

PPBS: WHAT IS IT AND WHAT CAN IT DO?

by Donald C. Stone*

PPBS (Planning, Programming, Budgeting System) has become a world-wide acronym of a "wonder drug" in the eyes of its proponents for financial and program decision-making. An increasing number of persons advocate throwing out the old system and adopting this new device for making "rational decisions". Budget and financial officers not tutored in the mysteries of PPBS often feel threatened by these proposals.

Unfortunately most writers about PPBS usually do so in such esoteric and theoretical terms that the ordinary program administrator doesn't comprehend it, or feels that under such a system he might lose control of operations for which he is responsible. The inference is that a person must have high competence in economics, mathematics, and computer technology if he is to understand or utilize PPBS.

Purpose of this Article

My purpose here is to discuss PPBS as an extension of planning, programming, and budgeting practices which have been progressively developed over many years. Except for the application of more advanced analytical and evaluative techniques and the integration of PPB concepts into a total system, there is little new about PPBS that sophisticated administrators do not already know.

The main reason for the current salesmanship of PPBS is very simple. It started in the United States because of the failure of federal, state, county, regional, and local city governments to formulate multi-year budgets which have built into them work programs, evaluated priorities, anticipated results, and instruments of implementation. It is due also to the adherence by most governments to annual budget practices in which requirements are tabulated in terms of object of expense (personnel, equipment, supplies, etc.) rather than in terms of programs and evaluated accomplishments; and incomes in terms of estimated cash receipts rather than total usable resources.

Any development plan or any budget which does not focus upon what is to be done, produced, or achieved, provides little information of value in determining the effective use of resources or in making prudent decisions in fulfilling the aspirations or the needs of a people. PPBS has been oversold by simplistic claims, but its concepts and techniques, if developed for operational use, can make an

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enormous contribution to the development of a nation, city, enterprise, or any significant organized effort. PPBS should be viewed as providing important inputs in a total administrative system or cycle. However, its limitations must be recognized. It is no more appropriate to require an elaborate annual analysis of alternatives for most public services than to offer a single cow a ton of hay each time it is fed.

The Role of Planning

Planning lies at the heart of PPBS, just as it is basic to the pursuance of any rational and effective course or action by a government agency. The difference between a static society or a static organization and a dynamic or progressive one is essentially reflected by whether what it will do next year is determined by what it did last or whether it engages in planning and the making of decisions based upon evaluated alternatives. Does it function by habit or precedent—by looking backward—or by looking ahead with objective analysis and rational choice. Planning entails the setting of goals, determination of policies, formulation of programs, design of projects, and forecasts of activities and operations.

A number of elements or categories of effort are vital to any effective planning and administrative system. They entail the application of measurement, analysis, and evaluation to the total planning—implementation process. The following are common elements applicable to most functions or purposes of government:

1. *Goals*: Goals are the objectives to which all effort is applied. The two words have about the same meaning and can be used interchangeably. A goal or objective, for instance, might be stated as the number of tons of rice to be produced in an area or country each year over a five-year period.

2. *Policies*: These are the principal guidelines, preferences, criteria, or adopted courses of action which will govern the effort to attain a goal or to carry out a program. An example would be a proposal or decision to increase taxes on tillable land that is not under cultivation as a means to encourage more extensive planting of rice.

3. *Functions*: Functions are fields of activities, services, or purposes. For example, the growing, harvesting, storing, transporting, and marketing of food. The work of a Ministry of Agriculture is a broad function with subfunctions.

4. *Programs*: Programs are definable or discrete elements of functions or services, to be incorporated in comprehensive plans to achieve goals. They are the broad component action—elements. For example, a Ministry of Agriculture might develop a program to make new types of rice seed available to rice farmers over a defined period of time together with the necessary fertilizer to be provided under

short-term, low interest loans. A program may consist of projects, activities, and operations.

