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THE PLANNING-PROGRAMING-BUDGETING SYSTEM: PROGRESS AND POTENTIALS

REPORT

OF THE

SUBCOMMITTEE ON ECONOMY IN GOVERNMENT

OF THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

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LETTER OF TRANSMITTAL

DECEMBER 4, 1967.

To the Members of the Joint Economic Committee:

Transmitted herewith for your consideration and use is a report by the Subcommittee on Economy in Government on the Planning-Programing-Budgeting System: Progress and Potentials.

The planning-programing-budgeting system is the latest in a historical series of programs designed to promote greater efficiency and economy in Government through developing more rational approaches to decisionmaking. Since PPBS has been in use in all Federal agencies for only a little more than 2 years, the subcommittee does not deem it appropriate or feasible to attempt a thorough assessment of PPBS in improving public programs. However, the subcommittee believes that valuable insights into the progress and potentials of PPBS were provided in its 4 days of public hearings. This interim report summarizes the subcommittee's tentative findings.

Although this study is the first the Joint Economic Committee has undertaken of the planning-programing-budgeting system as such, it should be emphasized that this investigation continues the committee's longstanding interest in improving the management of Government. Many of the integral components of PPBS have been reviewed in earlier committee studies, as the report points out.

Because of its obvious importance for economic management and policymaking, the subcommittee intends to follow closely the implementation of PPBS.

WILLIAM PROXMIRE,
Chairman, Subcommittee on Economy in Government.

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INTRODUCTION

While efficiency in the management of the Government's business is always a worthwhile objective, it becomes increasingly urgent at a time when Government expenditures are rising rapidly. Between fiscal 1965 and fiscal 1968, the national income accounts budget—the budget viewed by economists as the most relevant for gaging economic impact—has increased by over $50 billion, about one-half of which can be attributed to Vietnam. Today the Federal Government is spending about $165 billion in an economy of $790 billion. The increases at State and local levels have been equally large. From March 1964 to March 1967, there was a 30-percent rise in State and local tax revenues and a proportional advance in the rate of expenditures. Faced with this situation, it is of the utmost importance that our policymakers be armed with the best possible tools for evaluating the effectiveness of our public programs and expenditures.

To this end, the Subcommittee on Economy in Government of the Joint Economic Committee undertook an initial study of the planning-programing-budgeting system (PPBS) in an effort to promote a better understanding of its present application and future potentials. PPBS is the latest in a historical series of programs designed to promote greater efficiency and economy in Government through developing more rational approaches to decisionmaking. The principal objective of PPBS is to improve the basis for major program decisions. Program objectives are identified and alternative methods of meeting those objectives are subjected to systematic analysis comparing costs and benefits. Cost and benefit data reflect future as well as current implications of program decisions. The budget is the financial expression of the underlying program plan and translates program decisions into appropriation requests.

PPBS focuses on the output of programs whereas traditional budgetary approaches tend more or less inevitably to emphasize expenditure inputs. It assesses as fully as possible the total costs and benefits, both current and future, of various alternatives. It endeavors to determine rates of return for programs, as well as the rate of return that may have to be foregone when one program is chosen over another.

PPBS is a refinement of existing procedures rather than a completely new approach. Among its advantages is that of focusing attention on programs rather than on agencies. Through evaluating program costs, PPBS can put both old and new programs to a test of their worth.

Although this study is the first the Joint Economic Committee has undertaken of the planning-programing-budgeting system as such, many of the integral components of PPBS have been reviewed in detail in earlier committee studies. In 1957 the Subcommittee on Fiscal Policy, under the chairmanship of Representative Wilbur Mills, conducted extensive hearings and prepared a compendium of papers on "Federal Expenditure Policy for Economic Growth and Stability," considering among other topics the use of cost-benefit analyses and discount rates in the evaluation of Federal programs.

