

469

ECONOMIC ANALYSIS AND THE EFFICIENCY OF GOVERNMENT

HEARINGS
BEFORE THE
SUBCOMMITTEE ON ECONOMY IN GOVERNMENT
OF THE
JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES
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PART 3

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ECONOMIC ANALYSIS AND THE EFFICIENCY OF GOVERNMENT

THURSDAY, SEPTEMBER 25, 1969

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON ECONOMY IN GOVERNMENT
OF THE JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The Subcommittee on Economy in Government met at 10:05 a.m., pursuant to recess, in room S-407, the Capitol, Hon. William E. Proxmire (chairman of the subcommittee) presiding.

Present: Senators Proxmire and Percy; and Representatives Conable and Brown.

Also present: Robert H. Haveman and Richard F. Kaufman, economists; and George D. Krumbhaar, minority economist.

Chairman PROXMIRE. The subcommittee will come to order.

Efficiency in Government requires the decisionmakers in both the executive and legislative branches to have full information on the benefits, cost and redistributive impact of alternative policy measures and a willingness to act on this information.

This statement summarizes the objectives of the current set of hearings before this subcommittee. During these hearings we have again been reminded of the paucity of economic analysis and information on Federal spending policies and the reluctance of the executive branch to make what does exist available to the Congress.

In relying on analysis by economic experts from outside the Government, the subcommittee has confronted case after case of inefficient and inequitable Federal programs which were passed without careful consideration of their economic impact. These programs continue to exist unchanged because the spotlight of economic analysis has not been placed on them.

In testimony presented by economic experts to this subcommittee, we have been told, No. 1, that the medicare reimbursement formula is responsible for much of the recent increase in medical care prices and incorporates no incentives hospitable to economy.

No. 2, the urban highway and urban renewal programs impose enormous costs on low income, inner city residents, which costs are neither compensated nor considered in program decisions.

No. 3, programs of institutional aid to higher education provide a distinguished cash subsidy to middle- and upper-income groups.

No. 4, Federal water policy is not only inefficient but benefits, according to an expert witness we had, the very, very, very rich.

No. 5, Federal water pollution control policy subsidizes those who pollute rather than making them bear the costs which they impose on society.

No. 6, the maritime policy of the Government is costing taxpayers \$750 million per year, with little meaningful return.

No. 7, Federal transportation policies are both inefficient and inequitable in their failure to impose beneficiary charges to reduce congestion and encourage rational use of facilities.

It is precisely these kinds of issues on which we need rigorous economic analysis. This analysis has not been forthcoming from the executive branch.

This morning we welcome the Director of the Bureau of the Budget, Robert Mayo, who will discuss some of these matters with us; in particular, how the executive branch can respond to the needs of Congress for more economic information and analysis.

Mr. Mayo, you may go right ahead, sir.

STATEMENT OF ROBERT P. MAYO, DIRECTOR, BUREAU OF THE BUDGET; ACCOMPANIED BY SAMUEL COHN, ASSISTANT DIRECTOR FOR BUDGET REVIEW; JACK W. CARLSON, ASSISTANT DIRECTOR FOR PROGRAM EVALUATION; AND JAMES R. SCHLESINGER, ASSISTANT DIRECTOR

Mr. MAYO. Thank you, Mr. Chairman and Mr. Conable.

The bulk of my statement today will be in direct response to the questions posed in Chairman Proxmire's invitation to me to appear before the subcommittee. I hope you will find this approach more useful for your purposes than a general statement would be. The questions you have raised are thoughtful ones that deserve as complete answers as I can give.

I am pleased also that you saw fit to invite former Budget Directors Zwick and Schultze to testify on "Economic Analysis and the Efficiency of Government." Both of them were instrumental in making economic analysis an important part of the budget process, and we are in their debt for their having done so, and I would add that we consider that they have provided a basis for this.

NATURE AND PURPOSES OF THE BUDGET

The Federal budget is several things and it serves several purposes. First, it is a document that contains the financial plan of the Federal Government proposed by the President to the Congress for the fiscal year ahead. It sets forth the President's recommendations concerning the substance and size of Federal programs, requests the Congress for appropriations of funds to pay for these programs, and provides a plan for raising the necessary revenues. Because it is, in the first instance, a plan submitted to the Congress, the needs of the House and Senate Committees and Subcommittees on Appropriations—those to whom it is primarily addressed—are a primary determinant of the document's form and content. Insofar as it can, the budget also provides data requested by other congressional committees, including, importantly, some materials requested in the past by the Joint Economic Committee. The influence of the Congress on the form and content of the budget document is highly relevant to some of the questions that you have raised.

Other aspects and other purposes of the budget—and, particularly, budget formulation—bear more directly on others of your questions. These purposes include:

Economic stabilization, with the objective of promoting high employment, general price stability, and healthy growth of the economy;

Resource allocation, both as between the public sector and the private sector and within the public sector;

Income distribution among various groups in the private sector; and

Economic efficiency, providing the basis for choices among programs as well as the basis for executive and agency management of Federal programs.

Actually, the first two of these purposes might well be included under a broad definition of "economic efficiency," since the objectives of optimum growth of the national economy and optimum allocation of resources within the economy are efficiency objectives, too. Surely, a budget that contributes in a major way to economic stabilization also contributes in a major way to the efficiency of the national economy. Similarly, a budget that allocates resources between the public sector and the private sector in a manner that promotes economic stabilization contributes to the efficiency of the national economy, while an optimum allocation of resources within the public sector is determined by the relative efficiencies of various programs among which the allocation is made. However, the committee's primary interest during these hearings is in the use of microeconomic analysis to provide guidance in choosing among programs.

ECONOMIC ANALYSIS AND BUDGET FORMULATION

I am fully committed to the use of economic analysis as an aid in making budget decisions. At the same time, I would insist—as would anyone who understands our form of government—that economic analysis can never be the sole determinant of budget decisions. Indeed, one has only to study the present to learn that different aspects of economic analysis can lead to diametrically opposed policy recommendations. For example, the economic stabilization objective currently requires not only that there be a restrictive fiscal policy; it also requires that the restraint be greater in those areas where the inflationary pressures are greatest. Hence, this objective dictates greater restraint on Federal employment and on construction than on other controllable Federal expenditures, even though microeconomic analysis would undoubtedly produce illustrations of specific programs in which these restraints result in less efficient operations.

This illustration assumes that budget decisions are based solely on economic analysis. Even under that assumption a choice had to be made between conflicting policy recommendations. The fact is that budget formulation is a highly political exercise in the American democratic system. And it should not be otherwise. While I would insist that economic analysis can and must—and I underline "must"—be used a great deal more than in the past as an aid in budget formulation, I would insist with equal vigor that economic analysis cannot and must not be the sole, or in some cases even a primary, determinant of national

policy. Moreover—and here I speak as an economist rather than as Budget Director—economists, per se, have no special competence to make the political policy decisions inherent in establishing our national priorities and policies.

Economic analysis is readily adaptable to budget formulation because of the similarity of the objectives of economics and budgeting. Both are concerned with the allocation of scarce resources among competing uses. Both seek to maximize the returns from the scarce resources. And, therefore, similar methodology and techniques are adaptable to both. The limitations of applying economic analysis to budget formulation stem primarily from lack of agreement on the values to be assigned some of the returns from Government programs or projects.

