalent budgeting model at the College is primarily political in nature. Although there are some indications of a tendency towards a more objectively based budgeting process, mostly by department heads, a strong perception of political budgeting is quite apparent.
Table 25. Rank Order of the Concepts/Model Based on the Means and as Perceived by Department Heads

<table>
<thead>
<tr>
<th>Rank</th>
<th>Concept/Model</th>
<th>Mean</th>
<th>% Agreed to the Concept/Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Specialized</td>
<td>3.83</td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td>Incremental</td>
<td>3.15</td>
<td>84</td>
</tr>
<tr>
<td>3.</td>
<td>Historical</td>
<td>2.47</td>
<td>84</td>
</tr>
<tr>
<td>4.</td>
<td>Fairshare</td>
<td>2.23</td>
<td>74</td>
</tr>
<tr>
<td>5.</td>
<td>Fragmentary</td>
<td>1.84</td>
<td>74</td>
</tr>
<tr>
<td>6.</td>
<td>Non-Programmatic</td>
<td>1.52</td>
<td>68</td>
</tr>
<tr>
<td>7.</td>
<td>Sequential</td>
<td>1.21</td>
<td>69</td>
</tr>
<tr>
<td>8.</td>
<td>Satisficing</td>
<td>1.10</td>
<td>63</td>
</tr>
<tr>
<td>9.</td>
<td>Simplified</td>
<td>.63</td>
<td>63</td>
</tr>
<tr>
<td>10.</td>
<td>Political</td>
<td>.47</td>
<td>63</td>
</tr>
<tr>
<td>11.</td>
<td>Repetitive</td>
<td>-.47</td>
<td>47</td>
</tr>
<tr>
<td>12.</td>
<td>Experiential</td>
<td>-.57</td>
<td>53</td>
</tr>
</tbody>
</table>
Higher level administrators, however, suggest a greater perception of the politically rational budgeting model. A low perception of some concepts such as fairshare, satisfice, fragmentary, and non-programmatic appear largely to be due to some innate institutional characteristics which will be discussed in the following chapter. Overall, it is suggested that higher level administrators are more politically inclined in their budgeting perceptions and processes than are department heads.

Department heads indicate a much less political perception in the budgetary process of the institution. Furthermore, in two cases, the experiential and repetitive concepts, department heads view the process as being more based upon objective rationality. Yet, with fairshare, specialized, fragmentary, and non-programmatic concepts, department heads tend to be more political in their outlook. In general, however, department heads perceive the budgetary process at the College as political.

Tables 25 and 26 show the concepts and the political budgeting model rank-ordered upon their mean values as perceived by department heads and higher level administrators, respectively. Also provided are the percentages of the interviewees in each group who agreed to the concepts and, thus, to the political budgeting model.

Figure 38, using the same rank-order, illustrates the incidence of each concept and the political budgeting model as viewed by each group. In this segment, detailed analysis will primarily be devoted to the first and last three concepts, representing the most and least
Figure 37. A Rank Order Comparative Representation of the Politically Rational Budgeting Model and its Concepts Based on Mean Values and as Perceived by Department Heads and Higher Level Administrators
Table 26. Rank Order of the Concepts/Model on the Means and as Perceived by Higher Level Administrators

<table>
<thead>
<tr>
<th>Rank</th>
<th>Concept/Model</th>
<th>Mean</th>
<th>% Agreed to the Concept/Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Incremental</td>
<td>5.23</td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td>Political</td>
<td>4.97</td>
<td>94</td>
</tr>
<tr>
<td>3.</td>
<td>Specialized</td>
<td>3.61</td>
<td>97</td>
</tr>
<tr>
<td>4.</td>
<td>Repetitive</td>
<td>3.53</td>
<td>94</td>
</tr>
<tr>
<td>5.</td>
<td>Historical</td>
<td>3.41</td>
<td>94</td>
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<td>6.</td>
<td>Sequential</td>
<td>3.29</td>
<td>92</td>
</tr>
<tr>
<td>7.</td>
<td>Experiential</td>
<td>2.91</td>
<td>87</td>
</tr>
<tr>
<td>8.</td>
<td>Simplified</td>
<td>2.17</td>
<td>80</td>
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<tr>
<td>9.</td>
<td>Fairshare</td>
<td>1.84</td>
<td>73</td>
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<tr>
<td>10.</td>
<td>Satisficing</td>
<td>1.38</td>
<td>70</td>
</tr>
<tr>
<td>11.</td>
<td>Non-Programmatic</td>
<td>1.32</td>
<td>74</td>
</tr>
<tr>
<td>12.</td>
<td>Fragmentary</td>
<td>1.21</td>
<td>67</td>
</tr>
</tbody>
</table>
Figure 38. A Comparative Representation of the Concepts and the Politically Rational Budgeting Model Based on Mean Values and as Perceived by Department Heads and Higher Level Administrators
significant priorities for each group. Such an approach should clearly
distinguish outstanding perceptual differences between the groups.
The remaining pairs will be discussed in order of the degree of sig­
nificance.

According to Tables 25 and 26 and Figure 38, the concept with
the highest mean value for higher level administrators was the concept
of incremental budgeting. This concept implies an organizational en­
vironment within which there is a strong commitment to a relatively
equal and automatic distribution of available new resources, based upon
the size and content of each unit's previous budget. Thus, any distinct
budgetary adjustment, and much less so reform, from the traditional
approach to a more objectively rational budgeting method would be quite
improbable.

For department heads the highest mean value noted was the con­
cept of specialized budgeting, which requires a comprehensive under­
standing of the needs and problems of a given academic unit in
formulating its budget. Most of the department heads indicated that
the budget process at the College was largely unconcerned about the
needs of the units. They all maintained that their expert views and
those of their faculty members must be incorporated in the budget
building process if the budget of the College is to reflect the true
educational needs.

The large gap between these two concepts and their implied
values may be indicative of wide philosophical differences between the
two groups in regard to budgeting. Such a sharp disagreement may also
be explained simply by differences in perceptions that are a function of position in the organizational hierarchy.

The second highest mean value for higher level administrators was the overall political budgeting model, which was viewed almost as strongly as was incremental budgeting. This high mean value represents higher level administrators' strong acceptance of the model as best fitting budgetary procedures at the College. As will be discussed in the final chapter, in the author's view the political model would have shown a higher mean score if more candid responses had been offered.

Department heads' second highest mean value was for the incremental concept of budgeting. This was despite firm, collective support of the specialized concept. Like higher level administrators, department heads often acknowledged that the long established commitments of the College coupled with the State-mandated incremental funding formulas, had profound effects on the institution's budget planning and implementation.

The specialized concept of budgeting showed the third highest mean value for higher level administrators. Higher level administrators demonstrated a slightly lower mean value than did department heads. No doubt this reflects the department heads' opinion that only they can clearly understand their own units' financial needs.

For the department heads, the third highest mean value was for the concept of historical budgeting. Past and present budget levels were seen as closely related to present funding patterns in the units.
Concepts considered in subsequent paired order of significance by higher level administrators and department heads were repetitive/fairshare, historical/fragmentary, sequential/non-programmatic, experiential/sequential, simplified/satisficing, and fairshare/simplified. It is noteworthy that the concept of fairshare is assessed considerably higher by department heads. Generally, higher level administrators are thought to be more observant of the fairshare concept in their budgetary behavior. The existence of adequate resources was said to be a contributing reason for this low ranking; apparently resources were adequate to most units' needs.

Equally noteworthy is department heads' low rating of the non-programmatic concept. Department heads would be expected to place a higher value on program considerations when allocating resources. Apparently department heads viewed the reality as otherwise. For higher level administrators the concept of satisficing budgeting ranked tenth. This low ranking is surprising because the concept is integral to the political budgeting model. The presence of adequate resources could again be the underlying reason for the low ranking. Normally the satisficing concept would be a key element in budgeting when resources are scarce.

Department heads ranked the overall political budgeting model tenth. Such a low perception of the model probably reflects a lack of awareness and involvement by department heads in the political decision-making process. Their participation in the budget process was largely mechanical. The distinct contrast between the perceptions of higher
level administrators and department heads on this issue suggests a clear overall implication of the budget process at the College.

The two lowest mean values for higher level administrators were the programmatic and fragmentary concepts of budgeting. Apparently, unlike the Congress, higher level administrators at the College placed attention on programmatic concerns and tended more to view the institution as a whole.

The department heads ranked the repetitive and experiential principles the lowest, suggesting some weak traces of the objectively rational budgeting method at the department level. Some programs, particularly those in science and engineering, are either given higher priority or are more convincing in their budget requests. Thus, the budget processes of such programs are seldom repetitive. Also, department heads mostly indicated that the experiential approach to budgeting was often secondary to other considerations, such as the demonstration of needs based upon specialized understandings.