In 1962 the Subcommittee on Economic Statistics, under the chairmanship of Senator William Proxmire, began a detailed study of "The Federal Budget as an Economic Document," which was followed in the succeeding year by hearings and the subcommittee's report. Among other topics, the subcommittee's deliberations focused on the need for developing a program budget, and this constituted a major recommendation in the subcommittee's report. The present study carries forward the committee's longstanding concern in this area.

Some of the techniques of analysis contemplated in current discussions of PPBS have been employed in the past. In the 1930's the Department of Agriculture and the Tennessee Valley Authority used program budgeting. The Hoover Commission recommended in 1949 that performance budgets be adopted throughout the executive, but this advice was never fully implemented. During the 1950's, a few sporadic projects, such as the Interior Department's National Park Service "Mission 66" program, were successful. In 1961, the Budget Bureau outlined a 10-year projection of all Federal expenditures, and the Federal Aviation Agency adopted a 5-year-planning sequence. Comprehensive PPBS concepts were introduced in the Defense Department in 1961 and, by 1963, the Budget Bureau was encouraging all agencies to begin looking into further application of PPBS techniques.

On August 25, 1965, President Johnson issued a directive ordering all Federal agencies to apply PPBS techniques. The following potential achievements of PPBS were listed in his directive:

(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 most effectively at the least cost;

(4) inform ourselves not merely on next year's costs, but on the second, and third, and subsequent years' costs of our programs;

(5) measure the performance of our programs to insure a dollar's worth of service for each dollar spent.

In its report on the January 1967 Economic Report of the President, the Joint Economic Committee cited the development in recent years of a planning-programing-budgeting system for the Federal Government which the committee had recommended previously. The committee commended the President and the Budget Bureau for extending these techniques and looked forward to reflection of improvements throughout the Federal budget, including the document itself.

In spite of its obvious purpose of improving management and decisionmaking, PPBS has not been without its critics either in Congress or elsewhere. Skeptics fear that PPBS analysts and directors will become a new breed of technocrat who think that the computer can take both policy and politics out of decisionmaking. Among other things, critics fear that PPBS might be used to weaken congressional control of the budget through making appropriations subject to complex mathematical computation by experts in the executive branch. While the committee does not share these fears, we recognize that there are many problems and concerns to be faced in developing the new system.

Because of its recent adoption, it would not be appropriate or feasible to attempt a definitive assessment of PPBS in improving the effectiveness of public programs. At the same time, the subcommittee

is of the opinion that valuable insights were provided in the course of its four days of hearings on the following questions:

(1) What progress have the executive agencies made in applying PPBS?

(2) How have State and local governments used PPBS?

(3) How can interest/discount rates be utilized in PPBS to aid public decisionmaking?

(4) Can PPBS be helpful to the Congress?

(5) What alternatives does the Congress have for developing a staff capability in PPBS techniques of analysis?

(6) How effective is PPBS in identifying national goals?

These questions, among others, are considered in more detail in the following sections setting forth the subcommittee's tentative findings.

The subcommittee wishes to thank the witnesses for their fine papers and discussion. Their names and affiliations are listed in the appendix. While we have drawn freely from their statements they are, of course, neither individually nor collectively responsible for this summary or its emphasis.

PPBS AND THE EXECUTIVE AGENCIES

The witnesses from the executive branch indicated that in the relatively short period since its inception, PPBS has already produced the following results:

(1) Agencies can see their objectives in a more comprehensive framework.

(2) Agencies have become more aware of and have sought out alternative ways of achieving program objectives.

(3) PPBS has been very helpful in determining program priorities.

(4) PPBS has promoted a more specific expression of program objectives.

At the same time, the application of PPBS has not been without difficulties:

(1) The system has been applied differently in different agencies, thus causing some confusion in multiagency program evaluation. For example, the Corps of Engineers does not include secondary returns in its cost-benefit analysis, while the Bureau of Reclamation includes all measurable direct and indirect benefits in its analyses of the same types of projects. There have also been instances of widely varying discount rates applied by different agencies for similar programs. These inconsistencies reduce the efficiency of resource allocation that the PPBS is designed to provide.