REPLIES TO SPECIFIC QUESTIONS

Your August 12 invitation, Mr. Chairman, to me to testify requested by views on four subjects: First, plans of the Budget Bureau in developing a new budget document to include tax expenditures as well as direct expenditures; second, the plans of the Bureau of the Budget to develop a full program structure as a basis for budget presentation to the Congress; third, the plans of the Bureau of the Budget for implementing 5-year budget projections as the basis for appropriation deliberations by the Congress; fourth, the plans of the Bureau of the Budget for implementing substantive economic analysis of major problems of resource misallocation in Federal spending policy, including those areas which will be analyzed for the committee by economists during this set of hearings. Your letter of September 16 suggested an added subject—fifth, the Bureau's proposals on a procedure for submitting to the Congress the results of program evaluation performed in the executive branch.

The first three of these questions relate primarily to the printed budget document. In my opening remarks I noted that the Budget—by which I mean the *Budget of the U.S. Government* and its *appendix* is intended primarily to present the President's proposals on new legislation and appropriations and an overall fiscal policy for the coming year for congressional action. This being so, the *Budget* and its *appendix* are designed primarily to serve the needs of those in the Congress who are its principal users—the Joint Economic Committee in its appraisal of fiscal policy and the House and Senate appropriations subcommittees in their review of individual appropriation requests. Data requested by these users have high priority when the budget documents are being planned.

At the same time, we recognize that there are other important users, including individual Members of the Congress and the general public. For them we publish: a comprehensive discussion of Federal activities by function, historical data for both functions and subfunctions, various special tabulations, the popular *Budget in Brief*, and the widely used *Special Analyses* volume, which contained 18 special analyses this year. I must read the titles of the special analyses to illustrate the extent to which I think we have made substantial progress in the last 20 years toward giving the answers, at least on a factual basis, as to how these estimates tie together.

First of all, special analysis A—Federal transactions in the national income accounts. We hope that this will be closer to the unified budget as we work out some of the remaining problems growing out of the Budget Commission report. We are not quite there yet. We need time. The national income accounts segments, of course, have great significance to economic analysts.

Special analysis B—the various funds in the budget, that is, general funds, trust funds, and so forth. Even though we are strongly attuned to and firmly behind the idea of a unified budget in our basic presentations, there is an understandable right to know the various types of funds that go into making up the budget.

Special analysis C relates to agency borrowing and investments;

Special analysis D—Investment, operating, and other budget outlays, so those who wish to construct for their own analytical purposes an approach to the capital budget have the material that they need;

Special analysis E—Federal credit programs, where we have tried to array both the problems of the direct programs, direct Federal loans in one place rather than seeing them scattered throughout many functional programs, but also where we face up to a proper presentation of the whole guarantee and insurance function;

Special analysis F—Principal Federal statistical programs. We in the Budget Bureau have a coordination duty to make sure that all of these are interrelated. One of the functions of this table is to assist us in coordinating statistical programs. In addition, it has the function of giving greater public understanding of what we are doing in the statistical field;

Special analysis G—Unobligated balances of budget authority available in 1970. This has particular significance in the analysis of the budget on Capitol Hill;

Special analysis H—Foreign currency availability and uses;

Special analysis I—Civilian employment in the executive branch. Though interrelated with fiscal objectives, the employment objectives of the Federal Government are of particular significance in and of themselves;

Special analysis J—Federal education programs;

Special analysis K—Federal Manpower programs;

Special analysis L—Federal health programs;

Special analysis M—Federal income security programs;

Special analysis N—Federal programs for the reduction of crime;

Special analysis O—Federal aid to State and local governments;

Special analysis P—Federal public works activities;

Special analysis Q—Federal research, development, and related programs.

All of these are crosscuts, as you can see, of many different agencies. These analyses are the only places, and I might say the best places, for a revelation of the way in which these programs interrelates. Last, but not least.

Special analysis R—Selected agency budgets by program categories.

My answers to the first three questions that you have raised should be clearer, I think, in the context of this background.

1. The administration's policy regarding tax expenditures was made clear by the President in his April 21 statement on tax policy. The President stated then:

"Tax dollars the Government deliberately waives should be viewed as a form of expenditure, and weighed against the priority of other expenditures. When the preference device provides more social benefit than Government collection and spending, that 'incentive' should be expanded; when the preference is inefficient or subject to abuse, it should be ended."

Accordingly, tax expenditures will indeed be given close scrutiny in our deliberations concerning how best to utilize available resources.

We are still planning the fiscal year 1971 budget document, and, therefore, my remarks reflect only my present thinking rather than firm decisions. In this context, I do not now believe that tax expenditures should be added to the budget outlay estimates in the detail shown in the basic document; nor, so far as I am aware, would the congressional Committees on Appropriations believe that this should be done. We are, however, considering the possibility of an analysis of tax expenditures as part of the "Special Analyses" volume.

If such an analysis is to be included, the Treasury Department will have to provide the basic data. Delay in enactment and uncertainty about the outcome of pending tax legislation may, of course, make publication in January impractical or require that it be based on guess rather than on actual laws. I plan to discuss with Secretary Kennedy the feasibility of the Treasury's preparing the data under such conditions. Should a tax expenditures special analysis be published by the Bureau, it presumably would be quite similar to the one presented to the Joint Economic Committee, Mr. Chairman, last January 1969 by the then Secretary of the Treasury, Joseph W. Barr.

2. As Assistant Director Carlson explained in the paper he prepared for the Joint Economic Committee earlier this year, program structures have been developed by 26 agencies accounting for over 95 percent of total budget authority in 1970. The structures differ widely in quality and utility. Nonetheless, they represent helpful ways of viewing agency activities because they reflect the ways in which individual agencies approach the analysis of their programs.

Special Analysis R, of the 1970 budget "Selected Agency Budgets by Program Categories," contains data on budget authority by program categories. A similar special analysis is being planned for the 1971 budget document. However, until these program categories are reflected in agency appropriations, or the congressional Committees on Appropriations indicate that they will consider budget issues and the President's budget proposals in program category terms, we do not plan to convert the budget appendix presentation from an appropriation account to a program category basis.

We are not yet at the stage—if we ever will be—of having a program category structure that will simplify in any substantial sense the problem of choosing among programs designed to serve different objectives. We are not yet ready, therefore, to present a full program structure as a basis for budget presentation to the Congress. Currently, we employ the budget functional classification to present the President's program and the appropriation account structure to present

specific budget requests. In addition, we use the appropriation account structure in budget formulation and execution. We do this because, in order to establish responsibilities for budget execution, the classification system used must be consistent with the classification in which budget authority is delegated and structured. The program structure is useful for analyzing individual agency programs.

In using any of these classification systems, we are limited by our ability to interrelate them and, further, by our inability to develop output measures that permit intercategory comparisons of benefits. For better or for worse, we have no generally agreed upon way of deciding quantitatively whether the Nation benefits more by providing greater dignity for the aged—and less financial burden on their families—or by training disadvantaged persons in their early twenties or by making our airways safer or by reducing crime.

3. The Bureau has not in the past routinely published longer-range projections for either individual programs or for the entire budget. On the other hand, some agencies, when appearing before Appropriations Committees of the Congress, submit estimates of the future costs of proposed programs or program expansions in order to inform the subcommittees of the longer-range consequences of specific budget requests. These projections would appear to serve some of the purposes your subcommittee seems to have in mind.