5. *Activities*: These are the continuing tasks or measurable work elements required to perform services and fulfill programs. The conduct of rice extension activities as a part of the services or program of the Ministry of Agriculture to increase agricultural productivity is illustrative.

6. *Operations*: This term is used here to mean subdivisions of activities—in other words, specific or subordinate tasks which are part of an activity.

7. *Projects*: Projects are discrete, terminable undertakings. They have their own activity and operations components. An illustration is the construction of a center to be used by agricultural extension workers who assist rice farmers in carrying out the above program.

Identifiable elements of plans and programs along the above lines are essential in carrying out any system of programming, budgeting, evaluation, and administrative reporting whether called PPBS or something else.

The Total Cycle

If we examine PPBS in relation to the total administrative cycle or process, we can see how its elements are a normal and essential part of carrying out any development effort or service. The cycle may be annual or multi-year for different elements or purposes. For convenience, I divide this cycle or process into the following elements:

1. *Defining goals or objectives*: A first task that must be borne in mind in all other stages of the planning-implementation process is a determination of broad goals or objectives in terms of defined products, achievements, or results. This must be done within limits of potential resources, i.e. under a multi-year financial plan. Priorities must be established for these goals or objectives and the general method of reaching them identified. This entails setting of time, cost, and quality limits for the goals or objectives.

Defining and redefining goals or objectives needs to be done annually, in multi-year periods, or when new situations indicate. Annual adjustments are made in "rolling" projections on the basis of experience and new factors. In some cases annually but usefully at longer intervals it is essential to make comprehensive program evaluations through application of systems, cost benefit, input-output, and other forms of analysis, to determine preferable courses of action as compared with alternative possibilities.

2. *Planning*: This involves planning at every level and for both short and long periods. Planning is required in the determination of objectives, development of a project, improving a service, reorganizing a division, or rationalizing the procedure in an office. All public employees at every level should engage in plann-

ing for their respective responsibilities and in developing proposals or initiating changes in respect to objectives, programs, policies, organization, and administrative methods. Most planning may never be reflected specifically in a country's five- or ten-year development plans. However, any agency in which planning is a part of every official's orientation will inevitably contribute much to development.

3. *Programming*: This is a most important step in the cyclical process and conditions everything done subsequently. Programming entails the determination of activities, operations, and projects necessary to reach objectives or goals. Programs and projects need to be designed, evaluated, and scheduled. Programming entails forecasting of work volume, and costs, preparing detailed work plans, scheduling of resources, and determining sequences of execution.

4. *Budgeting*: This step requires the translation of programs and projects into budget resource requirements to fulfill both (a) annual budget programs for development objectives operation of the government, and public enterprises (b) multi-year budgets which project the annual budget into future periods. In essence the expenditure side of the budget is the work program of a country, a province, a city, a department, an office, an enterprise, or activity expressed in monetary terms.

5. *Funding*: The next step in the cycle is to procure the necessary funds to finance the budget. This involves the assessment of what resources are available, and determination of what will be used in the time period. It includes levying of taxes, arrangements for other forms of funding, and making of appropriations or authorizations for the use of funds. Just as all proposed expenditures for all purposes need to be reflected in annual and long-term budgets, so too, all sources of funds should be included in the process of appropriating and authorizing the use of income or assets. In this way the budget is a major instrument of fiscal and economic policy.

6. *Operating*: This term is used here to cover the administrative tasks to carry out budgeted plans, policies, programs, and projects. This includes developing the organization, procedures, and methods; recruiting, appointing, training, and managing personnel; procurement of materials, supplies, equipment; provision for plant and facilities; and the various processes of management in directing, coordinating, evaluating, controlling, and motivating the organization.

7. *Financial Accounting*: A comprehensive accounting system should cover all elements of the budget, both capital and operating, and multi-year, annual, and sub-annual. The accounting system provides a means of recording, analyzing, and controlling income and expenditures in relation to authorizations for objectives, programs, and projects. It enables comparisons of outcome with expectations. Accounting is primarily a management tool, providing information to check on the past, but more importantly to produce guidance for current and future decisions, including the preparation of new budgets.

