

TRADITIONAL AND MODERN BUDGETING SYSTEMS

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Government expenditures are becoming difficult to optimize and even justify satisfactorily to legislators and to the public they serve. The public is beginning to pressure governments to solve existing and future problems in the most economical and efficient way possible. At the same time, the electorate has become more sensitive to the problem of where and how the taxes collected from them are allocated. Also, many government programs produce relatively little, in comparison with the resources like money and manpower invested in them. Whether government programs are effective or not certain truths like public expectations grow faster than government's ability to meet these expectations, government grows faster than public willingness to tax itself, government programs tend to be inefficient and lack clear definition, citizens become more alienated when governments grow but fails to perform, are evident (1).

While the public demands for an efficient and effective government, at the same time, there is growing reluctance to pay more

(1) Joseph S. WHOLEY, *Zero-Base Budgeting and Program Evaluation*, Heath and Company, Massachusetts, 1979, p. 1.

taxes, to meet this challenge, government tries to balance its expenditures versus its revenues through various available budgeting systems.

All the governments have this continuing concern of allocating the scarce public resources to their most highly valued uses in the most efficient way (2). To meet this crucial objective, the governments have always tried a budgetary system in which the allocation of scarce resources would be effective.

As Richard Goode defines, budget is the outcome of a process that includes preparation of the financial plan, review of the plan by the legislature where there is one, execution of the plan and evaluation and public reporting of the results (3).

According to Richard A. Musgrave the budget process has two important functions: (i) it establishes accountability for public funds, prevents their diversion into private use, and assures that actual outlays are in line with programmed activities; and (ii) it serves as an important tool of economic policy (4).

Budgeting serves several purposes (5): First, it sets a framework for policy formation. This requires decisions among many competing proposals and actions has to be taken to reach objectives.

Second, budgeting is a means of policy implementation. The budget is used as a guide for management and also budgetary procedures are tools of administrative control. Third, the budget is a means of legal control. The emphasis in legal control is on the prevention of abuse of power and improper use of public funds. Fourth, the public document may be a source of public information on past activities, current decisions, and future prospects.

To allocate scarce resources, a budget system should answer the following questions:

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- (2) Randall G. HOLCOMBE, *Public Sector Economics*, Wadsworth Publishing Company, California, 1988, p. 334.
 - (3) Richard GOODE, *Government Finance in Developing Countries*, The Brookings Institution, Washington, D.C., 1984, p. 9.
 - (4) Richard A. MUGRAVE, *Fiscal Reform in Bolivia*, The Law School of Harvard University, Cambridge, 1981, p. 125.
 - (5) Richard GOODE (1984), pp. 9, 10.

(i) Where and how can we most effectively spend money?

(ii) How much money should we spend? (6).

To answer these questions, government agencies use the current operation and expenditure levels as an established base, and then make their analysis in detail for any increase or decrease. By doing this, they are looking at a small part of the total budget. Such an approach has the following problems: it lacks the evaluation of current operations' efficiencies and effectiveness, and it lacks the possibility of reduction of expenditures in the current operations and funding new programs. For the past three decades, the governments have tried various budgeting systems such as traditional line-item budgeting; performance budgeting; program budgeting; planning, programming, budgeting system (PPBS) and zero-base budgeting system (ZBB). Now we in this study, intend to analyze and compare different budgeting systems under the heading of traditional budgeting; planning, programming, budgeting system and zero-base budgeting system and try to make a comparison of these budgeting systems. Also we will try to evaluate the implementation attempts of PPBS in TURKEY.

TRADITIONAL BUDGETING

Traditional budgeting is usually in line-item form and it accepts the existing organizational structure of government. It requires no formal relationship to a prior planning process, or to the determination of government objectives and priorities (7). As Aaron Wildavsky says, the traditional line-item budgeting is uninterested in objectives (8). In traditional line-item budgeting, the items necessary to run a government process such as salaries, supplies are identified for each government unit and the sum of money required for each item is identified by year.