There are good technical and policy reasons for the past reluctance to publish longer-range projections. Indeed, technical difficulties alone are sufficiently formidable to justify a decision not to publish official longer-range projections. Assumptions regarding price trends, wage and salary trends, and various workload measures are tenuous enough when applied to the regular budget period; they become positively fragile when the period of the projection lengthens significantly. And the obsolescence rate of longer-range projections is rapid. Furthermore, there is a sometimes difficult matter of deciding what the basic nature of the projections is—whether they are recommendations or forecasts. When they are issued as official documents, the distinction becomes very important.

To be sure, long-range projections can be made. They are made for planning purposes. And I know of no committee considering authorizations or appropriations for any activity that requested and was denied such projections for that activity. However, we are cautious about broadcasting either activity projections or aggregate projections because publication of them gives them a status—an aura of accuracy or commitment—that is largely undeserved.

On policy grounds, we are reluctant to forecast congressional actions or to appear to be committing the President—or even future Presidents—to decisions concerning the future that have not been made or that have been intentionally left open pending actual performance in the ensuing year. By publishing long-range projections, we could—unintentionally—limit the choices of the President and the Congress with respect to future decisions by permitting the inference to be drawn that the decisions have already been made.

Having said all this, my sympathies lie on the side of providing long-range projections. In fact, in April of this year we encouraged Bureau staff members to present at a professional association meeting

their views on 5-year projections of the Federal sector and the State and local government sector of the economy. This was a way to give the interested public the benefit of the analyses of expert professionals without committing the administration to the value judgments of these experts. These papers achieve much of the objective, I believe, that this subcommittee seeks.

4. The Bureau's firm commitment to systematic program evaluation is clear evidence of its determination to conduct, and to insist that other agencies conduct, substantive economic analyses of major problems of resource allocation in the Federal sector. The manner in which we are proceeding and our progress to date were described in some detail by Assistant Director Carlson in the paper he prepared for the committee earlier this year.

The areas analyzed for the committee by economists during this set of hearings are significant ones. It is not surprising, therefore, that they have been the subject of numerous analytical studies in the past. We welcome having the benefit of the new studies and recommendations of these experts. You can be certain that they will be given a careful review by Bureau staff.

Experience teaches us, however, that acceptance and endorsement of the recommendations of the executive branch goes for naught unless there is concurrence by the Congress. Indeed, in one of the areas covered by the economists who testified earlier—maritime policy—the Congress did not accept even the modest recommendation of the executive branch in another administration that the Maritime Administration be transferred to the Department of Transportation to facilitate the development and administration of a comprehensive national transportation policy, which we agree with you needs to be done. In fact, only a Presidential veto kept the Maritime Administration from being taken out of the Department of Commerce and made an independent agency.

Some of the areas analyzed for the committee were among the 12 recommended program reforms in the *1969 Budget*. As former Budget Director Zwick noted in his testimony before this committee last week, only two of these reforms have been adopted, and one of those resulted from executive branch action rather than congressional action.

We are disappointed that the Congress has not accepted more of these recommendations, but we are not discouraged. In fact, eight of the 12 recommended reforms were included in this administration's April 15 budget statement covering fiscal year 1970 and again in its *Summer Review of the 1970 Budget*, issued on September 17. I expect that we will continue to recommend their adoption by the Congress. As former Director Zwick observed in his testimony, the reluctance of the Congress to act favorably on these recommendations cannot be blamed on inadequate analysis.

5. Your fifth question, concerning the submission to the Congress of the results of program evaluation performed in the executive branch, is not an easy one to answer satisfactorily. In accord with the policy of this administration, we have adopted a less restrictive attitude toward the disclosure of the results of studies. It is our view that the Congress, the executive branch, and the public profit from a policy of frank discussion of pending issues. At the same time, there is an

essential need to preserve the President's ability to obtain the objective and unbiased analytical studies that he must have for internal decision-making as he formulates administration policies and on recommendations to the Congress. A dilemma is posed by the fact that the objectivity and freedom from bias in these studies diminishes as the audience and the pressure groups interested in the studies widen. Incidentally, this same characteristic is found even when the audience for a study widens within the executive branch itself. The problem is to reconcile competing objectives satisfactorily.

I am doubtful that we will be able just now to develop procedures applicable to the great variety of circumstances that occur in the many agencies of the executive branch. Instead, ad hoc resolution of problems relating to specific subjects or types of analysis may have to be our "procedure" for the time being.

Policy analyses and program evaluation results have already been made available to interested congressional committees in some areas, such as oil shale exploration and the development of the liquid metal fast breeder reactor. We expect that the substantive legislative committees and the appropriations subcommittees are the principal users of such information, but studies done by the executive branch have also been made available to the General Accounting Office for their independent analysis. In addition, agencies have incorporated the results of analytic program evaluation studies in their budget justifications to appropriations subcommittees. A good example of this is contained in attachment 13 to volume 2 of the committee's recent compendium of papers on the PPB system.* The Bureau has encouraged the inclusion of such information in budget justifications, and will continue to do so.

As you know from the earlier hearings on the PPB system, the results of program evaluation studies appear in program issue letters, program memoranda, program and financial plans, program overview sheets, and in various special analytic studies. Many of these documents—including the program issue letters and program memoranda—are used in the executive branch decisionmaking process; the data in others—like the program overview sheets—quite frankly are based on many guesses that are not yet sound enough for public exposure. We use the program overview data cautiously.

I would expect that, in general, the program evaluation studies that can be submitted to the Congress will come primarily from the special analytic studies, but I do not rule out the possibility that material from other sources might be submitted. In either case, the material would not necessarily reflect the current views of the submitting agency or of the administration because any number of assumptions or conditions on which the material was based, may have been rendered invalid by the passage of time.

CONCLUSION

We in the executive branch, and especially those of us in the Executive Office of the President, Mr. Chairman, share your determination

*"The Analysis and Evaluation of Public Expenditures: The PPB System," committee print, Subcommittee on Economy in Government, Joint Economic Committee, U.S. Congress, 1969.

to ferret out Federal policies that waste money, that fail to produce benefits in excess of cost, that have outlived their usefulness, and that provide unwarranted subsidies to anyone. We are engaged in a project right now in the executive branch—with no publicity—as to what we can do in this very regard. And we are firmly committed to the use of economic analysis as a powerful analytic tool in this endeavor. I am persuaded that the difference between us—given the inevitably different value judgments that two persons or two institutions will have—are relatively minor.

Federal agencies already provide a greater deal of information to substantive legislative committees and to appropriations subcommittees, and I would expect the quantity of information provided to increase in the future. The budget document, I am afraid, Mr. Chairman, is not going to get smaller; it is going to get larger as the world moves forward.

I am probably less optimistic than you that the availability of additional information based upon program evaluation studies will produce dramatically more agreement between those who differ now as to the merits and value of a particular program, or who differ on the distributional aspects of Federal program, for example, through the farm program, veterans' benefits, maritime and other transportation subsidies, and the welfare program. Too many illustrations can be found where sound analysis leading to a solidly defensible position has not produced agreement. Yet, sound analysis is absolutely essential if we are to strengthen the decisionmaking process, and you will find, Mr. Chairman and members of the committee, that I shall continue to support it vigorously.

Thank you.

Chairman PROXMIRE. I appreciate that assurance very much, Mr. Director, because I would agree with you, that this isn't going to dissolve our differences. After all, we are still going to have debate and disagreements, and we are going to have to make our decisions on value judgments, but we hope that the information that we get is going to permit us to make better informed decisions and permit us to come down on the side of efficiency and economy much more than we have in the past, when we simply haven't had this information available.

