

RATIONAL SYSTEM OF BUDGETING

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Abstract

A budget is a comprehensive, formal plan, expressed in quantitative terms, describing the expected operations of an organization over some future time period. Budget systems should be designed to help – but not to replace – those who prepare, justify and make decisions on budgets. This article offers an assessment of the two rational systems of budgeting. The article shows that both systems are useful tools for planning and control. Nevertheless, the practice indicated that there are many limitations that emerged from the implementation of the systems.

Key Words: Budgeting, Zero base Budgeting, Planning Programming Budgeting System, Decision Making.

Introduction

The central figure in the rational model of budgeting is the rational man, a figure very similar to the classical economic man. The modern man will select the most efficient option, the option that maximizes output for a given input. It is not just efficiency or purpose that gives the contemporary rational model its “rigour”. What rationality adds to the “concept of purpose is the concept of consistency”, e.g., consistency among goals and objectives relative to a particular action and consistency in the application of principles in order to select the optimal option (Allison, 1971). The aim of this article is to discuss the implementation steps, benefits and limitations of each of the system.

Planning Programming Budgeting System

The Planning Programming Budgeting System was first developed in the government sector in the U.S. Department of Defense at the instigation of the RAND Corporation in the early nineteen sixties (Douglas, 1995). In August 1965, President Johnson ordered the implementation of PPBS throughout the U.S. Federal Government (Gray, 1979). In his statement to Cabinet Members and Agency Heads he was a little more precise in claiming potential benefits from PPBS:- “It will enable us to:-

1. Identify our national goals with precision and on a continuing basis.
2. Choose among those goals the ones that are most urgent.
3. Search for alternative means of reaching those goals effectively at least cost.
4. Inform ourselves not merely on next years’ cost, but on the second and third and subsequent years’ costs for our programs.
5. Measure the performance of our programmes to ensure a dollar’s worth of service for each dollar spent.

Peterson (1971) described PPBS as attempting to provide a rational framework to join planning, management, and operational control with the budgeting and information system. Castello (1973) described PPBS as a refinement of existing procedures rather than a new approach. It assesses the total costs and benefits, both current and future, of various options. It also endeavors to determine rates of return on the programmes. Freeman and Shoulders (1999) Stated that PPBS emphasizes long-range planning in which (1) ultimate goals and intermediate objectives must be explicitly stated, and (2) the costs and benefits of major alternatives courses to achieve these goals and objectives are to be explicitly evaluated – in quantitative terms where practicable and narratively in all cases. PPBS relates three factors: a desired outcome (planning), the structuring of methods of achieving the outcome (programming) and the funds available to accomplish the end result (budgeting), (Garbutt and

Minnier, 1974) (Douglas, 1995). It is based on the dominance of the planning function and attempts to make government operations more efficient and effective by improving the allocation of public resources between competing needs.

The Sequence

PPBS comprises a sequence of stages (LAMSAC, 1972):-

Stage 1: Identification of Strategic Problems. An authority needs an information system that informs it of new or changing problems in the environment and about how effectively it is performing its current activities so that the need for policy changes is clearly recognized.

Stage 2: Definition of Objectives. Once an authority has understood the nature of the problem facing it, it should decide its objectives. Unless an Authority has explicit objectives, it has no yardstick against which to judge the effectiveness of alternative policies.

Stage 3: Preparation of the program structure. The program structure breaks down each major objective into sub-objectives, and arranges groups of activities (programmes) under them that contribute to the attainment of each objective. The program structure proceeds from objectives at the top through sub-objectives and programmes, to detailed activities at the bottom. Programmes may be complementary or provide alternative ways of meeting objectives.

Stage 4: Program Analysis. Once the full range of programmes for meeting an objective has been arrayed, it is necessary to assess the effectiveness of each in meeting the objective. The Authority may be looking for the program that gives the best performance for a fixed sum of money, or for the program that gives a specified level of performance at a minimum cost.

Stage 5: The Corporate Plan and Program Budget. If the procedure so far described is to influence Local Authority policy and planning, it must be firmly linked to the budgetary process. This is done through the “corporate or program plan” and the associated program memoranda. This is a statement of all the resource costs and expected output of an Authority’s programmes for the next and subsequent years.

Stage 6: Implementation and Monitoring of Performance. The information on output contained in the corporate plan and in background papers is a guide to those charged with implementing policies, and provides members and senior officers with target against which they can check actual performance.