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- (6) Peter A PYHRR, *Zero-Base Budgeting*, John Wiley and Sons, Inc., New York, 1973, p. ix.
- (7) See Thomas D. LYNCH, *Public Budgeting in America*, Second Edition, Prentice-Hall, INC, New Jersey, 1985, pp. 41-44; Aaron WILDAVSKY, *The New Politics of the Budgetary Process*, Scott Foresman and Company, Illinois, 1988, pp. 181-437; Edward A. LEHAN, «Public Budgeting», *Public Budgeting and Finance*, (ed. Robert T. GOLEMBIEWSKI and Jack RABIN), Marcel Dekker, INC, New York, 1983, pp. 12, 19.
- (8) Aaron WILDAVSKY- *The Politics of The Budgetary Process*, Forth Edition, Little, Brown and Company, Boston, 1984, p. 220.

The terms related to traditional budgeting are relatively simple. The primary organizational level for which information is brought together for decision-making is the basic line-item of expenditure depending on the existing agency structure. The accounting system is limited to procedural accountability, and thus requires no evidence on spendings. The scope of the traditional budgeting is generally limited to operating expenditures, and the time horizon almost invariably to one year. The objective of the traditional budgeting is limited to financial control. In this system, information is obtained on inputs. Sources of funding, often limited to a single-item appropriation or authorization from government are listed and expenditures associated with this funding are classified by category or object-as mentioned before not by objective-for each agency.

The line-item form of traditional budget involves listing all items for purchase by government during the next budget year. The list is created by the executive for approval by the legislature. The traditional budget is a «shopping list», detailing what government plans to buy. It contains little information about the purposes which the line item will accomplish, however.

The traditional line-item budget may be said to be a control budget, then, one that controls details but not substance or purpose.

PLANNING, PROGRAMMING - BUDGETING SYSTEM (PPBS)

This concept was announced by Lyndon B. Johnson in 1965 and he claimed that it was a «very new and a very revolutionary system» (9). Which at that time he called upon all departments and agencies to institute this system by defining clearly their major objectives or programs to be achieved and providing alternative ways in which these objectives are being or may be sought. Also,

(9) David NOVICK (ed.) Program Budgeting: Program Analysis and the Federal Budget, Harvard University Press, Cambridge, 1965, p.v. Also see; Aaron WILDAVSKY (1984), pp. 186-221; A. PREMCHAND, Government Budgeting and Expenditure Controls Theory and Practice, International Monetary Fund, Washington, D.C. 1983, pp. 326-334; Thomas D. LYNCH (1985), p. 46-49; Allen SCHICK, «The Road to PPB: The Stages of Budget Reform», Public Budgeting, (ed. Fremont J. LYDEN and Ernest G. MILLER) Forth Edition, Prentice Hall, INC., New Jersey, pp. 46-68.

plan their spending in long-range and short-range terms. In his speech, Lyndon B. Johnson stated five major reasons for the adoption of planning, programming, budgeting system:

- i. To identify national goals with precision and determine the priority among them.
- ii. To develop and analyze alternative means of achieving the goals.
- iii. To project long-term systems costs and relate them to the benefits of each program.
- iv. To specify plans for several years ahead that will achieve the stated objectives.
- v. To strengthen control over programs and budgets through improved measurement and analysis of program performance in relation to cost.

In conformity with the objectives mentioned above, the PPBS had three main ingredients; i. structural aspects, dealing with the classification of government transactions, ii. analytical aspects, dealing with the application of quantitative criteria for the determination of appropriate programs, and iii. informational aspects, dealing with the development of supporting systems that help policy formulation and appraisal. These are illustrated in Table 1 (10).

Table 1. Schematic Presentation of the PPB System

Structural Aspects	Analytical Aspects			Informational Aspects
	Planning	Programming	Budgeting	
Classification of the budget into:	Formulation of objectives	Determination of personnel and resources needed for the fulfillment of objectives	Allocation of resources for selected programs	Progress reports on the implementation of the budget
Functions	Identification of alternatives		Presentation of the budget in the program structure evolved for the purpose	
Programs	Evaluation of alternatives	Determination of costs of such resources		Adjustment in the light of progress
Activities	Selection of the feasible course	Determination of the annual profile of costs		
Cost elements			Formulation of operational targets	Evaluation

(10) A. PREMCHAND (1983), pp. 327, 328.