Mr. MAYO. This is my goal, too.

Chairman PROXMIRE. Now, along that line, one of the constant themes that runs throughout your testimony is the assertion that the substantive legislative committees and the appropriations subcommittees receive from the administration whatever information they need to make decisions or they can request additional data if it is necessary.

As a member of both the substantive legislative committee, the Senate Banking and Currency Committee, and of the Appropriations Committee, I completely disagree with those assertions. One of our most serious problems in the legislative branch, in my judgment, is the failure of the executive branch to properly inform the Congress and the public and a tendency to withhold information obtained with taxpayers money from the public.

Let me give you two examples: First, in national defense, it should be obvious now, after all the debate that recently occurred on the

Senate floor, that many Members of the Senate are dissatisfied with the information they have been receiving about defense programs. As an example, there is a strong sense in the Congress that defense data is being unnecessarily withheld by the executive branch, let me read to you a letter written by Senator Magnuson to the Comptroller General on June 10, 1969. Senator Magnuson, as you know, is chairman of the Senate Commerce Committee. He has been chairman for many years of the Independent Offices Appropriations Subcommittee of the Appropriations Committee. He is now, I believe, chairman of the Health, Education, and Welfare Subcommittee. He is a man, obviously, who is well qualified to speak and he is a member of the Defense Appropriations Subcommittee. He wrote this in June of this year:

As a member of the Defense Subcommittee of the Senate Appropriations Committee, I have learned that present military procurement policies thwart rational congressional control over defense spending. The subcommittee and Congress as a whole simply do not have access to the critical information, cost data, profit reports, sources selection procedures, rates of progress in production and so on needed to make consistent and enlightened decisions about which programs are on schedule and which need investigation.

For years we have accepted these limitations on our access to information because we believed the Defense Department procedures were geared to efficiency and lowest cost procurement. Today it is clear that that is frequently not the case. The current military procurement procedure is far from insuring the best buy for the taxpayers dollar, actually result in the waste of several millions every year. Some of the largest and most respected American business firms take advantage of contract loopholes while we in Congress are kept ignorant of contract terms and cost data alike.

And a second example, before I ask you to comment, a second example is in the area of product information. According to an article in last Monday's Washington Post by Morton Mintz, in December of last year the Johnson administration task force, set up by Joseph Califano and headed by Lawrence Levinson, recommended the public disclosure of information on brand name products obtained by Government agencies. So far the present administration has refused to permit the public disclosure of such information, and I am informed that the Bureau of the Budget has recommended that such information be withheld from the consumer.

Would you comment on those two areas?

(The article referred to follows:)

[Reprinted from Washington Post, Sept. 22, 1969]

U.S. IS URGED TO DISCLOSE CONSUMER TEST DATA

(By Morton Mintz)

A Johnson administration task force last December laid down a plan and a timetable for publicizing results of government tests of consumer products ranging from paints to contraceptive devices.

The "administratively confidential" report never surfaced, however, because President Johnson, in keeping with his general policy of helping the Nixon administration make a fresh start, quietly passed it along with other so-called transition papers.

Yesterday, Ralph Nader gave newsmen a copy of the report, which he had obtained from an undisclosed source, as well as a copy of a letter asking Herbert Klein, director of communications for the White House, to help end the "massive and long on-going suppression of government information relating to consumer products."

The consumer advocate termed the report the previous administration's "most encouraging policy document in the consumer affairs area," but emphasized that its recommendations harmonize with President Nixon's own philosophy.

During the presidential campaign, Mr. Nixon said, "The consumer must be protected, but he also must be trained and encouraged to protect himself." He also spoke of the need to have "a thoroughly informed, self-reliant consumer."

Nader pointed out to Klein that the task force recommendations "center on assisting the consumer to help himself in the marketplace, with little need for added government manpower and funds."

The Johnson administration task force was headed by Lawrence E. Levinson, a deputy special assistant to the President.

Its 43-page report said that while the amount of brandname information in government hands is "very small," it could "be made valuable to consumers." In addition, it said, "much more" non-brand information exists.

Some highlights of the report:

In the first year of a recommended government-wide disclosure program, the General Services Administration, which buys for federal use about 900 consumer items—more than any other agency—could release data on products ranging from antifreeze to flashlights.

Also during the first year, the National Bureau of Standards, which "is enthusiastic about taking on the program," could prepare information for the public "on perhaps a dozen products (including paints, roofing materials, floor coverings, and textiles)."

"A substantial portion of the drugs sold through commercial pharmacies do not meet the exacting specifications set by the Army. The task force strongly believes that every effort should be made to include some of this information within any release program."

Until 1965, the Agricultural Research Service regularly conducted small-scale performance-in-use tests "on commercial refrigerators, stoves, water heaters, irons, washers and dryers . . . Much brand data were amassed, but Department of Agriculture policy precluded reference to brand names in departmental releases. Beginning in fiscal year 1966, Congress discontinued support of the research altogether. The reasons for discontinuance were not fully clear. . ."

COURT CHALLENGE PENDING

Under pressure from Consumers Union, the Veterans Administration last year adopted a policy—termed "a milestone" by the task force—under which results of tests of brand-name hearing aids are made public. The policy did not apply to tests made in the past. A court challenge on that point, brought by CU, is pending. A disclosure policy also has been adopted by the Federal Trade Commission for the tar and nicotine levels in cigarette brands.

In a draft memorandum prepared for Mr. Johnson's signature, all federal departments and agencies were directed to report to the task force by last April 1 "about the properties and performance of products purchased by consumers." The agencies involved in a pilot program for releasing product data would have been directed to make a progress report by July 1.

The President's Committee on Consumer Interests was to coordinate the program and, by last Aug. 1, report findings and recommendations to the President.

DISCLOSURE URGED

The leading advocate of disclosure has been Rep. Benjamin S. Rosenthal (D-N.Y.), who has provided for it in a bill for a Department of Consumer Affairs. Other advocates include Sen. Gaylord Nelson (D-Wis.), a Senate sponsor of the bill, and Rep. Florence P. Dwyer (R-N.J.), ranking minority member of the House Government Operations Committee.

In the White House, the initial push for disclosure had come from members of Mr. Johnson's staff. But the decision to set up the task force, it was learned, came last year at a meeting between the President and Wilbur J. Cohen, Secretary of Health, Education, and Welfare.

A few minutes after the meeting, Cohen stopped by the office of Joseph A. Califano Jr., Mr. Johnson's top aide, to tell him of the President's wish.

Califano put his deputy, Lawrence Levinson, now a New York City lawyer, in charge of the project. He drew members for the task force from high echelons

of the Departments of Defense, HEW and Justice, the GSA and VA, the Council of Economic Advisers, and the office of presidential consumer adviser Betty Furness.

Over a period of several months the task force reached the conclusion the product data could be released only with numerous precautions.

REVIEW OF RESULTS

For example, the task force said, agencies in the pilot program, before releasing test results, would have to review them "or accuracy, reliability, objectivity and meaningfulness." Trade secrets and proprietary information would not be disclosed. Test methods and the extent to which the results might be limited would be explained. Affected suppliers would be notified in advance of disclosure.

In addition, results would be released with a statement "that while advertising of released information is permissible, any implication that the government does endorse any product will be considered false and misleading."

One idea considered in the White House was for a monthly bulletin that would put useful test information in easily understandable form.