(2) Agencies found that in applying PPBS, they lacked much essential data. Population data, for example, can sometimes only be derived from the 1960 census. Other quantifiable data is only available at high cost, both in terms of time and money expense.

(3) Hopefully, PPBS will lead eventually to a more optimal reallocation of funds within present budgets, but since existing programs tend to gather unique constituencies and because agencies many times seem to be "locked in" to a certain direction and do not seem to care about possible alternatives, such reallocations become hard to accomplish. To avoid reshuffling, some

agencies have applied PPBS only to new programs and have ignored older, and usually more costly, programs.

(4) Since programs are not presently structured on a broad, cross-agency basis, a program designed to achieve a given objective in one agency may have high priority, while a program to achieve the same objective in another agency may have low priority. This creates the danger of program conflict and duplication.

In summary, executive agencies appear to be progressing at a moderate rate toward efficient application of PPBS to their activities. One obstacle to increased success is the lack of personnel well trained in PPBS techniques. Another is that PPBS techniques are not yet sophisticated enough to deal with certain government programs.

STATE AND LOCAL APPLICATIONS

At least eight States and many major cities already employ PPBS techniques. The Ford Foundation has given its support to the movement by funding a joint program with five States—Wisconsin, California, Michigan, Vermont, and New York; five counties—Los Angeles County; Wayne County, Detroit; Dade County, Miami; Davidson County (greater Nashville), Tenn.; and Nassau County, N.Y.; and five cities—San Diego, Denver, Dayton, New Haven, and Detroit—studying application of PPBS to State and local governments.

Considerable success in aiding decisionmaking and long-range planning has already been reported in Wisconsin and Vermont, and in New York City, according to witnesses from these three jurisdictions.

1. Wisconsin first began switching over to PPBS methods in 1959 when State conservation projects were converted to program budgeting. Two years later, the motor vehicle department and board of health also adopted the PPBS approach to budgeting. Studies of the new techniques indicated marked success, and by 1964, all State operations were covered by the program budget format. In addition, Wisconsin officials were able to reorganize the State government structure; 90 separate agencies were reconsolidated into a functionally directed 26-department organization. On the legislative budgeting level, the traditional budget document was broken down into a series of policy papers which have received favorable support.

2. Vermont now stands where Wisconsin was in 1959; PPBS is just now being instituted in Vermont at basic levels. At this stage, Vermont officials are formulating the questions they expect PPBS to help answer. Some of these questions are:

How does the output of colleges and universities compare to State needs?

What steps can be taken to broaden and deepen opportunities for public service training?

Are existing employment service programs effective?

Is the highway program effectively assisting in development of State natural resources?

Vermont Lt. Gov. John J. Daley expressed to the subcommittee the hope that PPBS methods will give the State "the first real tool to work with to project our thinking and to cut down the guesswork."

3. New York City concentrated its first PPBS applications to areas of "high apparent yield" according to Budget Director Fred O'Reilly Hayes.

City administrators introduced functional and program approaches into the capital and expense budgets; a new program planning division was established in the city budget bureau, along with a policy planning council comprised of the deputy mayor, city administrator, budget director, and chairman of the city planning commission. In specific fields, PPBS techniques were applied to police, health services, housing, higher education, human resources, the board of education, fire department, and to air pollution and sanitation programs. While many of the studies concentrated on long-range planning, the city also set up some short-run systems analyses in such problem fields as refuse management, air pollution, and tax relief for middle-income housing.

Witnesses indicated that PPBS improved executive-legislative relationships. In Wisconsin, for example, where different political parties have controlled the State house and legislature in recent years, PPBS was cited as strengthening leadership in and between both government branches. State legislatures were reported to be increasing their demands for PPBS studies. In addition, State officials noted that PPBS is contributing to better Federal-State relations. Two specific areas in which State administrators felt that PPBS tools have aided Federal-State relations are in general health programs and in State-run grant programs.