Summary

Using the interview technique and analysis of selected documents, this chapter examined the budgetary process at Pima Community College. The major objectives of this chapter were (1) to examine the nature of the budgetary process at the College to determine if the process is based upon Wildavsky's politically rational budgeting model or a given objective approach, (2) to identify any major differences in budgetary perceptions between higher level administrators
and department heads, and (3) to synthesize the interviewees' perceptions and analyze the ensuing budgetary implications.

As illustrated in Tables 1-24 and Figures 1-36, the prevalent budgetary process at Pima Community College was found to be a political process, incorporating the embedded concepts of the political model as proposed by Wildavsky. Higher level administrators and department heads showed varying perceptual differences on each concept. Higher level administrators generally indicated a greater perception of the political model; department heads overall were less aware of the underlying concepts and forces of the political process.

In synthesizing the interviewees' perceptions, their budgetary perceptual differences were studied both comparatively and on a rank order basis, as reflected in Figures 37 and 38 and Tables 25 and 26. The distinguishing and notable results were that higher level administrators indicated a relatively low perception of the fairshare, satisficing, fragmentary, and non-programmatic concepts whereas department heads demonstrated some perception of the objective approach, specifically as the experiential and repetitive concepts were examined.
CHAPTER 5

SUMMARY, DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

The basic objective of this study was to assess the budgetary process implemented at a higher education institution to determine whether the process was based upon Wildavsky’s politically rational or an objectively rational budgeting model. In this concluding chapter, the framework, methodology, and findings are summarized; the author's syntheses and the implication of the findings are discussed; and finally, recommendations are presented.

Statement of the Problem

Budgeting is often a well-defined process reflecting the overall policies of an organization. A budget states planned priorities, expressed through varying financial support of the entailed programs in relation to stated human needs. It also determines the means of implementing policy. Budgeting is diverse; Wanat simply defines it as "a many-faceted phenomenon" (1978, p. 10). Experts (Wildavsky, 1974, 1975; Babunakis, 1976; Lee and Johnson, 1977; Wanat, 1978; and Lynch, 1979) maintain that the process of budgeting incorporates countless variables and forces, establishes various relations and regulations, involves different procedures, and signifies distinct perspectives. Thus, budgeting is a configuration of many factors.

To understand the process and phenomenon of budgeting, one must comprehend all of these aspects collectively. Despite much recent
attention to more objectively based budgetary methods, the actual budget building and resource allocation process is not clearly understood. Consequently, administrators often fail to design effective strategies for financial management. Under rapidly changing financial conditions, their attempt to implement new budgetary methods in line with redefined institutional policies and priorities may prove ineffective.

**Significance of the Study**

The main purpose of the study was to determine the bases of the resource allocation process at work in the higher education environment. By examining two distinct views and opposing models of budgeting, the findings of the study may be valuable in various ways to administrators of higher education institutions. First, higher education administrators can use the findings of the study to identify the prevalent budgeting method at their institution and, in turn, to decide how budgeting should be best approached. Second, if budgeting represents the most dynamic and sophisticated functions of management (Jones and Trentin, 1966), an empirical knowledge and understanding of the budget process can be equally dynamic when proper tools are designed and implemented by administrators to identify, measure, and evaluate the effectiveness of their budgetary process in regard to the stated needs. Third, the study can be used effectively to manipulate the existing budgetary process towards redefining institutional policies, reordering the priorities, and adopting a more selective approach to education programming.
Fourth, the study also can help administrators acquire a more critical understanding of budgetary processes, their significance, and effectiveness in relation to the stated needs. The study will enable them to consider forces at play and avoid implementing ineffective budgetary concepts and tools. Fifth, the study may modify some administrators' views toward the budget process—that the process is overall relative and not absolute, is ever-changing and is not static.

Summary of Framework

The adopted framework for this study was based upon two distinctly different views of resource allocation: Wildavsky's politically rational perspective and the objectively rational or objective budgeting views. Wildavsky's model, which was used to describe the budget process of the Congress, is behaviorally based and proposes that strong political considerations largely determine the size and content of the budget. The objectively rational budgeting models advocate an apolitical process designed in regard to effectiveness and efficiency and built upon well-defined goals, assessed needs, stated mathematical guidelines, and a thorough evaluation of the existing alternatives. Each model is comprised of certain concepts determining the basic budgetary structure and requirements. For comparative, analytical purposes concepts are described respectively as incremental/non-incremental, fairshare/need-based, simplified/non-simplified, experiential/objective, specialized/non-specialized, historical/independent from past practices, satisfice/all or none, fragmentary/wholistic, repetitive/solved once and for all, sequential/simultaneous, and non-programmatic/programmatic.
Historically, most higher education administrators have been practicing line-item, incremental budgeting. But with a developing environment of diminishing resources and an increasing demand for efficiency and accountability, more objective methods of resource allocation have been proposed. The main objectives of such methods are to establish a system in which the relationship between resources and outputs can be objectively planned, measured, and evaluated.

The new environment has compelled many higher education administrators to reexamine their budgetary processes and, in many cases, to call for the application of objective systems. Thus, many college and university presidents have ventured to implement budgetary methods, such as planning, programming, and budgeting systems (PPBS), to replace the old, simple, and inadequate traditional approach. But obstacles are considerable. As Hussain (1976, p. 128) puts it, the decision to use such a system demands "a significant commitment of resources with an uncertain return." Furthermore, the application of such elaborate budgetary systems requires "the allocation of already limited analytic talent" (p. 128). Cost effectiveness, conceptual problems in objectively defining and measuring input and output are among major reasons for making such systems mostly impractical at postsecondary institutions.

**Summary of Methods**

The case study was selected as the appropriate method for this study. Case studies allow in-depth examination of complex variables in their natural setting. Consistent with this, it was determined that
the interview technique would be most appropriate as the major tool of
data collection. Interview permits probing into complex concepts and
theories. The conceptual framework served as the basis for designing
the interview guide. A separate set of questions addressed each pair
of concepts in the two models. The questions sought the perceptions of
the interviewees concerning the actual budgetary process in operation at
the College.

A two-year public institution was selected for the case study.
The proximity of the institution and the willing consent and support of
the study by the College leadership were the primary factors in its
selection. Purposefully, the researcher had no prior acquaintance with
the process of resource allocation practiced at the institution.

Once the institution was selected, the individuals involved with
the budgetary decision-making process at various levels were identified.
This pool of administrators was divided into two levels: department
heads and higher level administrators—all those administrators who
were managing a separate budget. This division was made to determine
if higher level administrators' perceptions of the bases for resource
allocation were similar to those of department heads. A stratified
random selection of each pool was made.

All administrators were interviewed separately, and responses
were taped. Responses to each set of questions were placed on a scale
of +10, representing a very strong perception of political budgeting,
to -10, reflecting a very strong perception of the objectively
rational budgeting approach. The values for each concept were assigned at the discretion of the author.

The final interpretation involved syntheses of the data for each pair of concepts as perceived by the interviewees and the author. The author's syntheses, which are offered below, were supplementary, with the intention being to provide alternative perspectives of the process.

**Summary of Findings**

The results and the analysis indicated that Wildavsky's politically rational budgeting model strongly prevailed at the institution. The following summarizes and highlights the findings.

Political budgeting was the predominant method and process of resource allocation at the College. The embedded concepts in the political model were all considered to be important but varied by level of administration in the budget process. The process showed very little deviation from Wildavsky's model of Congressional budgeting, in spite of the peculiarities of higher education institutions. PPBS seemed to be ineffectual, operationally, in any resource allocation determination at Pima College, even though the President had instituted the process. Used only in filing budget request forms, PPBS was disregarded by almost all administrators in the resource allocation process. Ironically, higher level administrators overlooked PPBS much more than did department heads when discussing the actual budget process.

The political budgeting approach proved to be viable for three main reasons: historical and organizational reasons and due to the
existence of government budgetary formulas. All three reasons relate to incremental (or decremental) budgeting. Historically, the College has been practicing incremental budgeting since its inception. Budgetary changes historically have been expressed in incremental terms. Organizationally, higher education institutions' main category of expenses is salary and wages which often has built-in incremental factors (e.g., salary increments). Further, local financing and state funding formulas also are developed on incremental budgeting bases. Each year, every category of expenses is increased or decreased (rarely) on a percentage basis, leaving the College at least partially compelled to adopt incremental approaches to internal resource allocation, even if the College intends otherwise. Consequently, incremental budgeting tends to be the most feasible budgetary method. Significantly, resources increase incrementally too. Local tax income (over 50 percent of all revenues) increase annually as the county-assessed valuation grows annually. The state formula generates new revenues as enrollments grow and, very recently, on an additional 7 percent annual growth rate basis.

The political budgeting model, as well as most of the underlying concepts, were reported to be of a greater significance by higher level administrators than by department heads. Some of the former even called the model a necessity as far as budgeting was concerned, arguing that political budgeting fits human nature and behavior best. Department heads' acceptance of the model was more reserved and was, at best, uninformed and cautious. Basically, contradictory budgetary policies
and practices at the College were thought to have caused the confusion. It was observed that the higher the administrative rank, the greater the political recognition of and participation in the budget process and, thus, more informed in regard to the function of the budget process at the College.