8. *Cost Accounting*: Costing is especially useful to PPBS concerns. It consists of compiling and analyzing expense attributable to the carrying out of a program, activity, operation, project, or other definable and measurable effort. The value of cost accounting depends to a large extent on the ability to develop quantitative and qualitative measurements of output or work accomplished, performance, and results achieved.

9. *Program and Budget Reporting*: This aspect of the cycle relates to the use of financial accounting, cost accounting, and other systems and procedures for providing information essential to management. Periodic reports are required by supervisors and managers at all levels within the organization as well as the top executives of ministries, members of the legislature, and the public. Monthly reports inform supervisors and program managers how expenditures are running in comparison with authorizations, whether program and project objectives are being fulfilled, how work performed or accomplishments relates to expense, whether unit costs and other evidences of effectiveness are favorable. Central budgetary, and finance officers need frequent reports on how tax collections and other resource availabilities compare with estimates. Central planning and administrative officers also need broader types of reports that enable assessment of how programs and projects under annual and multi-year plans are progressing. Development of a comprehensive system of reporting is an essential administrative task of every organization or government.

10. *Financial Auditing*: This process, frequently confused with accounting, is concerned with the analysis of transactions to determine that they were legally incurred, that income due was actually received, that equipment and supplies were delivered, that work under contracts was performed, and that the right accounts were posted. Auditing also includes an examination of accounting records to determine that the aggregate of receipts and disbursements and assets and liabilities recorded are accurate. Except for the "internal" or pre-auditing which takes place as a part of the accounting process to provide a check on the accuracy and integrity of transactions before posting or recording, audits should normally be conducted on a post-audit basis by an organization independent of ministries, departments, city governments, enterprises, or central accounting agencies.

11. *Evaluating*: The final element or step in the cycle and the one which contributes most to the readjustment of goals, policies, and programs is that of evaluation. Administrative, program, planning, and budget officers have a continuing responsibility for review and appraisal of progress. Here we see the importance of a comprehensive and prompt reporting and feedback system, supplemented by inspection, consultation, alertness to breakdowns and to good and bad performance, and a constant search for better methods. In light of such knowledge, continuous improvement in operations and adjustment to new circumstance or outcomes can be made.

Making of major changes in goals, policies, programs, and administrative methods usually require more intensive evaluations. They require ad hoc or periodic multi-year analysis or surveys in depth. This entails the collection of special data, application of systems and operational research methodologies, cost effectiveness studies of alternatives, and other intensive analytical and developmental effort.

Common Budget Deficiencies

Budgeting is the most potent decision-making instrument in the administrative cycle or process described above is budgeting. The manner in which resources are planned and actually used largely determines the results and reflects the capability of administration. If budgets are planned and programmed whether labeled PPBS or something else, one will probably find capable administrative leadership and effective performance. If budgets are prepared in traditional ways, the likelihood is a static and unresourceful organization with poor performance.

PPBS has done a great service by pointing out the limiting and indeed paralyzing character of budgeting based upon what was spent for a function, program, or operation in a previous year. Such budgets usually list the positions (sometimes even the persons), equipment, materials, and other things to be purchased and then add an increase to cover higher prices or because there is never enough in any event. They don't tell anything except what is expected to be bought.

Traditional budgets are not informative in respect to what expenditures will accomplish, to giving a clue as to how funds could be better spent, or what change in priorities might be advantageous, or whether programs are efficient.

The PPBS Additive

What is PPBS that distinguishes it from the above described administrative-planning-budgeting cycle? How does it fit into the process and who is responsible for what?

As I see it, PPBS is essentially a highly developed form of program or performance budgeting. It is a new name with some special features for what a few progressive government agencies have been doing for years. Indeed, I was involved in designing and applying a PPB system over thirty years ago in the field of public works in which all of the elements of the current approach were present except for the availability of advanced economic analysis tools and evaluative methods. Nor did we have the computer, but we used what was then the new 60 column tabulating card in the collection and analysis of data.