PPBS was also commended for increasing communications channels from the States to Washington. At the same time, State officials said that in some instances they found that Federal programing planned on a national scale does not leave enough room for variation and adaptation within States; they said PPBS methods could be used to show where national programs are not the most optimum at lower levels.

THE DISCOUNT RATE ISSUE

During the hearings, the subcommittee investigated the role and function of discount rates in the economic evaluation of prospective public investments within the framework of the planning-programing-budgeting system. Since interest, or discount rates as they are commonly termed, are used to bring projected flows of benefits and costs into a common time frame, they are a crucial element in the cost-benefit analyses utilized by PPBS. The determination of the discount rate to be used has a very great significance for a program's benefit-cost ratio; indeed the difference may be great enough to determine whether a program should be undertaken or not. Thus, a project which appears sound when a low discount rate is chosen, may be economically unwise at a higher rate.

For the sake of clarity, the subcommittee wishes to differentiate between the discount rate discussed here which relates to the economic evaluation of investments, their costs, and future benefits and the "discount rate" as the term is popularly used in the monetary world. The latter is, of course, the rate which is established by the Federal Reserve System governing the cost of member bank borrowings from the System. On the other hand, the discount rate to be used in judging the economic feasibility of Government programs reflects the availability of capital. Admittedly, the availability of capital is affected by money market conditions but it is by no means the same as the discount rate charged by the central bank.

According to the testimony received by the subcommittee, economists generally agree that the appropriate discount rate to use in

evaluating public programs is the opportunity cost of capital in the private sector. That is, the discount rate should reflect the rate of return that a given amount of resources employed by the Government could earn in the private sector. This rate, of course, varies over time largely reflecting credit market conditions. The witnesses generally agreed, however, that the opportunity cost of capital in the private sector is at least 10 percent at the present time.

Despite this agreement within the economics profession, the Federal Government at the present time uses a variety of discount rates, the determination of which has little to do with opportunity cost. For example, public works projects undertaken by the Corps of Engineers and the Bureau of Reclamation apply the historical coupon rate at the date of issue of long-term Government securities, or about 3¼ percent; many highway projects involving Federal funds use a zero interest rate, and a majority of highway projects which employ positive interest rates utilize discounts which vary from 0.1 percent to 6 percent; poverty program evaluations have used interest rates of both 5 percent and 7 percent.

The lack of a coherent, consistent policy concerning appropriate discount rates has two serious, undesirable results. First, when the Government uses a discount rate lower than the opportunity cost of capital in the private sector, there is a misallocation of resources from the private to the public sector, from a higher return use to a lower return use. Or, on the other hand, if the Government uses a higher rate than that employed in the private sector, there is a misallocation of resources from public to private use. Second, when various Federal agencies use divergent rates, the result is a misordering of priorities. A given resource may be used in a lower return use rather than in a higher return use within the Government.

The alternative to the current system of Government discount rates is the use of a uniform rate throughout all agencies which is equal to the opportunity cost of utilizing the funds in the private sector. Adoption of a uniform discount rate based on opportunity cost would result in the approval of projects whose yields are greater than those which could be earned in the private sector, and the rejection of projects whose benefits are not equal to the private return.

If rates used in evaluating Government projects were raised to reflect economic opportunity costs, unquestionably this would have a profound effect on budget priorities. The current low rate structure has been used to justify many large public works programs to the point where there undoubtedly has been overinvestment in this area. A higher and more realistic discount rate for public works would doubtless lead to increased Government investment in human resource programs. Several recent pilot studies reveal high returns from investment in such activities as education and training. For example, one study showed rates of return in education to range from 11 to 19 percent; another study compared benefit-cost ratios for water resource and Job Corps programs at equivalent interest rates and found that the returns to Job Corps projects were significantly higher than the public works returns; and, finally, one other such study reported a benefit-cost ratio of almost 9 to 1 in an adult education program.