Mr. MAYO. Mr. Chairman, I am not aware of the issue that is involved in the second case you cited. It hasn't come personally to my attention. As far as the first is concerned—

Chairman PROXMIRE. You're not aware of that although the allegation is that the Bureau of the Budget is against public disclosure?

Mr. MAYO. No, I am not aware that the Bureau of the Budget ever made such a recommendation. However, the Bureau, as a general principle, has a responsibility to the President, Mr. Chairman, to treat in the category of executive privilege, information that is involved in decisions that are in the process of being made. I don't think, in other words, that we can reveal all before the decision is made. The weighting of those factors must be done by the executive branch itself.

Chairman PROXMIRE. You see, our difficulty is that often we have to make decisions on these programs, whether it is the C-5A or the aircraft carrier or whatever it is, and we cannot make intelligent decisions and informed decisions unless we have the information.

Mr. MAYO. Well, again, I don't want to pretend to know all of the details of the Pentagon operation, Mr. Chairman, nor do I think that it is our job to manage the Pentagon. That is why Mel Laird is there, as Secretary of Defense. And I know that he is quite conscious of the guidelines of this administration favoring fuller disclosure of the various factors that are involved in how the Pentagon operates and how decisions are made. He has assured me that he has done a great deal to make information, fuller information, available to the committees on the Hill in this regard. He understands the problems very well, as you know, because of his experience on the Hill.

Chairman PROXMIRE. I am very disturbed, Mr. Director, about the failure of the Budget Bureau to get into the Defense Department the same degree of effort and concern and in the same depth as you do in the domestic programs and the nondefense area. It seems to me that the record is pretty clear, that we simply don't have the same kind of scrutiny or the same kind of information.

For example, the only two studies that we know of on the C-5A, fourth squadron, the additional planes above the 58 planes which were already authorized, the only two studies were made in the Office of the Secretary of Defense by the Office of Systems Analysis. Both of those studies, one in November and one in June—November of 1968

and June of 1969—both recommended against the purchase of additional planes, additional C-5A planes.

Now in all this debate we got the opinion of the Secretary of Defense and the Assistant Secretary in charge of systems analysis, but the Budget Bureau was never brought into this. There didn't seem to be any position or any concern over this very, very important decision. Here is a decision that will eventually cost \$1 billion. The immediate decision involved \$500 million, but these 23 additional planes before we are through, we are told, will cost some \$900 million.

Now, isn't this exactly the kind of question the Budget Bureau should be right in on top of, and should be making their own recommendations and have their own firm position?

Mr. MAYO. To the extent that this relates to what you might call the specifics of the management process in the Pentagon, it is up to the Secretary of Defense to exercise that responsibility. Certainly, whenever we do have a point of view on any of the details of a program, they are made clear to the Pentagon. We have a good working relationship of a critical nature, Mr. Chairman, and I can reassure you on that, just as we do with the other departments. But we do not try to tell HEW how to manage each and every one of its grant programs, either. Our job is to set guidelines for the whole Government, to set general ground rules. If we were to get into the specifics of the operations of the programs of each agency, we couldn't do it with 500 employees. We couldn't do it with 5,000 employees. I don't think that is the function of the Bureau of the Budget.

Chairman PROXMIRE. All I ask is you do it with the same vigor and the same effectiveness that you do with the nondefense sector.

Mr. MAYO. You can be assured that we are trying to exercise our responsibilities equally across the board with all the various agencies. I think I made my position on that clear to you in the past.

Chairman PROXMIRE. Well, how about the—

Mr. MAYO. About the compliment, I am not sure that we are as effective as we would like it to be on some of the domestic programs, either. We are trying like the dickens.

Chairman PROXMIRE. Well, I appreciate that, but we do have a situation in which the Bureau of the Budget last year analyzed controllable and uncontrollable spending.

Mr. MAYO. Yes.

Chairman PROXMIRE. That is, they found a great deal of the budget was not within the control of Congress or the capacity of Congress to reduce in a year or so—

Mr. MAYO. That's correct.

Chairman PROXMIRE (continuing). International debt, the social security benefits, payments of this kind. But only about \$104 billion of the nearly \$200 billion budget is controllable.

Mr. MAYO. Not even that, as we get through the year, Mr. Chairman.

Chairman PROXMIRE. Of this, about \$80 billion is defense spending. Now, what proportion of this 80 percent, nearly 80 percent, say 70 percent or 75 percent of your spending that is controllable, what proportion of your personnel, of your auditors and so forth now, as of September 1969, are devoted to defense as compared to nondefense areas?

Mr. MAYO. We have, if you measure it on your scale, a relatively small and, I must add, a very capable staff dealing with defense activities. However, I think we must look at the Budget Bureau in terms of all of its functions, organization and management, personnel coordination, statistical review, and so forth.

Let me make a couple of points on this: First of all, now that the Congress has passed its first appropriation bill for the present fiscal year, which included our appropriation, we are in the process of allocating of positions and there will be additions to the defense analytical staff.

Second, the existence of a fairly large number of agencies that spend \$1 million a year or less adds to some extent to the workload of the Bureau of the Budget. Even though, measured as a percent of controllable expenditures, they should be assigned about 0.01 percent of Bureau employees, the job of examining them makes much greater demands on manpower.

The amount of work we have to do vis-a-vis each appropriation request and each category, if you were to work it out that way, obviously will vary, and not necessarily according to the dollars involved.

Further than that, Mr. Chairman, I do not feel that we are missing any important analytical bits in the way we approach the Pentagon spending picture. Obviously, in saying we are going to add to that staff, I grant that we need some more people, but I don't think that we can say that we have a greater lack of analytical capabilities in the defense area in comparison to other agencies.

Chairman PROXMIRE. You have had 9 months. What is the arithmetic—what is the number of people who are assigned to defense and the number of people assigned to nondefense in the Bureau of the Budget?

Mr. MAYO. Those are essentially the same figures, Mr. Chairman, that I gave you a few months ago. I don't happen to have them with me. I am not sure whether Sam does, but I tried to point out then the relationship between the figures on personnel and the figures on appropriations.

Chairman PROXMIRE. Is it true that it would be about 15 percent assigned to defense as compared with 85 percent assigned to non-defense? Is that about right?

Mr. MAYO. I don't think the figures are quite that extreme, sir.

Mr. SCHLESINGER. At the present time it is about 25 percent.

Chairman PROXMIRE. Better than 25?

Mr. SCHLESINGER. Now that our appropriation request is approved, we plan to include the staff to better than 25 percent. Between 25 and 30 percent.

Chairman PROXMIRE. Assigned to defense?

Mr. SCHLESINGER. Yes.

Chairman PROXMIRE. Although it constitutes 75 to 80 percent of controllable expenditures?

Mr. MAYO. Well, we can't exclude the uncontrollables just because they bear—

Chairman PROXMIRE. Well, put them on any kind of comparison that you want, and it seems to me you still have obviously less manpower assigned to defense in proportion to the dollars spent than you have in other areas.

Mr. MAYO. Well, if you put it on that basis, I have more manpower than I should have assigned to many of the smaller items. I have really complete inadequacy with regard to assignment of manpower to analysis of interest on the public debt, which is \$18 billion.

Chairman PROXMIRE. At any rate, there has been no shift in the last few months—

Mr. MAYO. There has been no shift yet. We don't like to take steps, especially in the Budget Bureau, to spend money that the Congress hasn't given us, but now that this appropriation bill has passed we will be increasing that staff.

Chairman PROXMIRE. Well, we will certainly want to follow that very closely. My time is up. I will be right back.