The new features are emphasized by the letter "S" standing for "System". All aspects of a program or organization are dealt with in the context of a system, and information is produced regarding the work or results performed by the system

in relation to the resources available to the system. Primarily what has been added are cost benefit, cost effectiveness, discounting, and other quantitative and some qualitative analytical methods.

Much work needs to be done to develop clear expositions of what PPBS is and how to apply it to different kinds of government agencies, institutions, goals, functions and programs.*

In contrast to traditional budgeting on an object basis, the significant elements of PPBS may be summarized as follows:

1. Setting of goals or objectives.
2. Development of classification of goals, functions, programs, activities, operations, projects, etc.
3. Development of measures of work accomplished, performance, achievement, and results.
4. Formulation of plans, programs, and projects using such classifications and measurements.
5. Formulation of annual and multi-year budget and financial plans.
6. Assignment of responsibilities, authorities, and resources for implementation.
7. Maintenance of accounting, cost accounting, and other performance records which make possible a system of reporting what happens.
8. Evaluation of performance or results in relation to original estimates, predictions, assumptions, and decisions.
9. Examination of the merit of alternate means for achieving and utilization of different methods.
10. Making of policy and program decisions taking these analyses and evaluations into account.

Value of PPBS

A PPB system comprising the foregoing elements has obvious advantages over the practices now in effect in most national, regional, and local governments throughout the world.

It forces attention on the validity of goals or objectives and whether present or proposed courses of action to attain these goals are being successful. It brings out interrelationships between programs and enables the setting of priorities. It relates inputs to outputs. It facilitates the making of decisions regarding the effective use of resources and enables choices to be made among alternatives with assurance that the course of action and priorities adopted will contribute most to the

*A useful monograph prepared in the United States is "Introduction to Planning, Programming, and Budgeting", Vol. 1 No. L-9, management Information Service, International City Management Association, 1140 Connecticut ave., N.W., Washington, D.C. 20036.

achievement of a goal, or to the execution of a project. Such a system provides prompt and reliable information on work performed, costs, results, efficiency, and effectiveness. It is an invaluable instrument of policy formulation and administration.

PPBS has forced a broader time horizon than one year. It forces to set policy considerations into the open. Most countries have found a multi-year period (five, six, ten years) essential in preparing comprehensive development plans. New or revised services and projects require two or three years or even longer periods to organize, establish or complete, so that a multi-year program with a financial or resource utilization plan is indispensable.

The traditional system of budgeting by object for one year time periods usually leaves out of the budget system many kinds of resources. It suppresses consideration of the substance of programs and goals. It fails to relate cost to measurable performance or anticipated results. It prevents intelligent consideration of alternatives. It beclouds economic implications. There is no continuity from a planning and programming standpoint. It overlooks the need for different perspectives at different levels in the organization and between legislative and executive branches and the need for public reports.

Some Shortcomings

Most of the current development of what is called PPBS has been the work of economists. As a result PPBS tends to assume that policies and decisions are self-executing. The systems as designed are usually analytical rather than operational in character. They stress use of advanced analytical methods to determine relative advantages of alternative courses of action. This is important but is impractical to try to do annually for most programs and projects. One has to be highly selective in making evaluations in depth. Political and social outcomes are often more important than economic. Initial breadth of goals and purposes may be restricted by the limited tools of the econometrician.

Thus the system needs to be designed by persons knowledgeable about the full cycle of the administrative and political process. It should be tested at every point whether it meets the needs of management—not primarily whether it casts up data for economic analysis by a group of evaluators who have no responsibility for operations.

Another shortcoming is the lack of significant work or performance measurements for many functions. The ability to quantify work performed or produced, or results achieved for particular functions, programs, projects, activities, and operations is crucial to a PPB system. Examples of quantitative measurements are square feet or yards of highway of certain specifications that are built or miles of particular kinds of roads improved or maintained; tons of rice produced per unit of land; cubic yards of concrete poured in a dam; value of exports generated; number of tourists attracted; number of land titles investigated; gallons of water produced for irrigation, etc.. Measurements of quality are also needed, and these are even more difficult to develop. Measurements of results or contribution to public welfare are often most elusive.