Furthermore, it is important to note that many of the cost-benefit studies of human resource investments attempt to measure only those benefits which accrue directly to the individual and are easily

quantified. Yet the benefits to society as a whole may be much greater than the individual benefits. Because of these measurement problems many choices among social programs may have to be made for the time being on the basis of cost comparisons. However, there is a clear need to develop better techniques for measuring the diffused benefits of many social programs. If a comprehensive measurement of benefits could be achieved, it is likely that the reallocation of resources into this area should be even greater than present studies indicate.

In addition to affecting the ranking of budget priorities, the use of a discount rate based on opportunity cost could also have an effect upon the total level of Government expenditures. Some programs, such as public works, undoubtedly would be drastically reduced. On the other hand, an adequate measurement of the benefits of human resource investment might result in a growing level of Government expenditures. Whatever the outcome, it would reflect a far more logical distribution of the Nation's economic resources than the haphazard system used today.

Although there is presently no uniform method followed by all Government agencies for computing interest rates used to evaluate public investments, in the area of water resource projects there is a specific procedure used, which is spelled out in Senate Document No. 97, 87th Congress, 2d session. This document provides for the determination of the discount rate on the basis "of the average rate of interest payable by the Treasury on interest-bearing marketable securities of the United States *outstanding* at the end of the fiscal year preceding such computation which, upon *original issue*, had terms to maturity of 15 years or more." (Italics added.)

The subcommittee believes that this procedure has no relevance to economic fact, and should be changed. In the first place, this procedure presumably was intended to relate discount rates to the cost of long-term borrowing by the Federal Government. However, by using coupon rates on outstanding Government bonds it is recording past history and does not reflect the Government's current long-term borrowing rate. Secondly, the 4.25 percent interest limitation imposed on the U.S. Treasury in issuing bonds, resulting in the principal reliance in recent years on short-term issues, has contributed to an understatement of the Government's real long-term borrowing costs. And, finally, even if a rate representing the Government's true long-term borrowing cost was used, this measure would still fall far below the opportunity cost rate in the private sector, because of the effect of the Federal income tax.

It is the subcommittee's conclusion that the optimum allocation of resources requires the use of economically relevant discount rates in the evaluation of public investments. Although the subcommittee believes that further study is required to establish procedures for determining the appropriate rate, the point stressed here is that Government rates should be on a par with private sector rates, and that the current gap between the discount rates in the two sectors leads to resource misallocation. Since the responsibility for developing evaluation procedures for use in studying water resource projects is placed in the Water Resources Council, the subcommittee is requesting the views of the Executive Director of the Water Resources Council on the propriety of the current interest rate and the procedure for computing this rate. In addition, as Senate Document No. 97

provides for the adjustment of the procedure for computing the discount rate in the evaluation of water resource projects, the subcommittee is also requesting the Council to reanalyze the adequacy of the present procedure.

CONGRESS AND THE PPBS

The use of new techniques for budgeting obviously poses an important question for the Congress. As indicated earlier, a failure by Congress to apprise itself of the new techniques could make it easier to create a complex methodology which could frustrate congressional understanding and control of programs. If mastery of the new technique is limited to the executive branch, there is danger that both the Congress and the States may become less than equal partners in the program decisionmaking process. On the other hand, full utilization of the PPBS techniques in the appropriation process might prove to be an extensive undertaking. In essence, there seem to be three alternatives.

(1) Congress could utilize a large staff of its own personnel and attempt to develop alternative analyses to those being done in the executive.

(2) Congress could utilize a smaller staff which would analyze the PPBS reports emanating from the executive. However, it was felt that congressional staff might have trouble obtaining studies that were less favorable to the Administration's or agencies' program and budget proposals. To counter this danger, it was suggested that a small staff might conduct very critical and deep studies of a few programs rather than attempt an overall examination; such critical analyses of a few programs would then stimulate the executive agencies into submitting more complete reports to the smaller congressional staff.