Senator Percy?

Senator PERCY. Mr. Mayo, I am delighted to see you this morning.

In your testimony, which I found exceedingly helpful, you indicate a reluctance to publish longer range projections because unintentionally you could limit the choices of the President and the Congress. I can well understand the great difficulty of doing these projections, and it might almost seem presumptuous and offend some Members of Congress, particularly committee chairmen—of which I am not one—who would feel this is within their province. But could we change the term from "projections" to "goals"?

President Eisenhower set up a National Goals Commission in which we were always trying to look ahead to where we would like to go, what we would like to be, what kind of a people and Nation we want to become. Would setting goals be less offensive? Would it be somewhat easier and would it then serve as a reference point?

For instance, we had no reluctance, executive branch or legislative, in establishing a national housing goal of 26 million units in 10 years. It is extremely helpful to have such a goal because we can constantly see what is needed and then how far we are falling behind and then what we have to do to correct that situation. I think that would be more what I had in mind in asking if we couldn't get 5-year projections. They would be something at least to work on, to see where we are going and how we might get there.

Mr. MAYO. I have great sympathy for what you are suggesting and I was one of those who urged that we try to do something like it at the time we had our Budget Commission deliberations. We are working on goals at the other end of Pennsylvania Avenue right now. You may feel you are seeing them piecemeal in terms of a goal of x billion over x years for public transit, for airports and airways, for welfare reform, and various other things. Some of these—maybe housing is the best example—are relatively definable, even though you may want to change the goal over the years. I don't deny that it is an important benchmark to keep in mind.

However, adequate national defense, for instance, is a much more difficult goal to define and one which I think we would all agree goes through much change over a period of time. This is true, I think, of many of the various programs that we deal with.

One of the points the President stressed, when he received the Vice President's report as Chairman of the Space Task Force, was not only the importance of having a goal such as, perhaps; a man on Mars by

the end of this century, but also of preserving the flexibility approaching that goal in any number of ways, depending on its relation to other goals and depending on the constraints of the budget situation. And I was glad to see, for instance, this particular report pay heed to the budget constraints not just in the short but over a period of time.

The job of allocating resources among competing goals in a sense becomes even more precarious if you have put them down in black and white. In April, for instance, we decided to request funds for the agricultural conservation program for fiscal year 1970, contrary to the January budget. We knew that the January budget request would offend some Members of the Congress by giving them too little advance notice of a recommendation to discontinue the ACP. To request such funds for a 5-year program would have had a different sort of an impact psychologically, however. The same rationale applies to aid to impacted areas in education. To publish even the most tentative estimates gives them an often undeserved authority, stamping them, in the public mind, with the seal of Bureau or even Presidential approval. I do not believe in setting our projections in concrete in such a way.

I do believe, however, that it is within the public domain to discuss substantively the alternatives of resource allocation with the assistance of competent experts. This is the name of the game that we are all talking about here. There must be free and enlightened discussion especially through staff channels, with some of our alumni up at Brookings and with others. I think much can be done in terms of providing information on the question of relative goals and the quantification of projections.

Senator PERCY. Well, I take it that you are sympathetic with my objective and desire but can't quite see how it can be implemented?

Mr. MAYO. That is correct.

Senator PERCY. I am unsympathetic with my friend's answer. You're a banker. I just ask you, what would you think of an organization that came in for a long-term credit, for instance—more aptly they would go to an insurance company, I suppose—without knowing what their goals were, where they were going?

Mr. MAYO. Now, our—

Senator PERCY. You see, our problem is here in Congress. We sit in these appropriation authorization committees. You are critical of Congress; I would even be far more critical. I think you have been terribly gentle. This is not a way to run a railroad or a government, the way we try to focus on programs. We are all in the authorization area. We all authorize things that we are interested in, but we don't bring them together. We just assume the Appropriations Committees will bring it all together, but that is such a gigantic job that you sit on a subcommittee there. Who is it that gets this total picture? When you authorize an SST, a go-ahead with 26 million homes, a go-ahead with an agricultural program, the Defense Department—when do you finally realize that they are unrealistic goals in the light of economic development or growth that we foresee? And who then is responsible for pulling us back down to reality? I would hope to look to the Bureau of the Budget as about the only place that I can see that it can be done.

Mr. MAYO. Well, I think—excuse me.

Senator PERCY. I just am aghast at the lack of information I have as an individual Senator in trying to make substantive decisions as we go along.

Mr. MAYO. Well—

Senator PERCY. We had a fight yesterday on the floor of the Senate. I had to use a Bureau of the Budget study of what it would take to feed hungry Americans—\$2,930 million—to prove that what we were doing was not extravagant or wasteful or unnecessary, as I was being told on the floor. Where was the projection that we could have been working on for a long period of time as to what it would take even to provide basic food?

We seem to be very cognizant of the needs of India. We work with the Government of India and their long-range projections. They give us copies of their projections. We work them over. Individual foundations such as Ford, help analyze them to see where they are going. I see better planning in India, under our guidance and with our assistance and help, than I really do back here at home. I am wondering whether it is because the Russians thought of a 5-year plan first, that we therefore are so sensitive about saying we had better not have a 5-year plan because it sounds like it is socialistic. It seems utterly chaotic to me not to know where the country is going and have someone pull various programs together. And I don't care whether we call them "projections" or "forecasts"—"goals" is a softer term, but I do think that we can't operate unless we properly have a sense of direction that we do not now have, unless the chairman of this subcommittee, who has been in the Senate longer than I have, has a better sense of direction than I have.

Mr. MAYO. I would like to respond, Senator Percy, by taking your example of what happens when a potential borrower comes into a bank and wants to get a loan. Obviously, the bank will ask for his projections.

They insist on this in the banking industry. They must, in order to make the decision. And just as you say, having much information available is appropriate in the Federal Government also.

The projections that that person or that company gives to the individual bank is, of course, confidential information, and this confidence is requested by both parties.

I would say that the same thing is true today in the Federal Government, Senator. I say that because, as I tried to point out in my testimony, we do have projections of various individual programs—and, I think you would agree that in the last analysis, congressional decisions are made in terms of individual programs.

I have no knowledge of an instance in which a congressional appropriations or substantive legislative committee has asked for a long-range plan, be it for a southern Nevada water project or the Atomic Energy light water breeder reactor program or whatever and was turned down by the executive branch.

What I have been trying to speak to today is somewhat more difficult I think, than the kind of thing about which you indicate your concern. The much more difficult thing is choosing among goals and trying to set up models, not just of the public sector but of the entire

economy, as a basis for our comparison of goals and the translation of those goals into actions.

Now, we are working on goals, on alternatives, really, with the goals commission in the White House. We have a little date called 1976 in mind, which happens to be an important anniversary in the history of this country. We also believe in rounded figures and have the year 2000 in mind in terms of other statements of goals. I think we can agree that the paths to those goals can present many viable alternatives.

The quantification of all of this leaves much to be desired. I am not sure whether or not, since goals change suddenly but importantly, quantification doesn't represent an oversimplification. I think this is partly what makes me hesitant.

We do 5-year projections in many of our analyses and we cannot talk to the President about the 1970 and 1971 budgets without giving him our best judgment as to 1972 and 1973 and 1975. We would be remiss if we did not do this. But these projections are obviously based on shaky economic analysis. They are based on the best assumptions we can make, but they are assumptions which, to overuse the phrase perhaps, we can't set in concrete.