Even if the measurements are not quantitatively satisfactory, the analysis testing of probable outcomes is usually a very profitable exercise. Much effort is needed to develop meaningful units and measurements which have operational value. They must be related to a clear-cut classification structure of functions, programs, projects, activities, and operations.

A major difficulty has been the monopoly of the budget system in most countries, regions, municipalities, and public institutions by ministries or departments of finance. Budgeting has been viewed as a fiscal or accounting process rather than an administrative (policy and program development and implementation) process.

A modern budget system must be organized as an executive instrument to serve and to be managed by the chief administrator of a government, agency, or enterprise, at whatever level. This is why budgeting is taken out of finance ministries and departments and placed in the executive offices of prime ministers, presidents, governors, mayors, and other chief executives.

Because it is not easy to reorganize the budget system and responsibilities for its operation or to reorient budget employees who lack training in PPB concepts and procedures, the temptation is to superimpose PPB as an additional system independent of the existing budget organization. This can only create confusion and conflict. Difficulties with PPBS in the federal government of the United States arose in part because of the failure to revamp and build it into the existing budget organization. It has suffered also from other deficiencies mentioned.

Concluding Comments

To sum up, PPBS must be designed to fit operating and administrative realities. The first of these is the necessity of viewing budgeting as an administrative and policy decision-making process, and secondarily as a fiscal process. Obviously, budgeting has profound fiscal implications, but its primary focus is upon goals, policies, programs and not on financial transactions.

Based upon observations in many countries, it is my conclusion that when budgeting is viewed as a subsidiary of finance it is dealt with as an aspect of accounting, namely in the tabulation of objects of expenditure. This prevents bringing it into the central arena of administration—into the stream of setting of goals, planning and programming. This is why the central budget and program office in a government should be part of the office of the prime minister, president, governor, or chief executive of a city. In a ministry, department, or enterprise it should be responsible to the chief administrative officer, not the finance and accounting officer.

Central planning boards and planning staffs in ministries, departments, and enterprises need persons concerned with the substance of programs, with administrative processes, and with budgeting of resources, not alone economists, accountants, statisticians, and other technicians. Administrative management planning and improve-

ment staffs need to be a part of or related closely to these planning, programming, and budgeting units.

In this context administrative and supervisory officers of a government or agency must make planning, programming, and budgeting their main concern. This is the heart of administration. It is the means for fulfilling political commitments. It is the device for getting things done which is the purpose of public service organizations.

To this end it should become the expected responsibility of department heads, bureau chiefs, enterprise managers, university rectors, municipal executives, provincial governors, and executive officers and managers of programs and operations wherever found to formulate, install, and operate a suitable PPB system designed for their particular situations.

The development and installation of a PPB system requires a great deal of planning and perseverance to make it workable. This upsets many traditional practices and disturbs employees whose work requires change.

An essential step is to pave the way by "educating" all persons affected as to what the system is and how it will help them. Persons scheduled to operate the system or who will be significantly affected by it will need to undergo intensive training. PPBS concepts become an important part of the curriculum of a school or university engaged in the teaching of public administration, municipal administration, economic and social development, finance, economics, and business administration.

Much research and developmental work is needed to make PPBS viable and effective in particular situations.

Thailand provides a favorable setting for the development and implementation of innovative concepts and procedures. Its organization for budgeting, administrative management, and planning are advantageous. It has the administrative commitments and capacities. Its advanced institutes, schools, and other university programs are in a position to focus on these problems. It has resources and can show rapid results. It is in a position to demonstrate to many other countries what can be achieved by realistic and practical approaches to administration and management in which the full cycle of PPB processes are interrelated and coordinated.