The formal structure of the planning, programming, budgeting system consists of four major elements:

i. Program Structure: The activities and budgetary costs of agencies' programs are grouped into program categories. The purpose of the program structure is to provide a better framework for the analysis of all activities and related costs to a given program, to discriminate differences and similarities of operations in different organizations providing the same program. Programs whose output are closely related and either close substitutes or necessary complements to each other are grouped together. Broad categories are subdivided in subcategories, and each of subcategories is, in turn, subdivided into program elements.

ii. Financial Plans: Each agency is required to submit financial plans showing the outlays for each program and funds committed for the next five years, and the link between annual budget allocations and medium-term plans.

iii. Program Memorandum: The program memorandum provides the strategic and analytical justifications for each major issue showing the decisions made by agencies and the reasons for such decisions.

iv. Special Analytical Studies: This includes any analysis of a particular program and the application of mathematical techniques to the program.

The general idea in PPBS is that budgetary decisions should be made by focusing on output categories like governmental goals, objectives, and end products instead of inputs like personnel, equipment, and maintenance. Once priorities among objectives were established, planning, programming, budgeting system supposed to determine the best expenditure mix in the annual budget to secure the future benefits (11).

ZERO-BASE BUDGETING (ZBB)

Zero-base budgeting is supposed to be a new way of preparing annual budgets, which contrasts with the current way, which is called incremental budgeting (12). Incremental budgeting takes a

(11) Aaron WILDAVSKY (1984), p. 186.

(12) Robert N. ANTHONY, «Zero-Base Budgeting is a Fraud», *Public Budgeting and Finance*, (ed. Robert T. GOLEMBIEWSKI and Jack RABIN), Marcel Dekker, INC., New York, 1983, p. 343.

certain level of expenses as a starting point and focuses on the proposed increment above that level. In zero-base budgeting zero signifies that the budgeting process starts at zero that the agency preparing the budget request must justify the money that it requests.

The term and procedure of zero-base budgeting which was introduced by Peter Pyhrr in 1970, was not an entirely new concept in the area of budgeting. Aaron Wildavsky and Arthur Hamman, in their article (13) state that zero-base budgeting was first introduced in the Department of Agriculture in 1962. The combination of PPBS and previous systems, and the experience gained over the years, paved the way for the introduction of ZBB in the United States Federal Government (14).

The instruction for preparing a zero-base budget for the United States Department of Agriculture was to calculate the following:

- i. Justification of the need for all activities regardless of the past experience or the congressional mandate.
- ii. Justification of the level of expenditures for the above needs.
- iii. Justification of the costs of the needed programs from the ground up (15).

ZBB did not produce the intended results in the Department of Agriculture and it never became fully operational.

ZBB was developed by Peter Pyhrr for use at Texas Instruments in 1969. In 1972 Governor Carter introduced the system in to the state government in Georgia. And several years later President Carter directed the heads of federal agencies and departments to implement ZBB in the fiscal year 1979.

Peter Pyhrr describes ZBB as a operating, planning and budgeting process which requires each manager to justify his entire budget request in detail, from scratch, and, in effect, shifts the burden of proof to each manager to justify why he should spend any

(13) Aaron WILDAVSKY and Arthur HAMMANN, «Comprehensive Versus Incremental Budgeting in the Department of Agriculture», *Administrative Science Quarterly*, December 1965, pp. 321-346.

(14) A. PREMCHAND (1983), p. 334.

(15) Aaron WILDAVSKY and Arthur HAMMANN (1965), pp. 321-346.

money at all. This approach requires that all activities be justified in «decision packages» which will be evaluated by systematic analysis and ranked in order of importance.

The process of zero-base budgeting can be outlined as the following (16):

i. Developing Decision Packages: According to Peter Pyhrr, a decision package is a document that identifies and describes a specific activity in such a manner that management, first, evaluate it and rank it against other activities competing for limited resources, and second, decide whether to approve or disapprove it. Therefore, the information displayed on each package must provide management with all needed information for such evaluation. The most important information in a decision package is the presentation and evaluation of alternatives for each activity.

ii. Ranking the Decision Packages: The ranking decision packages are listed in order of their importance or priority, starting from the highest at the top to the lowest at the bottom. This listing will enable the management to allocate its resources by determining «how much should we spend?» and «where should we spend it?».