The concepts in the political model generated similar reactions. The majority of higher level administrators identified most of the concepts as commonly observed budgetary strategies at the College. Some of the concepts, such as fragmentary and non-programmatic budgeting, did not measure up to the importance suggested by Wildavsky, seemingly because higher education institutions exist in a somewhat different political and organizational environment when compared to the Congress. Other concepts, like fairshare and satisficing, seemed to be even less in operation, partly because the College's ample financial support has been sufficient to keep necessary attention to these concepts at a low level. It was observed also that the multi-campus structure of the College resulted in a situation whereby comparable units often lacked knowledge of amounts allocated among them.

Department heads were perceived by the interviewer to be mostly uncertain and somewhat apprehensive about most of the concepts, particularly those that were thought to be politically more manipulative in nature, such as the simplified, repetitive, and experiential concepts. The College financial strength, at least so far, and a vague method of need assessment and priority setting (called justifications), were main reasons for the repetitive concept to be perceived negatively. Some of
the department heads simply believed that PPBS was strongly in operation at the College. In general, department heads' perceptions partly represent their impressions of the budgetary concerns and behaviors of higher level administrators, since institutional budgetary policies are often equivocal and final budgetary decision making is highly centralized.

Discussions

This part will examine briefly the major findings of the study. First will be the author's syntheses of the assessed budgetary process at Pima College. Following will be the implications of the findings and their significance in regard to the future budget planning, management, and analysis at the College. Recommendations to Pima College will be included.

The Author's Syntheses

This part will present the author's syntheses, based on an overall assessment of the budgetary process at Pima College. Since the major purpose of this study is to analyze the budgetary process accurately, the author's views are germane in that these views represent an additional perspective. Whereas College administrators see budgeting from an internal viewpoint, the author's views are not only free of vested interest complications but represent a broad understanding of the two models examined—Wildavsky's politically rational model and the objectively rational budgeting model. The author's objective is to analyze and integrate College documents including the five-year master plan, budget profiles, and broad information gained from all
interviewees. This will offer a unified perspective on the College's budgeting methods and priorities. In the process of presenting this synthesis, a discussion of what has been found at the College will be offered.

The author's assessment has been drawn partially from careful observation of and communication with all the interviewees. Within the course of interviews many non-verbal signs, verbal off-hand remarks, and other non-systematic communications were made by the interviewees. Many of these were not reflected in the direct responses reported above. Part of the consensus that emerged was not recordable in part because it was not openly expressed. Reservations and concerns about confidentiality were evident on the part of the interviewees.

The author will offer his own generalized observations of the College budgeting policies, patterns of budgetary communication, organizational and administrative structure, and other such variables impacting on the budget process. An interfusion of all these variables by the author, who is the single person possessing all information provided, will lend a somewhat different and perhaps illuminating dimension to the study.

Tables 27 and 28 and Figures 39 and 40 illustrate the author's assessment of the actual application of each concept to the budgetary process at Pima College, by administrative level. The concepts are ranked as observed by the author to be the most powerful factors in determining the budget process at the College. The scale of +1 to +10 was selected in conformance to the scale used by the interviewees.
Table 27. Author's Rank Ordering of the Politically Rational Budgeting Model and its Concepts at the Departmental Level

<table>
<thead>
<tr>
<th>Rank</th>
<th>Concept/Model</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Incremental</td>
<td>7</td>
</tr>
<tr>
<td>2.</td>
<td>Fairshare</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>Satisficing</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>Fragmentary</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>Historical</td>
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</tr>
<tr>
<td>6.</td>
<td>Specialized</td>
<td>4</td>
</tr>
<tr>
<td>7.</td>
<td>Repetitive</td>
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</tr>
<tr>
<td>8.</td>
<td>Sequential</td>
<td>1</td>
</tr>
<tr>
<td>9.</td>
<td>Experiential</td>
<td>1</td>
</tr>
<tr>
<td>10.</td>
<td>Simplified</td>
<td>1</td>
</tr>
<tr>
<td>11.</td>
<td>Non-Programmatic</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 28. Author's Rank Ordering of the Politically Rational Budgeting Model and its Concepts at the Higher Level Administrator's Level

<table>
<thead>
<tr>
<th>Rank</th>
<th>Concept/Model</th>
<th>Weight</th>
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<tbody>
<tr>
<td>1.</td>
<td>Incremental</td>
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<tr>
<td>2.</td>
<td>Simplified</td>
<td>8</td>
</tr>
<tr>
<td>3.</td>
<td>Fairshare</td>
<td>6</td>
</tr>
<tr>
<td>4.</td>
<td>Satisficing</td>
<td>6</td>
</tr>
<tr>
<td>5.</td>
<td>Repetitive</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>Historical</td>
<td>5</td>
</tr>
<tr>
<td>7.</td>
<td>Specialized</td>
<td>4</td>
</tr>
<tr>
<td>8.</td>
<td>Experential</td>
<td>4</td>
</tr>
<tr>
<td>9.</td>
<td>Non-Programmatic</td>
<td>4</td>
</tr>
<tr>
<td>10.</td>
<td>Sequential</td>
<td>1</td>
</tr>
<tr>
<td>11.</td>
<td>Fragmentary</td>
<td>1</td>
</tr>
</tbody>
</table>
Figure 39: Author's Rank Order Comparative Perceptions of the Politically Rational Budgeting Model and its Concepts

- Incremental
- Simplified
- Fairshare
- Satisficing
- Fragmentary
- Repetitive
- Historical
- Specialized
- Repetitive
- Experiential
- Sequential
- Experiential
- Simplified
- Fragmentary
- Non-Programmatic
- Political
- Department Heads
- Higher Level Administrators
Figure 40. Author's Comparative Perceptions of the Concepts and the Politically Rational Budgeting Model
In Tables 27 and 28, the weights given to each budgeting concept were drawn from a careful observation of all the interviewees. Factors such as the interviewees' overall support or application of a concept, an indirect or informal indication of the value or importance of a concept, or other non-verbal or off-hand remarks were used to produce the weights. Figures 39 and 40 are developed by utilizing the same weights.

On balance, the author could not identify any objectively rational budgeting elements to be operating in the College budget process. When compared with Tables 27 and 28, the view of the author was that department heads' perceptions differed from those of higher level administrators more than these persons actually perceived. The concepts for which interviewee and author perceptions vary notably will be examined in greater detail.

Based on the author's assessment, the prevalent method of resource distribution at Pima College was incremental in nature. The College may find it too difficult to implement other budgetary methods primarily because state funding formulas to the College are themselves incremental and decremental. Thus, the College must adjust its budget accordingly. Despite a mild persistence by the College that PPBS was being widely and seriously implemented, the author could not verify this. The majority of the administrators considered PPBS, zero-based budgeting, a combination of both, or sometimes performance budgeting to be the officially adopted budgetary method at the College. PPBS, however, was found to be reflected only in a minor section of the budget request forms in which "program mission description of actions" are
requested (see Appendix D). The actual process of resource allocations at the College seemed to disregard the section concerned with program considerations and to reflect incremental budgeting. Moreover, the author could not avail himself of any College standard evaluation guidelines—ordinarily used in PPBS—to ensure the employment and effectiveness of PPBS. Neither was there any indication that such guidelines were to be developed soon.

To understand the budgetary implications as well as conceptual differences between higher level administrators and department heads, it is essential to examine the status of PPBS and its future at the College. PPBS was established at the College in academic year 1980-1981 by a new administration, partly in response to a fiscal crisis that had swept the College. PPBS was also an attempt to move towards a more objective and efficient method of resource allocation. At this writing, PPBS is still far from being completely planned and fully operational. Such a slow transition from traditional budgeting to PPBS may indicate a deep uncertainty on the part of the College community about PPBS as an effective budgetary method.

This state of affairs plus the College advocacy of PPBS, as reflected in the emphasis given to the "program mission description of actions" section on the budget request forms, may have affected department heads' general perception of the College budget process. In requiring a comprehensive understanding of the needs and problems of each academic unit, the emphasis on PPBS has led department heads to perceive the specialized concept as the building block of the budget process.
Yet, the author's observation was that department heads were almost as equally involved in incremental resource allocation as were higher level administrators. Much of the confusion is believed to be due to uncertainty over budgetary policies at the College.

Additionally, in looking at the five-year master plan of the College, there is minimal consideration given to budget development and particularly to PPBS. The master plan does not specify PPBS as a means of addressing the College's fiscal management policies. No plans for changing the budget process can be drawn from the master plan (see Appendix E).

In brief, in the absence of a perception of a firm commitment to PPBS, almost all interviewees indicated confusion as to the budgetary value of PPBS for the College. While a great many interviewees stated that only PPBS was being used, most of the interviewees, including top administrators, had difficulty describing what PPBS meant to their budgets and budget processes.