(3) A third possibility would be for Congress to contract for nongovernmental organizations to carry on its PPBS analysis. This would minimize the need for Congress to invest heavily on its own into PPBS. For a trial period, this might prove to be the most feasible approach, but there is the question whether nongovernmental organizations should be allowed to participate to such a degree in these decisionmaking processes. Another criticism of the contract system is that such groups—most notably universities—may not be accustomed to analysis of public programs.

The General Accounting Office already carries on substantial PPBS-type analysis; techniques such as cost information classified by major organizational segments and by budget activities are now employed by GAO. The General Accounting Office is engaged in studies looking into cost ramifications of adopting PPBS analysis to see whether currently used GAO methods provide the same information as that generated by PPBS. Within GAO, a new systems analysis section has been established in the Office of Policy and Special Studies, and over 200 GAO employees have taken special PPBS training courses. With an established background in PPBS systems currently existing at GAO, there may be justification for carrying out congressional studies in conjunction with the General Accounting Office, rather than for employing a separate congressional staff.

This subcommittee is firmly of the opinion that the Congress should make use of these new techniques for better evaluation of government programs in terms of costs and benefits, as well as a more comprehensive view of the priorities in program commitment. The subcommittee recommends the development of a congressional staff capability in PPBS techniques of analysis in addition to utilization of GAO staff.

GENERAL PERSPECTIVE

PPBS is one of the more recent attempts to achieve a more systematic and rational approach to decisionmaking in respect to Government programs. It undertakes to assess costs of achieving objectives against the benefits to be expected therefrom, and in this way makes possible a more intelligent use of resources by the public sector.

The effort is by no means free of handicap. Unquestionably, it is easier to measure costs and benefits that are amenable to marketplace assessment than it is to measure the true costs or true value of those more intangible effects of Government activity that are not solely subject to market determination. In assessing the cost-benefit relationship of a proposed dam, for example, it is far easier to measure benefits in terms of water supply, power supply, and navigation than it is to measure the many other incidental effects, such as redistribution of income, esthetic improvement, effects on long-term population movements, and the like.

There is a tendency to exaggerate both the potential and the progress of PPBS. Judging from the brief hearings held, it is the subcommittee's conclusion that some progress has been made in bringing a more rational means of decisionmaking into the public sector, but that this is only a beginning. The Government has a long way to go in applying PPBS or any similar system of program management on any kind of comprehensive basis.

Likewise, there is considerable confusion about the role of PPBS in making basic decisions. Public economic policy questions, by their very nature, often involve decisions which affect people as to burdens and benefits. In other words, a public policy decision may increase the burdens of one group and raise the benefits of another, or effect resource transfers between regions. These decisions are frequently made now, particularly by legislatures, but on a judgmental and necessarily subjective basis. PPBS can help to provide a more rational and coherent basis for judgment. But many decisions will remain beyond the reach of quantitative analysis.

In addition, PPBS does not help us much in deciding on ultimate goals for public policy or in deciding between alternative goals. Our knowledge is not sufficiently advanced to answer definitively such questions as whether we ought to put more money into housing or welfare, whether to emphasize decentralization of our cities or not. Such basic choices are far beyond the reach of quantitative measure. Given determined objectives, cost-benefit analysis or any other systems approach can help us in deciding which alternative would provide the most effective means of achieving an objective. But we should not expect it to go beyond this. The choice of goals is a basic political decision, arrived at democratically; we should not rely on budgetary techniques to eliminate the hard problem of choice that now confronts both the Congress and the executive branch.

The subcommittee is of the firm opinion that PPBS represents a substantial forward step in budgetary techniques. At the same time, it is our opinion that much more work is needed in the definition of national objectives and the determination of priorities in the allocation of public funds. If the Nation had a little clearer notion of its goals and national priorities (bearing in mind that they are apt to be continuously shifting in a society like ours), it would ease the task of PPBS inasmuch as it would give rise to definable objective programs which could then be subjected to a systems approach.