The initial ranking process is done at the level where the decision packages are developed, so that the manager can evaluate and prioritize his or her activities. Then these rankings are submitted to the higher level management, which then they will review and use them as guides to produce the final consolidated ranking for all the packages send to him or her from all different level of management.

In sum, zero-base budgeting procedures involve five basic steps:

i. The identification of organizational entities, referred to as decision units, for which budgets are to be prepared.

(16) See: Peter A. PYHRR (1973); Joseph S. WHOLEY (1979); A. PREMCHAND (1983); Aaron WILDAVSKY (1984); Logan M. CHEEK, *Zero-Base Budgeting Comes of Age*, Amacom, New York, 1977; H.C. KNIGHT, *The Zero-Base Budgeting Process: A Practical Guide to Evaluation, Implementation and Use*, The Society of Management Accountants of Canada, Hamilton, 1979; Thomas D. LYNCH (1985); John A. WORTHLEY, William G. LUDWIN (eds.), *Zero-Base Budgeting in State and Local Government*, Praeger Publishers, New York, 1979; Thomas H. HAMMOND and Jack U. KNOTT, *A Zero-Based at Zero-Base Budgeting*, Transaction, INC., 1980; Fremont J. LYDEN and Ernest G. MILLER (1982), pp. 184-193, 289-301.

ii. The clarification of the objectives of decision units' programs.

iii. The drawing up standard document, called decision packages, which provide a justification for and a description of the decision units' programs and activities.

iv. The ranking of these decision packages in order of priority.

v. The consolidation of these decision package rankings for review and final decision by a higher authority.

ZERO-BASE BUDGETING VERSUS TRADITIONAL BUDGETING

The major points of differences between traditional and zero-base budgeting could be seen in the following remarks which were made by Peter Pyhrr:

«When everybody said 'Why do this zero-base budget?' The answer is we have only done a zero-base review in very selected areas. What the zero-base approach tends to do in a systematic manner is review all operations, review the expenditures, of which the majority in the so called base of ongoing operations. What we are trying to do is develop a process which basically said two things: no I, The budgeting process has to be the local point of most management analysis and decision making, because this process determines how the resources get allocated. Any pragmatic manager knows he should spend his time and effort in something that will produce results, and the budgeting process result in getting money...» (17).

Further, he decribed zero-base budgeting as a system which tries to identify the whole iceberg rather than just the tip as a reference to the incremental traditional budgeting. In incremental traditional budgeting, the total picture of a program is not rewied, instead, the partion of addition or deduction to the program will be studied before the decision is made.

Phyrr, also, noted that «The name of the game in incremental budgeting is, the more you ask for, the more you are going to get,

(17) Logan M. CHEEK (1977), p. 277.

because you wear them down (18). But in zero-base budgeting, with the analysis we are asking for, some of those increases look stupid. And what managers quickly learn is if they look stupid in one area, because they request ridiculous increases which they cannot justify on a programmatic and evaluation basis, everybody else will think all their programs are the same way. So, what they do is police themselves, because they do not want to look stupid. With such policing, the burden will be on the agencies who provide analysis and priorities of their programs, and all, the top management will do is to determine the level of funding (19).

As Wildavsky says, every criticism of traditional budgeting is undoubtedly correct. It is incremental rather than comprehensive; it does fragment decisions; it is heavily historical and looks backward more than forward; it is indifferent to objectives; and it is concerned about the care and feeding and control of organizations, their personnel, space, maintenance, and all that. Why, then, has traditional budgeting lasted so long? Because it has the virtue of its defects. Traditional budgeting lasts, because it is simpler, easier, less stressful, and more flexible than modern alternatives like zero-base budgeting and planning, programming and budgeting system (20).

ZERO-BASE BUDGETING VERSUS PLANNING, PROGRAMMING AND BUDGETING SYSTEM

The major areas of differences between ZBB and PPBS could be summarized in the following categories:

i. PPBS is basically a macro economic, centralized, top-down and long-range planning tool.

ii. PPBS provides information on what will be done, not how to do it.

iii. Budgeting as defined by PPBS is a cost calculation based on the decisions made in the planning and programming steps, but in reality, there are many policy decisions and alternatives which should be evaluated during the actual budgeting operation.