Perhaps the best indication that incremental budgeting is being widely implemented at Pima College can be seen in the budget request and financial report forms published by the College (see Appendix F). The budgets for the previous three to four years are provided for incremental comparison. Moreover, as one top-level administrator described, any budgetary reform would be inadmissible because it would be an exercise in futility, because we know that we have certain programs that are here to stay. I think through incrementalism we are saying that there is nothing we can do about 95 percent of the budget. For us to start from scratch would be reinventing the same wheel, because
there is nothing much we can do to change what we have already locked in . . . two to two-and-a-half million dollars, much less than 1 percent of the total annual budget of the College, which is new, is what we have to work with. We cannot ignore totally the last year's budget; if so, we would not be able to do much because we recognize much of it anyway.

Of course, incremental budgeting is not necessarily inconsistent with PPBS. That is, PPBS may result in increments being gained by all budgetary units. However, such an eventuality would assume that the case for new funds could, in fact, be made approximately equal by each unit. It was the author's distinct impression that increments were not made from this basis but from the more-or-less routine process characteristic of a political budget process.

Resource allocation strategies utilized by the College were mainly simplified. Although the College has a widely used policy of appointing advisory committees on significant issues, the applications of committee deliberations to fiscal decisions were difficult to identify. Many budgetary resolutions are generally made on the simplest methods of data assessment and frequently by one or two administrators. Consideration to committee views may well have been given, but the author could detect only limited evidence.

Budget allocations for new programs, too, seem to be simplified and have a political base. Strongly favored programs receive ample financial support; real costs of programs appear not to be identified. The budget process does not seem to address the unique operating conditions of different programs. Consequently, the funding patterns are simplified and may not reflect the actual financial needs. In all of
Continuing programs, regardless of their complexity or changes in their direction or structures, simply keep their original funding patterns and are quite rarely reviewed for any budgetary adjustments. This, too, probably is normal. Ensuing incremental budgeting keeps the programs in a relatively similar financial status as when they started. As a result, and because of changing needs of the operating unit, many programs are over- or underfunded each year. To correct the problem, funds are transferred routinely from one program to another. But such fund transfers almost always are excluded from the general budget records, and the process repeats itself each fiscal year. The author believes that the budget process at the College is oversimplified. Thorough budget analysis largely does not appear to occur. Rather, there seems to be a lack of direction and consistency. Admittedly, however, the author does not possess the extent of knowledge about internal College operations possessed by College administrators.

The concept of fairshare, as assessed by the author, was more in operation than was perceived by the administrators. Further, although most of the administrators' direct responses to related questions suggested a low perception of the concept, their personal views—such as when complaining about a recent cut in their budgets to reallocate money to another program—revealed a considerable affinity for fairshare budgeting. More politically concerned in their budgetary approach, higher level administrators are often expected to have a greater
perception of the concept. Their understating of the concept, compared to department heads, may suggest that department heads and their faculty members tend to be more competitive in obtaining funds to keep their programs functional or that some units may not have been receiving what they expect to be their equitable share of the available resources. Thus, department heads express a greater awareness of the fairshare concept in budgeting. Conversely, higher level administrators may not have viewed the concept so essential perhaps because, historically, resources have been plentiful at the College, and each administrator has enjoyed a more-or-less secure flow of funds. Also, other more significant political considerations may have made higher level administrators overlook the concept. But the concept of fairshare will become more significant at the College as resources diminish.

Although the majority of administrators (see Tables 25 and 26) indicated that the concept of satisficing was used in determining the size and content of the budget, low emphasis was given to the concept. The College's financial health, again, probably contributes to this perception as the competition for funds is not particularly intense (such statements herein are made always in the relative sense).

The author's view was that the budget process at the College was more repetitive than some department heads suggested. True, a few programs enjoy very strong financial support, but others have to face repeated challenges to their budgetary requests. In addition, various techniques often are employed by most administrators to avoid the necessity for repetitive requests. Sophisticated budgetary requests
appear to be perceived as reflecting urgent and justified needs, as well as high priorities. Overall, the budget process is considerably repetitive.

The author's perception was that administrators overstated the extent of specialized budgeting. Despite strong indications made by both groups that each and every academic or administrative unit had specific needs and problems comprehensible mostly by the experts in the respective units, the interviewees also revealed strong territorial feelings. It appeared to the author that people with specialized knowledge in any unit were seldom influential in determining the final product of the budget process. Overall, the specialized concept of budgeting was a low priority in the actual budget process and among the administrators.

The author also believes that perceptions of the concept of non-programmatic budgeting were overstated. The author's impression is that department heads were in reality more concerned about the content, quality, needs, and desirability of programs than was suggested outright. Department heads, collectively, condemned non-programmatic approaches yet expressed considerable attention to the concept. Their responses may have reflected their view of higher level administrators' concerns. On the other hand, higher level administrators were less programmatically oriented; quite naturally, they often viewed the budget as a whole.

The concept of sequential budgeting is believed to be perceived by administrators much more strongly than reality dictates. The author
could not identify a distinct pattern of sequential budget review. Despite strong indications by the College that a sequential review of the budget was unavoidable, no evidence of such a process could be discerned even during critical financial periods. Recalling the past fiscal crisis at the College, one top administrator described how sequential budgeting was totally ignored.

What generally happens is an overall freeze rather than a careful evaluation. Instead of dealing with problems on a sequential basis, they freeze vacancies, stop purchase of capital equipment, or travel. This is a more-or-less typical response or reaction of government agencies faced with financial crisis. That's what happened about three years ago when it got really bad around here.

Overall, when independently viewed, the budgetary process and practices at the College were seen to be more politically based than was commonly acknowledged by the administrators. The author found that Wildavsky's politically rational budgeting model and its embedded concepts were both strongly perceived and practiced at Pima Community College. Although a form of objectively rational or objective budgeting was being advocated by the College, the political model was largely in operation. In fact, the advocacy of PPBS sometimes even seemed to have its political advantages. Higher level administrators demonstrated a significantly greater understanding and application of the political model, but some concepts, such as the budget as being specialized and fragmentary, were appealing to department heads. In general, the process was political in nature because, as one top-level administrator described it,

Most of human actions are politically motivated, especially in an organization which has all kinds of hidden agendas.
and other motives and purposes. To that extent, I would say
the budgetary process is politically motivated. I use po-
litical maneuvers to achieve what I like . . . . I always
evaluate and analyze my environment, colleagues, and forces
around me . . . . I do not think that the intensity of
politicalness necessarily varies at a level in any organi-
ization, but I think it varies from one unit to the next.

Implications

The Pima Community College budget process was primarily politi-
cal; that is, political considerations were basic and of priority over
most others. The institution's budget as well as its overall policies
were often directly affected by politics. Although the College fre-
quently expressed a fundamental need for what Schmidtlein and Glenny
(1977) call technical efficiency, allocation efficiency, and rationality
as prerequisite to budgetary effectiveness, political efficiency and
rationality were the two cardinal budgeting criteria at the College.

However, the strong political mechanism existing at the College
does not necessarily reflect the College administrators' collective
commitment to the process. Historically, the higher education system
in America has evolved as a part of the political process. Colleges
and universities have translated the federal, state, and local govern-
ments' political preferences into academic and administrative policies
(Corson, 1975). An apolitical postsecondary education has been more
of a myth than a fact; political factors have often been at or near
the center of the government-political spectrum (Waldo, 1969, p. 280).
Some institutions are even more politically bound because of an elite
group of locally based social leaders who operate in an entrepreneurial
style, and they often determine the educational and administrative policies. Iannaccone (1967) calls such a rather traditional arrangement a "locally based disparate" political linkage. A recent report by the Carnegie Council on Policy Studies in Higher Education (1975) predicts that higher education institutions will become increasingly political in the future. Declining enrollments and diminishing state resources, as reported, will make the institutions become more competitive and thus more political in their policies.

The extent of political concerns at the College and the ensuing political behavior were generally much greater at higher administrative levels. However, the extent of political considerations varied with the type of budgetary issues, people, and topics involved. Generally, the more distinct and pronounced changes in the resource allocation process required greater and broader political manipulations.

Department heads' expectations of the budget process were to address their needs and problems efficiently and rationally. Political efficiency to them meant negative and unjustified tradeoffs. They saw a greater value in apolitically rational budgeting mainly because they strongly believed that their budgetary expectations were often expressed rationally and in realistic, modest terms based on actual needs. Therefore, the overall budgetary decision-making approach taken at the College, at times, may suggest some qualities of the limited-rationality model.

Considering the two distinct views and approaches to budgeting by the administrators, coupled with the College's dual budgetary
policies--political and PPBS--it must be said that the budget process has failed to provide a smooth interactional process through which budgetary needs and limitations are to be mutually understood. As a result, the quality of budget allocations has suffered considerably. The majority of the administrators were seriously critical of the budget planning and management process. Most viewed the College support of PPBS merely as a gesture of valuing apolitical budget efficiency and rationality. The disregard for the much advocated PPBS, the regular annual process of reallocation of funds from overfunded units to underfunded ones, and the inconsistent and divided budgetary policies and practices at the College made many administrators very critical of the budget process (one cannot help but wonder if administrators do not always complain about budgeting).