The whole area of economic analysis has come a long way, and I say this from personal experience. In 1943, in the Treasury Department, we were given the assignment—we being Milton Friedman, Oscar Gas, Wesley Lindo, and myself as staffman—to construct models of the U.S. economy for the immediate postwar period. One of the models we came up with had a trillion-dollar GNP for the year end-of-the-war-plus-one.

Our assumption was incorrect. I say we have come a long way since then, but let's not forget we are still dealing in assumptions, and assumptions can still turn out to be wrong. Milton Friedman, by the way, still has those working papers in his basement in Chicago.

Senator PERCY. My time is up but, as the chairman said, I will be back.

Chairman PROXMIRE. When you say you have your projections, you give the projections to the President, you have them in your program, your financial plan and, furthermore, I would like to call your attention, Mr. Mayo, to Public Law 81-801. This law, passed some years ago now, provides in effect that the executive branch should furnish Congress with budget projections of programs. Could you explain to me why this law hasn't been followed in the past year?

Mr. MAYO. I was under the impression that we have followed that law.

Chairman PROXMIRE. We certainly haven't gotten them in the way that would be most useful to us. We haven't gotten any kind of a comprehensive picture of where we are going 5 years from now, where the budget is going to be, in any of these areas—the defense budget, the space budget—

Mr. MAYO. I do not think that that law applies in general to the defense budget or the space budget. But on space for instance, you have the recent task force report. The assumption in there will, in effect, give you working papers from which to develop alternatives yourself, if you wish, and I know you will. Also, let me reiterate that

where such projections are requested with reference to specific programs, we are providing them in a way that is responsive.

Chairman PROXMIRE. I do hope for the record that you will document that because I have checked with the staff and they say they are very surprised at this response, and I am surprised and we would like to know precisely where we have gotten these 5-year projections and where we haven't gotten them, where Public Law 84-801 has been complied with and in the areas where it has not been—and I am convinced that there are areas where it has not been—and the reason why.

(The additional response of the Bureau of the Budget follows:)

Public Law 84-801 is commonly construed to relate to legislative proposals of the executive branch which officially proposes or recommends the creation or expansion of any function, activity or authority, and which, if enacted, will entail annual expenditures in excess of \$1 million. The statute does not apply generally to budget estimates.

The Bureau of the Budget, in section 4(d) of Circular A-19 has directed the various departments and agencies to comply with the terms of the law.

Mr. MAYO. The rest of my above remarks, to make the record clear, Mr. Chairman, refers to our response to specific requests for information. We don't feel it incumbent upon us to force projections on committees that have no interest in them and do not want them.

Chairman PROXMIRE. Well, that is helpful. That means, then, that if you should be requested by this committee or another committee for projections, that you would provide them but you are not going to provide them unless you are?

Mr. MAYO. We will take each request on its own merits, that is correct.

Chairman PROXMIRE. You are going to get some requests.

In your statement you speak of the need for fiscal restraint in order to curb inflation. In your words you say this, and I quote: "In those areas where the inflationary pressures are greatest," you go on to say that restraints should be applied first to Federal employment and on construction and other controllable Federal expenditures. Now, how did you arrive at that decision? What kind of analysis was employed? It seems to me that spending on the defense and space programs are much more inflationary than the areas you have identified. After all, the production that we have in defense doesn't meet any economic need, nor does the space expenditure meet any economic need. We provide a great deal of spending in these areas but it doesn't increase the supply of houses or skilled labor or the other elements that are increased when we spend money in the domestic areas. Those, it seems to me, are much less inflationary than space and defense.

Mr. MAYO. Well, let me first put a footnote on my previous answer, just to set the record straight. The requests that I am talking about would be requests to the agencies, Mr. Chairman. This is where the requests should be made for the type of information that you are seeking.

Chairman PROXMIRE. Yes.

Mr. MAYO. They in turn will consult with us, it is true, but this is the proper response, I think, and I would have misled you if I hadn't said it.

With regard to your question about economic analysis concerning stabilization objectives let me mention first that the only reason that some steps were taken for instance the President's 75 percent cutback on direct Federal construction, the only—

Chairman PROXMIRE. On that I agree. I think that is correct.

Mr. MAYO (continuing). The only reason that he is and we are working so hard right now to get positive State and local government response in areas—at least in many areas beyond our control—is an economic one. The stopping of considerable new contract activity does not have a big budget effect in this fiscal year, as you know. A contract let today may have no effect by June 30, 1970, in helping me help the President meet his budget goals, but that isn't the point.

Chairman PROXMIRE. But it has an economic effect.

Mr. MAYO. It has an economic effect. I think this is terribly important and I call attention to it as a positive area where economic analysis has an important role. Now we do this in the face of, I would say, objection from most of your colleagues, from probably all of the Governors and all of the mayors in the United States, to name a few of the important people.

We therefore feel that the economic effect of this overrides political consideration. As far as the space and the national defense programs are concerned, I think the goal that you set up must not only meet economic criteria, but also meet the test of the adequacy of our national security. The question, however it may be appraised by the President and by the Congress, of the importance of the space program as a national program, is terribly important—one that cannot be decided purely on economic ground.

I would hasten to add that the steps that the Secretary of Defense is taking in many respects do go right along with what we are talking about on Federal employment. The figures in our summer review, Mr. Chairman, on Federal employment show more than half of the burden of those decreases in civilian employment fall on the Defense Department. You are quite familiar with what has been taking place on the military side, and this is a serious—

Chairman PROXMIRE. Well, I don't dispute that. I think it is helpful. I think Secretary Laird is moving in the right direction. I think he could move much faster, of course, but that is a matter of difference in judgment. But in your presentation here you seem to put your emphasis in the domestic sector and not in the defense sector and, it seems to me, as far as inflation is concerned I am convince that—

Mr. MAYO. We have not ignored—

Chairman PROXMIRE (continuing). The military area is by far the most inflationary.

Let me zero in on a specific project which seems to me is very hard to justify from an economic standpoint, a social standpoint, a priority standpoint, a stability standpoint—and that is the SST.

Development of the SST will cost the Federal Government \$1.2 billion by present estimates—the supersonic transport. By the time the supersonic transport is completed, this figure will undoubtedly in my mind, run a lot higher. Now, what kind of priorities should or will this appropriation have? What other programs will have to be scrapped or cut back to pay for the SST, if any?

Mr. MAYO. Let me mention this, that the decision with regard to the SST was a matter involving deliberation of the various aspects of the program. It wasn't just a question of cost effectiveness. I think it is generally agreed that there are some problems with regard to the SST.

Chairman PROXMIRE. That's right. I will come to that.

Mr. MAYO. I would say that those problems, the questions that were involved on the economic side had a full and ample discussion within the executive branch.

Chairman PROXMIRE. Now, this—

Mr. MAYO. May I finish, please?

Chairman PROXMIRE. I'm sorry; I thought you were through.

Mr. MAYO. I would say that the President and other members of the administration have made it clear that there are a number of factors involved in the decision on the SST, one of which—and only one of which—is the question of national leadership in the aircraft pioneering effort. This is a factor which, of course, will have some significance for whatever decision the President may make on the space program.

I would add that in an appraisal of the economic significance of the SST, we must also keep in mind that one of the most serious problems facing this country at the present time is the problem of the international balance of payments.