(18) Logan M. CHEEK (1977), p. 290.

(19) Peter A. PYHRR (1973), p. 149.

(20) Aaron WILDAVSKY (1984), p. 221.

iv. PPBS does not provide an operation manual for the line managers as how to implement the policy and program decision.

v. PPBS does not provide a mechanism to evaluate the impact of various funding levels on each program or establish priorities among the programs and varying levels of program effort.

vi. PPBS aligns programs toward common objectives and it focuses only on new programs on major increases in on-going programs and does not force the continual evaluation of on-going program activities.

vii. PPBS is ahistorical in that it is interested in comparing programs in here and now.

Besides from these differences Peter Pyhrr claims that ZBB can be used with PPBS because:

- ZBB and PPBS are compatible,
- ZBB fills the critical gaps in PPBS,
- ZBB reinforces PPBS,
- PPBS can provide the planning and policy framework required to effectively implement ZBB (21).

As mentioned before, PPBS provides the macro economic tool for centralized decision making on policy issues and basic fund allocations but, zero-base budgeting provides the micro economic tool for transformation of objectives into an efficient operating plan and budget and requiring managers to evaluate the effects of various funding levels on programs, so the limited resources can be more effectively allocated (22).

Also, with the following characteristics of zero-base budgeting system, we could easily see how it could fill the gaps existed in PPBS and as a result become a more effective tool in public administration:

i. Zero-base budgeting focuses on how to achieve a given objective.

(21) Peter A. PYHRR (1973), p. 152.

(22) Peter A. PYHRR (1973), p. 153.

ii. Zero-base budgeting provides a detailed evaluation of policy and alternatives in each activity within the program which the objective and policy has been defined.

iii. Zero-base budgeting provides an operational tool for the line managers to evaluate their operations, recommend the most efficient way to achieve their operational objectives and identify the effect of various funding levels on their operations.

iv. Zero-base budgeting provides a mechanism to evaluate the impact of various funding levels on programs. The evaluation of each operation at different levels can provide the basis to determine the best implementation plan and the various impact of various funding levels.

v. Finally, zero-base budgeting forces managers to review in detail, the efficiency and effectiveness of all plans and budgets.

In addition Pyhrr emphasizes that, zero-base budgeting should greatly reduce the workloads of those responsible for PPBS, both in the initial installation, and its continuing operation (23).

Table 2 summarizes the comparative features of planning, programming and budgeting system and zero-base budgeting system (24). As seen, there are a number of common features.

After implementation of zero-base budgeting and planning, programming, and budgeting systems for many years Wildavsky says that the forms of budgeting like, PPB, ZBB and similar ones once occupied center stage have lost their attraction (25) and other attempts failed. One major reason for this failure is the almost impossible burden of reviewing the details of each program each year. Additionally it has been found that fundamental change in agency and congressional behavior including the use of analytical tools is extremely difficult to obtain. Schick, Wildavsky, and others further note that the entire focus of budget reforms such as these is wrong, in that the budgetary process is not an appropriate tool for

(23) Peter A. PYHRR (1973), p. 154.

(24) A. PREMCHAND (1983), p. 338.

(25) Aaron WILDAVSKY (1988), p. 420.

Table 2. Features of PPB and ZBB Systems

Systems Elements	Systems Terminology	Planning, Programming and Budgeting Systems	Zero-Base Budgeting
1. Organization		Function	Decision unit
2. Objectives		Functional objectives and their relationship to national goals	Specification of short-term objectives, particularly in regard to increments proposed
3. Classification aspects		Functions and programs independent of the budget structure	Decision packages and consolidated decision packages that are flexible and independent of the budget structure
4. Analytical aspects		Application of quantitative techniques and evaluation of alternatives	Emphasis on monetary and performance increment relationships and ranking of decision packages in terms of different assumptions of resource availability. Preference for descriptive and explanatory statements on alternatives and in support of choices made at lower levels.
5. Budget and planning		Intergrated within the annual budget cycle	Integrated
6. Time-horizon		Five-year forecast	Four-year projections to be indicated but their role in overall budget formulation less specific
7. Evaluation aspects		Emphasis on evolving information systems	Emphasis on performance and its measurement
8. Intended extent of annual application		Throughout government	Throughout government
9. Intended benefits		Allocative efficiency	Greater involvement of the line managers in the budgetary process, measurement of performance, and a credible rationale for reallocating resources

major changes (26). Instead, they suggest that political processes are more effective in dealing with these strategic resource allocation issues.