This subcommittee recommends to the Joint Economic Committee that the full committee conduct an inquiry into the possibilities for a clearer definition of Federal program objectives than now exists and develop information on possible conflicts, overlaps, or lack of coordination in our present goals and on ways of setting priorities in the allocation of Federal funds.

As a general guide to improved budgeting, the subcommittee feels it appropriate to restate some of the proposals set down by the committee previously which emphasize basic economic principles. Among the recommendations made in the 1957 report of the Subcommittee on Fiscal Policy entitled "Federal Expenditure Policy for Economic Growth and Stability," and in the 1963 report of the Subcommittee on Economic Statistics entitled "The Federal Budget as an Economic Document," the following have particular relevance to this study:

(1) Economy in Government should be measured by the relative benefits and costs of each program. While quantitative evaluation of many Federal programs directed at social problems is admittedly difficult, the priority of these programs must be weighed by careful consideration of their relative costs.

(2) Federal programs aimed at supporting or improving the economic position of particular groups or industries should be constantly reevaluated in light of changing circumstances.

(3) The alternative-resource-use test also should be applied to Federal programs which involve no significant Federal expenditures. Federal enterprise activities and programs for insurance and guarantee of private loans may involve only small net budget expenditures, but exert a powerful influence on the allocation of resources.

(4) Recognizing that economic considerations may not always prevail in determining Federal expenditure programs emphasizes the need for carrying out these programs at minimum real cost.

(5) Federal expenditure policies closely geared to the Nation's economic growth objectives must provide for as rapid adjustment as possible in spending programs in response to changing demand and supply. Rigidities in Federal spending programs may limit significantly the economy's growth potential.

(6) The scope and character of Federal spending programs should reflect, wherever possible, the comparative economic advantages of the Federal, State, and local governments and of private enterprise in achieving program objectives.

(7) Federal participation in activities shared by State and local governments and private enterprise should be aimed primarily at improving the effectiveness of these activities and should avoid merely transferring responsibility for them to the Federal Government.

(8) The budgetary process should show how the various activities of the Federal Government are related to each other on a program

basis, and how these programs are related to similar activities outside of the Federal Government.

(9) Budget decisions should be based upon a clear recognition of the longer range prospects for Government programs in terms of their costs and benefits. Specifically, the budget for each year should be presented in the context of a longer run set of budgetary projections, probably covering a 5-year period; and regular periodic revisions of budgetary estimates should be provided, on at least a quarterly basis.

APPENDIX

The participating witnesses, by order of their appearance, were:

WILLIAM GORHAM, Assistant Secretary (Program Coordination), Department of Health, Education, and Welfare.

WILLIAM ROSS, Deputy Under Secretary for Policy Analysis and Program Evaluation, Department of Housing and Urban Development.

HARRY SHOOSHAN, Deputy Under Secretary for Programs, Department of the Interior.

JOHN J. DALEY, Lieutenant Governor, State of Vermont.

FREDERICK O'REILLY HAYES, New York City Budget Director.

WARREN D. EXO, Director of Management Services, Department of Administration, State of Wisconsin.

JACOB STOCKFISCH, Senior Research Associate, Institute for Defense Analyses.

MORTON KAMIEN, Associate Professor, Graduate School of Industrial Administration, Carnegie-Mellon University.

WILLIAM BAUMOL, Professor of Economics, Princeton University.

HARRY ROWEN, President, RAND Corp.

JOHN HALDI, Former Chief, Program Evaluation Staff, Bureau of the Budget.

OTTO DAVIS, Professor, Graduate School of Industrial Administration, Carnegie-Mellon University.

FRANK H. WEITZEL, Assistant Comptroller General of the United States, General Accounting Office.

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