Limitations

Freeman and Shoulders (1999) identified six limitations that prevent implementing the PPB system:

1. It is quite difficult to formulate a meaningful, explicit statement of a government's goals and objectives that can be agreed upon by all concerned.
2. Not only goals change, but elected officials in particular, often prefer not to commit themselves to more than very general statements lest they be precluded from changing their positions when politics dictates.
3. The time period considered relevant by an elected official may be limited to that remaining prior to the expiration of his or her current term of office—resulting perhaps, at least subconsciously, in a greater interest in short-run costs and results than in long-run costs or results.
4. PPBS assumes both an adequate data base and a high level of analytical ability to be readily available to the government. Relatively few states or local governments have sophisticated program data or the luxury of sophisticated staff analysis.
5. It is difficult to measure the achievement of the objectives since both costs and benefits, over a period of several years, must be estimated. Both are often quite difficult to measure and the ratio or relationship between two such estimates is apt to imply far more precision than actually exists.
6. Despite its planning strengths, the PPBS focus on program differs from the departmental object-of-expenditure control orientations of most legislatures and chief executives. Indeed, many of these officials view PPBS as a threat to their “power of the purse strings”

Zero Base Budgeting

In the late 1960s, the concept of zero-base budgeting was introduced. This gained much recognition in both public and private sectors. The idea was proposed by President Carter in 1977 to various Federal Agencies as a modification of the more conventional budgeting procedures presently followed by those Agencies.

Zero-base budgeting is a budget-planning procedure for the reevaluation of an organization's program and expenditure. It requires managers to justify the entire budget request in detail and places the burden of proof on the managers to justify why authorization to spend any money at all should be granted (Matz & Usry, 1980). Zero-base budgeting requires that old programmes compete on an equal footing with new programmes. Priorities are established each year, and changes in the budget necessitate a realignment of resources in accordance with changing priorities (DeCoster and Schafer, 1976). Under ZBB, a program's existence is not guaranteed; in each budget cycle the program manager starts over from “zero” and projects various levels of expenditures at which a given program or service could be offered (Douglas, 1995). Morden (1986) states that zero-base budgeting forces managers and administrators to consider different ways of achieving their objectives and makes them justify the activities that they currently undertake. It can therefore have the potential to make a significant contribution to the achievement of the more rigorous budgetary planning and control that are now prerequisites of contemporary administrative environments.

The following steps compose the basic elements of zero-base budgeting:-

1. Establish goals and objectives. The zero-base involves all levels of management starting at the top. Top management

must initiate the preparation of budgets by providing guidance as to the goals and objectives of the organization. This initial top-down communication is crucial to the rational budgetary process. Top level management will first communicate the goals and objectives of the organization to the lower levels of management. Lower level will then specify to top management the programmes that they believe most appropriate in achieving the goals and objectives of the organization. Thus without the early development and communication of the goals and objectives by the top levels of management to the lower levels, the planning and budgeting process cannot work effectively.

2. Identify decision units. The development of the “decision packages” is crucial to the zero-base process. These decision packages serve as the blocks of the process. They provide a description and evaluation of each decision unit subjected to management review. The decision unit has to be defined for each organization so that it can be isolated for analysis and decision making. It is important to note that decision units are literally decision “units” – units of activities that can be analyzed and in which discretionary decision can be made. Ideally a decision unit should have the following characteristics (Jones and Pendlebury, 1984):
 - (a) A specific manager should be clearly responsible for the operation of the program.
 - (b) It must have a well defined and measurable impact.
 - (c) It must have well defined and measurable objectives.
3. Development of decision package. A decision package is a document that identifies and describes discrete activities, function, or operation in such a manner that management can evaluate it and rank it against other activities competing for limited resources and decides whether to approve or not support it. Decision package therefore, must provide management with all the necessary information for such evaluation.
4. Rank the decision packages. The ranking establishes priorities among the functions described in the package. All levels of management become involved in the ranking process. Since all packages are compared and ranked against all others, management can feel assured that it is funding the most important packages, whether ongoing or new.
5. Allocate funds accordingly. Top management can allocate funds to highest priority packages until the limit in spending is reached.

Numerous benefits have been attributed to the zero-base budgeting process. Peter Pyhrr (1973) identified several of these benefits, based on his work at Texas Instruments: (Reed, 1985)

1. The identification, evaluation, and justification of all activities promoted a more effective allocation of resources.
2. Top management had greater flexibility in budgeting because activities were presented in consolidated rankings.
3. New programs could be more readily funded by eliminating or reducing current activities.
4. Duplications of effort, improper planning, and poor coordination could be more easily identified and corrected.
5. Revisions in expenditure levels or particular decision packages could be effected without altering the entire budget.
6. Workloads and costs contained in the approved decision packages subsequently provided on the basis for control.
7. Managers continued to evaluate the efficiency and cost effectiveness of their activities during the operating year.