In regard to the strength of the political process at the College, PPBS seems to be basically an incompatible budgetary method. The College may realize an overall greater efficiency and practicality by strengthening its political budgetary processes and by gradually phasing out PPBS. By broadening the political process, the College can coordinate its policies and strategies with the forces affecting the process. Although such an approach is already in use, it is only partially so, it is disorganized, and it is understood by only a few administrators and within a closed environment. Participation will help the College collect its presently divided efforts to formulate better financial and administrative policies in a more democratic environment. As Schultze contends, "the political tool of decision
making—bargaining, advocacy, negotiating, and compromise—are the means by which workable agreements are made amid conflicts about values and interests" (1968, p. vii). Thus, the College may directly interject educational values and administrative concerns into institutional policies.

The political process is by no means inconsistent with quality decision making. Rather, politics should be viewed as the context within which quality decisions must be made. The process of decision making should incorporate debates on matters about which judgments are necessary to open up superior alternatives and to diminish hasty and inferior solutions. Schultze argues

It may, indeed, be necessary to guard against the naivete of the system analyst who ignores political constraints and believes that efficiency alone produces virtue. But it is equally necessary to guard against the naivete of the decision maker who ignores resource constraints and believes that virtue alone produces efficiency (1968, p. 76).

Success and efficiency in a political environment require well designed and implemented budgetary strategies to sustain or increase the amount of resources available. As Wildavsky maintains, "strategies are the links between the intentions and perceptions of the budget officials and the political system that imposes restraints and creates opportunities for them" (1974, p. 63). Effective strategies usually are the products of a well coordinated system that is well informed, planned, and organized. Political factors and powers ought to be identified and proper strategies developed. Adequate and effective lines of communication are essential in securing the efficiency of strategic moves since they "take place in a rapidly changing environment
in which no one is quite certain how things will turn out, and new goals constantly emerge in response to experience" (Wildavsky, 1974, p. 64).

The interviews and the author's overall observation of the budget process indicated a need for a limited budgetary reorganization of the College if effective strategies are to be developed. One major problem observed was a lack of coordination and a clustering of closely related functions. Concentration of administrative responsibilities in a certain unit/office created confusion in the bureaucratic structure of the College. Since community colleges are bureaucratic in nature (Baldridge, Curtis, Ecker, and Riley, 1978), the decision making at the College should be within a formal hierarchical structure with a clearly defined and delegated authority and with formal channels of communication. The advantages of a bureaucratic system seem to be undermined in parts of the administrative structure of the College, particularly where functions are over-concentrated. A reorganization may prove effective in reducing the budgetary problems, planning inadequacies, and obscure patterns of communications.

The Pima Community College organizational chart, as presented in the five-year master plan (see Appendix A), does not include a position of vice president for finance although such a position appears to have been created recently. The present organizational structure has delegated the responsibility for budget planning and management to the vice president for administrative services; but, as declared by the master plan (p. 121), the task of budgeting is to be managed by a director. Budgetary affairs and decisions seem to consume an overwhelming
share of the time and attention of the current vice president and his staff. Judging from the present organizational structure and the direction of the master plan, the desired responsibility for budget management is yet to be realized. The author believes that separation of the office of vice president for administrative services from financial affairs may be desirable for two major reasons. First, from a bureaucratic point of view, this would create a clear distinction between the two realms of responsibilities. It also would establish a more formal and desirable hierarchical representation of the administrators in the College. Thus, planning and decision making processes and communication channels would become distinctly defined, managed, and controlled.

Second, from a political standpoint, this would detach most all budgetary decisions from other administrative concerns. It would give more power and authority to the chief fiscal officer and allow that person to analyze institutional policies independently and translate them into resource allocation priorities.

Also, the recently created vice presidency for fiscal planning and development (not foreseen in the master plan) would function more efficiently if this position were assigned the power of coordination and supervision over the three other independently managed planning offices presently in operation. Otherwise, the reasons for creating such a position are seriously questioned. The merging of budgeting and planning is a sound strategy. One office should coordinate the College's overall planning policies with those of the budgeting office. Divided and disorganized planning and budgeting within a political
framework results in what Wildavsky calls "sheer guesswork" (1974, p. 64). The College needs effective budgetary and organizational strategies. It should identify the related budgetary targets and develop appropriate plans accordingly.

When dealing with the Board of Governors or State legislators, the College may gain greater budgetary success by not seeking to "sell" its processes as comprehensive and objectively based. A political environment calls for effective lobbying to represent the interests of the constituents and to portray the system effectively. Although according to Gove and Carpenter (1977) lobbying attempts to monitor or influence educational policies at the state level are not as well depicted and analyzed as those at the federal level, Anderson (1976) and Sandage (1975) report that such attempts in Florida and Indiana have been considered effective by both legislators and lobbyists. Among effective attributes of lobbying, as reported by Anderson (1976), are objectivity, factualness, and professionalism.

The results also indicate that the bases for budgetary strategies at the College should vary according to the level of administration, the political powers of administrators, and the size of their units. The higher the administrative level, the more politically based budgetary strategies should be utilized. When dealing with department heads on issues of reallocation of resources, less political and more rational and factual strategies should be considered, yet political considerations must be included. Although department heads often tend to perceive budgeting more on apolitical bases, their political power
is a significant factor in determining the internal budget policies of the institution. Pfeffer and Salanick (1974) suggest that the amount of resources allocated to departments is usually directly related to the political power held by that department. The rational approach seems to be most appropriate to most department heads, but "the more powerful the department, the less the allocated resources are a function of departmental workload, and student demand for course offerings" (Pfeffer and Salanick, 1974, p. 135). Internal budget strategies must be approached on a case-by-case basis depending upon the characteristics of a given department and the budgetary issue in question.

Campus and associate deans can be of great value to the College in implementing budgetary policies. In a large multi-campus college, the distance between department heads and top-level administrators is great. Deans are the critical linkages between the top administrators and department heads. Deans are the transition point between the top-level administrators' political rationality and the department heads' more objective rationality. Their dual exposure and transitory position between the two viewpoints, coupled with their close and personal knowledge of the departments, make them the pivotal administrators as far as the implementation of budgetary strategies are concerned.

**Recommendations**

Based on the conduct and findings of the study, the author sets forth the following recommendations:

1. The study should be duplicated utilizing other higher education institutions of different sizes and types in order to
ascertain the validity and generalizability of the findings. The budget process examined may not be a true representation of the prevalent budgetary processes at other institutions. Factors such as history and tradition, institutional financial health, state funding criteria, and management style, among many others, may have considerable effects on the budget process.

2. The interview should be reviewed and reconstructed to guard against interviewer biases and to obtain even more valid and insightful data. The interview guide may have contained the author's hidden biases. A reconstruction of the interview guide and also the method of examining the concepts may prove effective.

3. Members of the Board of Governors should be interviewed. The Board of Governors are key linkages between the institution and the state legislators. They may possess considerable powers over the institution's financial policies and budgetary practices. Their budgetary perceptions and philosophies may help researchers interpret the budget process more comprehensively.

4. A series of interactive discussions among the subjects should be conducted after formal interviews are completed. Such discussion may probe into budgetary issues unknown to researchers and thus neglected during the course of the interview. Also, it may provide an opportunity for some interviewees to discuss further their perceptions or to readdress the issues in a different light. This would increase the validity and reliability of the study.
5. Direct observation of budget meetings, if possible, should be included to verify specific approaches to the budgetary issues and the bases for budget allocations. Although some budgetary decisions are made among individuals and in private, others are made more openly in budget meetings. Empirical knowledge of such meetings may provide further information about specific budgetary issues and approaches not discussed during the interviews.
APPENDIX A

PIMA COLLEGE ORGANIZATIONAL CHART
## Pima County Community College District

### Proposed Budget - Fiscal Year 1981-1982

#### All Funds by Revenue Source

<table>
<thead>
<tr>
<th>Revenue Source</th>
<th>Current Operating Funds</th>
<th>Combined Plant Funds</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fund Balance Forwarded</td>
<td>$ 3,777,558</td>
<td>$2,003,000</td>
<td>$ 5,780,558</td>
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<tr>
<td>District Tax Levy</td>
<td>12,075,472</td>
<td>713,775</td>
<td>12,789,247</td>
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<td>State Aid</td>
<td>6,079,740</td>
<td>1,431,000</td>
<td>7,510,740</td>
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<td>Tuition and Fees</td>
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<td>6,175,868</td>
</tr>
<tr>
<td>Auxiliary Enterprise Sales</td>
<td>1,515,000</td>
<td>-0-</td>
<td>1,515,000</td>
</tr>
<tr>
<td>Other Revenue</td>
<td>375,697</td>
<td>474,500</td>
<td>850,197</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td><strong>$35,897,500</strong></td>
<td><strong>$4,622,275</strong></td>
<td><strong>$40,519,775</strong></td>
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APPENDIX C

INTERVIEW GUIDE
Interview Guide

(To be read by interviewer) My name is Reza Tehrani. I am a Ph.D. candidate at the University of Arizona, currently working on my dissertation in higher education finance. I am studying how resources are allocated within the operating units of colleges and universities. President Manilla has authorized this study and has given me permission to interview.