(26) See; WILDAVSKY (1984) and (1988); Robert L. HARLOW, «The Decline and Possible Fall of PPB, Public Finance Quarterly, January 1972, p. 85-115; Allen SHICK «A Death in the Bureaucracy: The Demise of Federal PPB», Public Administration Review 3, March/April 1973, pp. 146-156; Allen SHICK, «The Road From ZBB», Public Administration Review, March/April 1978, pp. 177-

Under certain circumstances, however, some of the concepts underlying PPBS and ZBB may well be useful for ensuring that the whatever resources are provided are used efficiently. As Havens says, we elect our political leaders to make decisions on our behalf and we hope and expect that they will make right decisions. To make an informed decision, any decision maker needs answer to these general questions (27):

- What happened in the past?
- Why did it happen?
- What are the options for the future?
- What are the implications of each of those options?

PPBS represented a systematic effort to supply answers to these questions.

CONCLUSION

After the advantages of the modern budgeting systems were introduced to the world in 1950's some of these advantages were recognized by the developing countries which tried to make a sudden transition from traditional budgeting to the modern budgeting systems. In some the introduction of the modern budgeting systems were influenced by external factors. These countries were influenced by contemporary developments in the United States and the incentives for adopting modern budgeting systems came from external technical assistance.

Turkey is one of these countries which is influenced by these developments and without sufficient preparation started to implement PPBS in the Fiscal Year of 1973. Although it was introduced as a fiscal reform, top executives in many ministries were not interested in planning, programming and budgeting system as a resource allocation tool in the budget activities. This lack of interest was exhibited by their failure to participate since 1973, with very

180; Frank D. DRAPER and Bernard T. PITSVADA, «ZBB-Looking Back After Ten Years», *Public Administration Review*, January/February 1981, pp. 76-83; Robert N. ANTHONY (1983), pp. 343-346; Harry S. HAVENS, «Looking Back at PPBS: Image vs. Substance», *Public Budgeting and Finance*, (ed. Robert GOLEMBIEWSKI and Jack RABIN), 1983, pp. 301-307.

(27) Harry S. HAVENS, «Looking Back At PPBS: Image vs. Substance», *Public Budgeting and Finance* (eds. Robert T. GOLEMBIEWSKI and Jack RABIN), Marcel Dekker, INC., 1983, p. 306.

little changes, the same budgeting technique is applied by the Central Government of Turkey which cannot be considered as PPB system.

In Turkey, planning has developed before and independently from PPBS. The implementation of PPBS did not bring a change in the functioning of planning and budgeting which continued to be performed on a dual basis. Budget classifications introduced at the beginning had the intention of pointing out the existing services and/or goods produced in each ministry to avoid the duplications. But later on, because of excessive paperwork this intention was not taken into consideration. The analytical aspects of the system remain unimplemented and a shift to a more objective or quantitative approach is found to be difficult and is usually ignored. It can be said that traditional incremental budgeting system with modern budgeting classifications, in a way, still exists in Turkey and it will be long while before it is replaced.

The implementation of PPB system in Turkey has been difficult and inefficient. It seems that it cannot be disassociated from the many of problems associated with unlimited needs and limited capacities. Lack of training facilities, shortage of skilled workers, inadequate structure, excessive paperwork, lack of information, nonutilization of the information generated, utilization of the information for strengthening centralized control, lack of adequate involvement of spending agencies, lack of proper combination of some techniques and methods, and too ambitious an application are a few of the easily seen features. There are also substantial lags in adjusting to the new requirements the supplementary systems such as reporting and accounting. These aspects contributed to failure, which in turn contributed to a series of questions and doubts about budgetary reforms, their impact, and relevance for the future.