Minmier cited three advantages that resulted from the employment of ZBB in Georgia (Reed, 1985):

1. A financial planning phase was established prior to the preparation of the budget. In the past planning and budgeting activities had been conducted concurrently.
2. The quality of management information improved and greater insight was provided into the function of state government.
3. Personnel at the activity level furnished input for the budget process.

Limitations of ZBB

Several hundred public officials from four cities and four states participated in a field study conducted by the Urban Institute to assess the implementation of ZBB. The study revealed the following points: (Schick and Hatry, 1982)

1. ZBB encourages the consideration of alternative funding levels for individual programs and individual agencies. It does not; however, appear to encourage the identification of new and better ways to provide services.
2. We found no significant evidence that ZBB is a tool for improving efficiency.
3. ZBB promises change but delivers continuity. This is not due to problems in implementation; ZBB has been tried. It has not succeeded in producing this expected result. Budget systems seem biased in favor of program continuation.
4. ZBB, despite its name, is still primarily a budgeting system that focuses on increment.
5. Expediency rather than efficiency usually determined the below-base budgets.
6. The perception of below-base budgets as devices for reducing expenditure converted ZBB into decremental budgeting.
7. ZBB lacks a planning-analytical stage for developing and promoting new ideas.
8. Despite the lack of evidence of significant impacts on important allocation decisions, substantial proportions of the managers felt that ZBB enabled their units to more rationally allocate resources and to more rationally cut activities.
9. ZBB encourages participation by operating managers in the budget process.
10. Paperwork and budget preparation time increased, but ZBB sites appear to have curbed it, at least after the initial year of operation. These did not appear to be major problems.
11. Many respondents in ZBB sites reported improvements in their understanding of activities in their units and perceived that they had additional influence over their budgets.
12. Despite the potential usefulness of the ranking process, we did not find the rankings used much to alter existing priorities.
13. ZBB does not appear to have significantly improved the quality of information available to help public officials in making resource allocation choices.
14. There was evidence, however, that ZBB can encourage the development of improved information system. A number of sites were attempting to improve their information on program performance. Those sites which appeared to make most substantial use of the budget system to affect resource decisions had substantial performance information available.

Selecting an Appropriate System

Freeman and Shoulders (1999) pointed out that designing an appropriate system requires (1) knowledge of the various gener-

al systems that have been developed, (2) insight into the history and activities of the organization in question and the attitude and capabilities of its personnel, in order to assess the proper planning-control-evaluation balance to be sought, (3) originality in combining the strength of the PBBS and ZBB systems, while avoiding their weaknesses, and (4) patience in system design and implementation and the ability to adapt the system to change circumstances. Experimentation with PPBS and ZBB analysis is highly desirable in the hope that they will be suited or adaptable to state and local government needs.

In this field, Douglas (1995) stated that while ZBB and PPBS systems have been implemented at various levels of government, none has been used with continuing success. They are difficult to understand and, with understanding, easy to manipulate. Most oversight boards tend to revert back to incremental budgeting.

Rege (1986) concluded that both the systems have been extensively used and have received the widest possible publicity. However, experience has shown that these concepts are not as comprehensive as they were initially believed to be.

Finally, Lauth (1985) stated that the budget reforms of recent decades have been aimed at linking both policy analysis and performance evaluation to the budgetary process. PPBS is the best example of an attempt to integrate policy analysis into the budgetary process and ZBB is an example of an effort to link performance evaluation to budgeting.

Summary

Different budgeting systems have been used over the past fifty years to force department heads to follow the rational steps in planning and controlling their budgets. The planning programming budgeting system was developed in the 1960s and is associated with President Johnson's reforms of the military. This system gives importance to long-run consequences of alternative courses of actions. Government and some business organizations started using ZBB in the 1970s. In this system, the budget for any activity at the start of each year is set at zero. Cost/benefit analysis will justify the continuing of the existing program or activity.

The aim of the paper was to describe the two systems of rational budgeting. Both systems were termed revolutionary in that they were both expected radically to influence the financial decision-making of government. Both systems tie costs to benefits by means of cost/benefit analysis and both stress the planning function. The real difference between PPBS and ZBB is the requirement of ZBB to formally rank-order (prioritize) all programmes and activities. This was never a requirement of PPBS.

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