Before proceeding, let me assure you that anything you say will be treated in the strictest confidence. Nothing you say will be identified as your statement. Furthermore, there will be no connection made between your statements and your unit. Do you have any questions or reservations about this? Do you desire any additional assurances? May I use a tape recorder during this interview?

General View

Let me begin then by asking your general view of the internal resource allocation process at Pima Community College.

1. Do you think the process is working well? That is, are you satisfied with the process and the outcomes? Why or why not?

2. Please describe the budgetary process as it involves your administrative or academic unit. In other words, tell me how the process works. (Note: The interviewer will determine whether the interviewee is describing merely the mechanics or whether he/she is
describing the total process, including any political or personal aspect of the process.)

3. (Assuming that the interviewee discusses only the mechanical aspects, the interviewer will continue with the following.) You have described the mechanics of the process. If the process is, in part, not purely mechanical, describe the interpersonal aspects, the parts of the process that are not simply mechanical. That is, how is the determination of how much your unit will get really made? How important are your own actions and activities in gaining budget increases or in minimizing reduction? How do some units get more or less than others?

4. Who are the key people, the powers that be in the budgetary process? Who are the real decision makers? Is it important to gain anyone's good will?

5. To what extent do your enrollments and enrollment changes affect the size of your budget? How? To what extent?

Incremental/Nonincremental

6. What is the primary base for determining this year's budget? To what extent is your budget for the last year considered in the determination of your budget for the next year?

7. Is reference made to last year's budget amount?

8. How important is last year's amount in setting this year's amount?

9. In determining your budget amount, do those above speak of percentage increase or total dollars?
10. How difficult would it be to gain funds above a 10 percent to 30 percent increase? How difficult would it be to be granted a budget that was totally independent of last year's budget?

Fairshare/Need-Based

11. How would you describe the budgetary amount received by your academic or administrative unit compared to other comparable units?

12. Is your budget for this year what you expected to get? Why? Do you think your budgetary amount is at a relatively comparable level to similar units? Comment please.

13. Do you think the budget of your unit increases or decreases in accordance with that of other units? To what extent? What if your enrollments were to drop by a third?

Simplified/Objectively Formulated Based Upon Cost-Benefit Analysis

14. If you were to describe the process and mechanics of resource allocation particularly in the areas that are highly technical and specialized, how would you identify the process? That is, how are the technical specialized areas handled? How do those above you know how much to give?

15. How do the key people in charge of resource allocation deal with issues that are outside their expertise, such as managing the computer center? How do they deal with making allocation when they lack knowledge as to what are areas of costs?

16. If you had to label the process, what would you call it?
17. In your unit, how do your superiors judge the amount to be budgeted for highly technical and complicated items or programs for which they lack expertise?

Experiential/Objective

18. Suppose your unit were to start a completely new program quite unlike any you presently have. How would you formulate your budget estimate?

19. In the lack of any, or adequate, data, how do you think the key people determine the budgetary amount of an item or a program? What criteria do they use?

Specialized/Non-Specialized

20. Who are the real budget experts in the college? Are there others in the college who could do their job? Why or why not?

21. Would you consider yourself competent to evaluate the budget of other units, for example, a unit of the occupational programs or the office of the Vice President for Business Services? Why or why not?

22. Would you consider others competent to evaluate the budget of your unit? Please comment.

Historical/Independent of Past Practice

23. Suppose you have a new member of less than a year in your academic or administrative unit. It is time to submit your annual
budget request, and you are on leave. Would you allow such a person to prepare the budget for your unit? Why? Why not? Comment please.

24. Suppose this person has recently joined those above you for a very short time and is assigned to review and decide on your budget request. What would be your reaction? Comment please.

25. Suppose you were heading a highly technical program that few could understand. Do you think you could ask for twice or three times your regular budget amount under the pretext of its complexity and get away with it? Why? Why not? Comment please.

26. If a faculty member brings up such a similar request and excuse, how would you be able to judge his request? Comment please.

Satisfice/All-or-None

27. Suppose a conflict developed between you and a parallel administrator over who would get a modest amount of money to support new rival programs. How do you think the decision maker (your superior) would resolve the matter? Do you think he/she would

a. favor your unit?

b. favor your colleague's unit?

c. try to keep you both somewhat happy by given some of the money to each of you? Have such occurrences happened? What was done?

28. Suppose you were the decision maker and two subordinates were those in the conflict. How would you resolve the dispute? Which tactic would you follow: a, b, or c? Have such occurrences happened? What did you do?
29. Suppose that you could make an extremely strong case for new funds. Would you expect to get as much new money as circumstances called for or a lesser amount? Why? Comment please.

Fragmentary/Wholistic

30. In examining budgetary requests, in your opinion do those above you view the budget primarily as a whole or, rather, on a unit by unit basis? In other words, do you think they take an overall, total college perspective or is their view more one of whether each unit's budget makes sense in and of itself? Discuss please.

31. Are there individuals or groups—perhaps committees—that examine pieces of the budget, such as the budget for the administration, for occupational programs, or a given campus or are the examiners responsible for the entire institution?

Repetitive/Solved

Once and for All

32. Can you think of budgetary requests you have submitted several times, for example, for a new position or new equipment? What was the outcome? Reflect on what really happened please.

33. Would you say this is typical or would you say that a more-or-less definite NO answer was given? Have you received most requests the first time asked for?

Sequential/Simultaneous

34. Suppose that a whole host of budgetary issues and problems arose at the college this year: urgent needs for new money in several
areas, enrollment decline, lots of worn-out equipment, need to expand a particular campus, etc. Would you anticipate that the administration and Board would try to address all or most of these issues this year or put some off?

35. Might you expect to find these problems to be assigned to departments or committees for study?

Non-Programmatic/Programmatic

36. If there is a disagreement among budgetary decision makers over where to cut or where to add, is it basically a matter of cost or a difference in philosophy?

37. When key people in resource allocation add to or eliminate a part or all of a program, do you think the fundamental reason is usually money or is it a difference on which programs are important?

38. In your own unit, when you view budgetary decisions, how do you deal with programmatic concerns on the one hand and monetary constraints on the other? Can you think of a case where conflict occurred, such as in the last cut? Describe please.
<table>
<thead>
<tr>
<th>TO (DEBIT)</th>
<th>FROM (CREDIT)</th>
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<tbody>
<tr>
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**REQUEST FOR BUDGET ADJUSTMENT**

**PIMA COUNTY COMMUNITY COLLEGE DISTRICT**

**Fiscal Control Use Only:**

**APPROVALS:**
- ASSOCIATE AREA DATE
- CHIEF FISCAL OFFICER DATE
- ADMINISTRATION UNIT DATE
- BUDGET REVIEW DATE

**DATE:**

**B/A:**

**APR:**

**JA:**

**AMOUNT DOCUMENT REFERENCE**

**FUND LOCAL TIER CHARGE CENTER TITLE**

**DATE:**
### PROGRAM STATEMENT

**FUND:**

**LOCATION:**

**FUNCTION:**

**SUB-FUNCTION:**

**MISSION STATEMENT:**

**DESCRIPTION OF ACTIONS/OPERATIONS:**

### QUANTITATIVE MEASURES

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<td>Services &amp; Supplies</td>
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<td>Capital Equipment</td>
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<td>Institutional Support</td>
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<td>Hourly (Incl. Student Aides)</td>
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</tbody>
</table>
**Pima Community College**

**PROPOSED TITLE:**

**ORGANIZATIONAL RELATIONSHIP:**

**SOURCE/LEVEL OF FUNDS/ACTIVITY:**

**PURPOSE (PROGRAM STATEMENT):**

**ATTACHMENTS PROVIDED:**

- [ ] Request for Budget Adjustment
- [ ] Program Statement

**APPROVALS:**

- **REQUESTOR**  
  **DATE**

- **ASSOCIATE AREA**  
  **DATE**

- **ADMINISTRATIVE UNIT**  
  **DATE**

---

**LEAVE BLANK - FOR OFFICE USE**

| A card | 01 | 05 | 06 | 07 | 08 | 09 | 10 | 15 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 41 | 42 | 43 | 44 | 45 |
|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Charge Center | Function | Location | Unit | Fund | Fund | Org. Code | Func | Assoc. Area | Project | |

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**REV June, 1982**

Approved by __________________________ Date ________
APPENDIX E

PIMA COLLEGE BUDGET SYSTEM AND DEVELOPMENT GUIDELINES
Administrative Services: Budget and System Development

Background. The purpose of the Office of Budget and System Development is to develop and analyze capital and operating budgets for all funds and financial planning to ensure financial integrity of the College and to maintain the financial flexibility within which the College will seek to achieve its stated goals and objectives. The Director of Budget and System Development is responsible for developing and managing a comprehensive program for the improvement of existing systems and the development of new systems thereby facilitating the activities of Administrative Services' operating units.

Present Status. The Office of Budget and System Development consists of a Director and a secretary and operates with extensive support from the Computer Center. Particular attention is paid to coordinating activities with the Office of Comptroller to insure consistency between the presentation of budget/management and financial data.

Evaluation. The FY 81-82 Budget Development Process represented the second year in a three-year implementation of Program Budgeting. Significant improvements occurred during the most recent budget process with increased user involvement and satisfaction and higher precision in the ability to perform financial forecasting. Formal quarterly financial/management reports were introduced for the first time during FY 80-81.
Recommendations. The following recommendations are set forth:

1. Within one year, the Director of Budget and System Development will acquire word processing capability to reduce reliance on temporary clerical help and increase capability to disseminate financial information;

2. Within one year, the Director of Budget and System Development will complete the implementation of Program Budgeting; and

3. Within two years, the Director of Budget and System Development will complete implementation of an integrated Financial Information System (FIS).
APPENDIX F

PIMA COLLEGE BUDGET DEVELOPMENT AND ANALYSIS DATA SHEETS
<table>
<thead>
<tr>
<th>Enrollments</th>
<th>FY80-81 Actual</th>
<th>FY80-81 Adopted</th>
<th>FY80-81 Projected</th>
<th>Master Plan</th>
<th>Budget Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. FTSE (45th Day)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>A. Regular</td>
<td>10,178</td>
<td>10,600</td>
<td>10,308</td>
<td>10,900</td>
<td>10,900(a)</td>
</tr>
<tr>
<td>B. Vocational Supplement</td>
<td>3,768</td>
<td>3,875</td>
<td>3,731</td>
<td>3,985</td>
<td>4,033</td>
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<tr>
<td>C. Percentage Vocational</td>
<td>37.02%</td>
<td>36.56%</td>
<td>36.20%</td>
<td>36.56%</td>
<td>37.00%</td>
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<tr>
<td>D. Short-Term</td>
<td>30</td>
<td>n/a</td>
<td>54.8</td>
<td>#</td>
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<td>E. Open Entry/Open Exit</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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<td>2. FTSE-Fund Allocation</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>A. General (Fund 00)</td>
<td>9,863</td>
<td>10,125</td>
<td>9,960.9</td>
<td>#</td>
<td>10,400(a)</td>
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<td>B. Contract (Fund 01)</td>
<td>345</td>
<td>475</td>
<td>401.9</td>
<td>#</td>
<td>500</td>
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<tr>
<td>3. FTSE-Unit Allocation (incl. short-term)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>A. Executive Dean, West Campus</td>
<td>4,691</td>
<td>4,993</td>
<td>4,754.8</td>
<td>#</td>
<td>10,900</td>
</tr>
<tr>
<td>B. Executive Dean Downtown Campus</td>
<td>2,294</td>
<td>2,416</td>
<td>2,304.0</td>
<td>#</td>
<td>10,900</td>
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<tr>
<td>C. Executive Dean, Community Campus</td>
<td>1,702</td>
<td>1,675</td>
<td>1,719.2</td>
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<td>10,900</td>
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<tr>
<td>D. Executive Dean, East Campus</td>
<td>1,491</td>
<td>1,516</td>
<td>1,584.8</td>
<td>#</td>
<td>10,900</td>
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<tr>
<td>4. Student Credit Hours (Assessed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Gross</td>
<td>165,784</td>
<td>169,500</td>
<td>168,990</td>
<td>#</td>
<td>174,000</td>
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<tr>
<td>B. Net (General Tuition Applicable)</td>
<td>149,418</td>
<td>154,000</td>
<td>152,936</td>
<td>#</td>
<td>158,000</td>
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<tr>
<td>5. Headcount</td>
<td></td>
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<tr>
<td>A. 45th Day</td>
<td>21,000</td>
<td>20,400</td>
<td>21,500</td>
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PIMA COUNTY COMMUNITY COLLEGE DISTRICT BUDGET DEVELOPMENT—FISCAL YEAR 1982-1983 ENROLLMENT GUIDELINES
### Appendix F, Continued

<table>
<thead>
<tr>
<th></th>
<th>FY80-81 Actual</th>
<th>Fiscal Year 1981-82 Adopted</th>
<th>Projected</th>
<th>Fiscal Year 1982-83 Master Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B. Gross Assessed</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1-6 Credits</td>
<td>11,485</td>
<td>11,825</td>
<td>11,382</td>
<td>12,100</td>
</tr>
<tr>
<td>7-9 Credits</td>
<td>2,307</td>
<td>2,365</td>
<td>2,519</td>
<td>2,500</td>
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<tr>
<td>10+ Credits</td>
<td>7,157</td>
<td>7,310</td>
<td>7,358</td>
<td>7,400</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>20,949</strong></td>
<td><strong>21,500</strong></td>
<td><strong>21,259</strong></td>
<td>#</td>
</tr>
</tbody>
</table>

**Notes:**

- B. Gross Assessed
  - A. Headcount
    - 1-6 Credits
      - FY80-81 Actual: 11,485
      - Fiscal Year 1981-82 Adopted: 11,825
      - Projected: 11,382
      - Fiscal Year 1982-83 Master Budget: 12,100
  - B. Student Credit Hours
    - FY80-81 Actual: 11,485
    - Fiscal Year 1981-82 Adopted: 11,825
    - Projected: 11,382
    - Fiscal Year 1982-83 Master Budget: 12,100

**Notes:**

- **6. Summer Session (Assessed)**
  - **A. Headcount**
    - FY80-81 Actual: 3,927
    - Fiscal Year 1981-82 Adopted: 3,255
    - Projected: 4,162
    - Fiscal Year 1982-83 Master Budget: #
  - **B. Student Credit Hours**
    - FY80-81 Actual: 16,745
    - Fiscal Year 1981-82 Adopted: 13,848
    - Projected: 18,480
    - Fiscal Year 1982-83 Master Budget: #

---

*Actual for Summer Session and the Fall Semester.

#Concept not addressed in Master Plan.

**Notes:**

- **a)** FTSE projections contingent upon the following:
  1. 100 FTSE at West Campus—conversion to classrooms of space vacated in AL Building by relocation of Central Administration staff.
  2. 200 FTSE at East Campus—add 3–4 classrooms to available educational facilities.
- **b)** Subject to final calculation by Office of Educational Services.
### PIMA COUNTY COMMUNITY COLLEGE DISTRICT
### BUDGET DEVELOPMENT—FISCAL YEAR 1982-1983
### REVENUE GUIDELINES

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<tbody>
<tr>
<td><strong>1. District Tax Levy</strong></td>
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<tr>
<td>A. Primary (2% minimum increase plus 5.5% for new construction)</td>
<td>11,734,874</td>
<td>12,075,472</td>
<td>12,750,000</td>
<td>12,571,981</td>
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<tr>
<td>B. Secondary (Equal to FY82-83 debt service requirement)</td>
<td>715,025</td>
<td>713,775</td>
<td>713,775</td>
<td>712,525</td>
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<tr>
<td><strong>2. State Aid</strong></td>
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</tr>
<tr>
<td>A. Regular Support</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1,000 FTSE @ $779 ea (728 x 1.07)</td>
<td>680,000</td>
<td>727,600</td>
<td>728,000</td>
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<td>Balance FTSE @ $504 ea (471 x 1.07)</td>
<td>4,033,524</td>
<td>4,519,680</td>
<td>4,450,950</td>
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<tr>
<td>B. Vocational Supplement</td>
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<tr>
<td>1,000 FTSE @ $311 ea (291 x 1.07)</td>
<td>272,000</td>
<td>291,040</td>
<td>291,000</td>
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<td>Balance FTSE @ $202 ea (188 x 1.07)</td>
<td>490,353</td>
<td>541,420</td>
<td>531,000</td>
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<td><strong>Subtotal</strong></td>
<td>5,475,887</td>
<td>6,079,740</td>
<td>6,001,050</td>
<td>6,689,000</td>
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<td>C. Special Supplement</td>
<td>744,000</td>
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<td>-0-</td>
<td>-0-</td>
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<td>D. Capital Outlay</td>
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<tr>
<td>Total FTSE @ $135 each</td>
<td>1,372,559</td>
<td>1,431,000</td>
<td>1,410,750</td>
<td>1,471,500</td>
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<td>E. East Campus Construction Supplement</td>
<td>n/a</td>
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<td>-0-</td>
<td>500,000</td>
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<tr>
<td><strong>Total Subtotal</strong></td>
<td>8,692,440</td>
<td>8,541,789</td>
<td>8,412,800</td>
<td>8,660,500</td>
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### 3. Tuition, Fees & Course Assessments
(Based on approval of Tuition & Fee Schedule—Section B)

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<tr>
<td>A. General Tuition</td>
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<td>2,205,000</td>
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<td></td>
<td>2,212,000</td>
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<td>FY80-81 Actual</td>
<td>Fiscal Year 1981-82</td>
<td>Fiscal Year 1982-83</td>
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<tr>
<td>------------------------------------</td>
<td>----------------</td>
<td>---------------------</td>
<td>---------------------</td>
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<tr>
<td>B. Other Tuition</td>
<td>1,272,156</td>
<td>1,200,000</td>
<td>1,348,000</td>
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<td>C. Registration Fees</td>
<td>2,134,624</td>
<td>2,135,000</td>
<td>2,359,196</td>
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<td>D. Summer Session (Tuition and Processing Fee)</td>
<td>474,640</td>
<td>408,873</td>
<td>542,910</td>
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*Concept not addressed in Master Plan.*

(a) Subject to final calculation of enrollment guidelines by the Office of Educational Services.
### PERSONAL SERVICES

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<th>FY 80-81</th>
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<td></td>
<td>Actual Amount</td>
<td>Actual Percent</td>
<td>Adopted Amount</td>
<td>Projected Budget</td>
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<tr>
<td>Salaries &amp; Wages:</td>
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<tr>
<td>Faculty</td>
<td>$5,259,572</td>
<td>29.55%</td>
<td>$6,545,525</td>
<td>$6,325,000</td>
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<tr>
<td>Institutional Support (Staff)</td>
<td>$4,305,160</td>
<td>24.19%</td>
<td>$4,760,142</td>
<td>$4,350,000</td>
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<tr>
<td>Other Compensation</td>
<td>$632,929</td>
<td>3.56%</td>
<td>$494,600</td>
<td>$600,000</td>
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<td>Associate Faculty/Instructors</td>
<td>$2,930,806</td>
<td>16.47%</td>
<td>$2,700,000</td>
<td>$2,375,000</td>
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<td>Student Aides</td>
<td>$423,533</td>
<td>2.38%</td>
<td>$217,836</td>
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<td>Fringe Benefits</td>
<td>$13,552,000</td>
<td>76.15%</td>
<td>$15,218,103</td>
<td>$14,375,000</td>
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<td>TOTAL</td>
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<td>83.99%</td>
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<td>$16,475,000</td>
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</table>

### SERVICES & SUPPLIES

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<th>FY 78-79</th>
<th>FY 79-80</th>
<th>FY 80-81</th>
<th>FY 81-82</th>
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<tbody>
<tr>
<td></td>
<td>Actual Amount</td>
<td>Actual Percent</td>
<td>Adopted Amount</td>
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<td>Communication &amp; Utilities</td>
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<td>$1,123,300</td>
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<td>Contractual Services</td>
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<td>3.11%</td>
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<td>Supplies and Materials</td>
<td>$668,257</td>
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<td>Current Fixed Charges</td>
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<td>$3,136,013</td>
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<td>$3,660,351</td>
<td>$3,675,000</td>
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## Appendix F, Continued

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<th>FY 79-80 Actual</th>
<th>FY 80-81 Adopted Budget</th>
<th>FY 80-81 Projected Budget</th>
<th>FY 81-82 Adopted Budget</th>
<th>FY 81-82 Projected Budget</th>
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<tbody>
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<td><strong>OTHER EXPENDITURES</strong></td>
<td></td>
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<td>Expense Transfer &amp; Reimbursement</td>
<td>-0- 0.00</td>
<td>-0- 0.00</td>
<td>(229,289) 1.05</td>
<td>(450,000) 2.26</td>
<td>(526,478) 2.19</td>
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<tr>
<td>Transfers - To</td>
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<td>(960,865) 5.39</td>
<td>100,203 0.46</td>
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<td>255,000 1.06</td>
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<tr>
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<td>(250,000) 1.26</td>
<td>(360,000) 1.50</td>
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<td><strong>CONTINGENCY &amp; RESERVES</strong></td>
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<td>Operating Reserves</td>
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<td>-0-</td>
<td>-0-</td>
<td>100,000 0.42</td>
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<td>(Reserved)</td>
<td>-0-</td>
<td>946,363 4.33</td>
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<td>0.00</td>
<td>2,000,000 8.30</td>
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<td>$17,796,229 100.00%</td>
<td>$17,820,388 100.00%</td>
<td>$21,845,731 100.00%</td>
<td>$19,900,000 100.00%</td>
<td>$24,100,000 100.00%</td>
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PIIMA COUNTY COMMUNITY COLLEGE DISTRICT, PROPOSED BUDGET, FISCAL YEAR 1981-1982
Designated Fund, Analysis by Object, Fiscal Year 1978-79 - 1982-82

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<tr>
<th>PERSONAL SERVICES</th>
<th>FY 78-79</th>
<th>FY 79-80</th>
<th>FY 80-81</th>
<th>FY 81-82</th>
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<tr>
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<tr>
<td>Faculty</td>
<td>$22,538</td>
<td>$29,489</td>
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<td>158,415</td>
<td>112,814</td>
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<td>83,965</td>
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<td>34,109</td>
<td>38,000</td>
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<td>558,904</td>
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<tr>
<th>SUPPLIES &amp; SERVICES</th>
<th>FY 78-79</th>
<th>FY 79-80</th>
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<th>FY 81-82</th>
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<tr>
<td>Communication &amp; Utilities</td>
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<td>82,607</td>
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<th>FY 79-80</th>
<th>FY 80-81</th>
<th>FY 81-82</th>
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<tr>
<td>Capital Equipment</td>
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<td>2,562</td>
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<td>16,500</td>
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### Appendix F, Continued

<table>
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<th>FY 79-80</th>
<th>FY 80-81</th>
<th>FY 81-82</th>
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<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Actual</td>
<td>Adopted</td>
<td>Projected</td>
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<tr>
<td></td>
<td>Amount</td>
<td>Percent</td>
<td>Budget</td>
<td>Amount</td>
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<td>MANDATORY AND NON-MANDATORY TRANSFERS</td>
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<td>(241,736)</td>
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<td>Operating Reserves</td>
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<table>
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<tr>
<th>Adopted Budget</th>
<th>Adjusted Budget</th>
<th>YTD Expend/Encumb Amount</th>
<th>Percent</th>
<th>Calculations</th>
<th>Budget Request</th>
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<tbody>
<tr>
<td>Staff-Classified</td>
<td></td>
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<tr>
<td>5131 Staff-(GRP03)-Office/Clerical</td>
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<td>30,494.65</td>
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<td>Subtotal</td>
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<tr>
<td>4,950.00</td>
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**EXPENDITURES** DEBIT/(AMT) X (+1)
Appendix F, Continued

<table>
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<th>Fringe Benefits</th>
<th>Adopted Budget</th>
<th>Adjusted Budget</th>
<th>YTD Expend/Encumb Amount</th>
<th>Percent</th>
<th>Calculations</th>
<th>Budget Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fringe Benefits</td>
<td></td>
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<td>Disability</td>
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Services and Supplies
Communications and Utilities
### Appendix F, Continued

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<th>Adjusted Budget</th>
<th>YTD Expend/Encumb Amount</th>
<th>Percent</th>
<th>Calculations</th>
<th>Budget Request</th>
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<tbody>
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<td>Adjusted Budget</td>
<td>YTD Expend/Encumb Amount</td>
<td>Percent</td>
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<tr>
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<td>----------------</td>
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<td><strong>Subtotal</strong></td>
<td>4,100.00</td>
<td>3,880.00</td>
<td>1,049.78</td>
<td>69.94</td>
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**EXPENDITURES** (DEBIT/(AMT) X (+1))

- 1500 Public Hearing Notice
- 1500.00 incl minor equip < $250
- 2000
- 3517.00

02-290-15190  PAGE 4
### Appendix F, Continued

#### **CURRENT FIXED CHARGES**

<table>
<thead>
<tr>
<th>Current Fixed Charges</th>
<th>Budget</th>
<th>Adjusted Amount</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5400 Current Fixed Charges</strong></td>
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<tr>
<td><strong>Budget</strong></td>
<td>20.00</td>
<td>20.00</td>
<td>16.00</td>
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<td>Subtotal</td>
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<td>16.00</td>
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<td><strong>Subtotal</strong></td>
<td>9,536.00</td>
<td>9,411.00</td>
<td>6,574.54</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>63,000.00</td>
<td>65,375.00</td>
<td>55,473.99</td>
</tr>
</tbody>
</table>

**Calculations**

| **BRQ604(00468)** | **03/29/82 14:53:50** | **PAGE 5** | **5 EXPENDITURES** (DEBIT/(AMT) X (+1)) |

Prepared by: Associate Area Representative

Approved by: Administrative Unit Head
References


Dilly, Frank B. "Program Budgeting in the University Setting." *The Educational Record,* No. 4, 1966.