Chairman PROXMIRE. On that I think you can get an argument on the other side, that it would be aggravating our balance of payments seriously. I can't believe that people flying on the SST aren't going to be primarily Americans getting over to Europe in a hurry and being able to spend their money over there much more rapidly. It is true that to the extent that the SST is produced in this country in great volume, it will be better to have American planes bought than British, French or Russian.

Mr. MAYO. That is the point I am making.

Chairman PROXMIRE. And I understand that point, but until America, with its productive capacity gets into this, it is hard for me to believe that France and Britain and Russia are really going to be able to produce this plane in sufficient volume so that it will be able to take away from the "jumbo jet" and our competitive planes—our dominant position.

As far as prestige and technological advance is concerned, the Advanced Manned Strategic Aircraft, AMSA, the supersonic bomber, we just appropriated unfortunately—we just appropriated \$80 million for further research on that. We are going to go into prototype construction, close to full production on that, so AMSA and the SST are parallel developments, exactly the same kind of a plane. Our prestige has certainly been emphasized very heavily in the space program. I wonder how far we have to go in our priorities in this area of prestige.

Mr. MAYO. This is a legitimate question for discussion, I am sure, and it has been discussed. In the end, we felt that the matter of national prestige point on the SST was important.

Chairman PROXMIRE. Now, presumably, this money will have to come out of the Department of Transportation budget. Does that mean you have to cut back on mass transit, say, to fund the SST or would

this mean we couldn't go ahead with the improvements on the St. Lawrence Seaway?

Why wouldn't these be competitive? After all, we have limited funds. You are more conscious of that than anybody in Government. Wouldn't this tend to restrain us in these other areas?

Mr. MAYO. I would think that there would be a tendency in that direction. There probably should be. I don't say this with reference to mass transit or airports and airways, where we have specific programs we believe to be necessary in just as firmly with the SST on the books as we did before; but I am always in the position of trying to enforce appropriate resource allocation, of taking an area like transportation and trying to make things come out even.

We haven't faced up to it precisely yet, nor can anyone ever anticipate exactly how these pressures will impinge on other programs. You are quite right, that the addition of even \$81 million to the fiscal 1970 budget is a very important consideration to the Budget Director at this time.

Chairman PROXMIRE. My time is up. I will be back on the SST.

Mr. Brown?

Representative BROWN. Mr. Mayo, I am sorry I wasn't here when you made your statement. I had another commitment this morning which also was significant to me, and I hope that in reading your statement I haven't missed some nuances which you may have given it, and I hope that I don't cover any ground that has already been covered. But I would like to push into an area that is somewhat related to another committee on which I sit.

We have been studying, in the Government Operations Committee, the question of grant-in-aid consolidation which the President has requested he be given the authority for in a reverse procedure set up by the Hoover Commission for the reorganization of the executive branch of the Government.

The thing that I am concerned about is something that developed in the study of that proposal and that, I think, cuts right to the heart of the responsibility of the Bureau of the Budget and to the economic and efficient allocation of the resources of both Federal, State, and local governments.

When a local community wants to apply for a grant-in-aid from the Federal Government, as things now stand the first thing it must do is find out what has been done by the Congress in this area which would provide the community with Federal resources which the Federal Government feels are important to be allocated for this problem. In other words, find out what the law is, what is available to the community in the way of grant-in-aid programs to resolve whatever its unique local problem might be.

A community can only do this by appeal to either a special ombudsman that it has hired for itself or through its Member of Congress or in some other special way, because no thorough and appropriate cataloging system of what those Government grant-in-aid programs are and how they would fit into the various needs of a local community. And so there has been a proposal that we catalog the grant-in-aid programs in a ready reference that any local community can flip through and find out what programs are going to be appropriate to

its need. And presumably this is what the Bureau of the Budget has in mind when they recommended the President's power to consolidate these grant-in-aid programs, to put together programs that fit in together to meet needs and cut down on the overlapping of specialized requirements that have been passed at various times by the Congress.

Now, the thing that I am concerned about is this: First, we haven't made any progress in the Congress. I won't suggest any reason for that, but it has been very slow going in authorizing the President to consolidate these grant-in-aid programs. But, more than that, when we explored how a community then utilized this by knowing what the budgetary status of the program was, I was advised by the Bureau of the Budget that such information didn't exist. In other words, a community takes its time to prepare a request for a grant-in-aid program, submits it through channels—whatever the Department might be, HEW or HUD—only to find that either the program has never been funded by the Congress or that it has so many applications that there isn't any hope of getting the money for several years or that the money has been funded, used up and the program may not be continued for some reason.

Now, isn't there any way that we can get some up-to-date information available to the communities—and I am thinking now the small communities that can't afford this very expensive Washington detail man—isn't there any way we can get information out to local communities on a day-to-day or week-to-week or at least a month-to-month basis as to what is available in Federal programs, whether the money has all been expended or whether they have any hope in making their grant-in-aid request of actually getting grant-in-aid funds.

It seems to me that it is highly inefficient and a waste of economic resources in this country for local communities to spend their tax dollars preparing proposals under the grant-in-aid programs and winding up finding out that there are no funds available or that that program wasn't funded or that you get in line and 20 years from now you can get your sewer grant if you are real lucky.

Isn't there something where we can have a dial-a-prayer or something so that you can call in and find out that your prayer isn't going to be answered, that there's no money there currently?

Mr. MAYO. I hadn't really considered the "dial-a-prayer" approach. You have given me something new to think about here.

I would like to make two points, however, Mr. Congressman, one of which is that, even though it isn't perfect, we already have the "Catalog of Federal Domestic Assistance," which was put out under the sponsorship of the Office of Economic Opportunity with careful Budget Bureau review this past spring. Although earlier Federal catalogs left something to be desired, the latest catalog has improved to the point where I would say that it meets basically the requirement you stated at the beginning of your remarks, that there be a catalog that does systematize available programs.

Representative BROWN. Well, may I interrupt you just at this point—

Mr. MAYO. Yes.

Representative BROWN (continuing). And ask you how many programs, how many grant-in-aid programs that lists?

Mr. MAYO. I cannot give you the digit. I won't put it in the same category as the number of parts in a Ford, but I believe that it is now quite comprehensive it may not cover a lot of the smaller detail, but I believe that the catalog does provide the basic information as to the characteristics of the program and how a potential applicant should proceed.

Now, let me try to respond to the second part of your question, if I can. Mr. Hasse who has responsibility for the catalog is not with me today. I recall that one of the suggestions has been that we do this on a monthly basis, and now you suggest maybe even more frequently than once a month.

I find this to be an extremely difficult proposition because I don't think even the agencies know exactly where they stand, believe it or not, in terms of unobligated balances—

Representative Brown. Well, this is precisely my point.

Mr. MAYO. Now, I have great sympathy with the idea of exploring the possibility of keeping the catalog more current. Whether that is semiannually or just what, I don't know. But I would add that a given State and local government unit is going to be interested, I would say, not in the total catalog, but probably in, let us say, half a dozen programs at a given point of time. And I feel that this is where your dial-a-prayer suggestion would come into the picture.

If we do our job right in the agencies—and the appropriate regional organization is, I think, an important part of this—the customer we are talking about need only pick up the phone and dial the right number, and he will have an answer from the regional headquarters—

Representative Brown. Well, now in answer to the—

Mr. MAYO (continuing). An answer to whether he is wasting his time putting an application together because funds are not available or whether there are any time constraints that have been the latest catalog.

I believe that a catalog can only go so far in meeting all these objectives. You have to have the dial-a-prayer approach—

Representative Brown. Well, it seems to me the catalog is pointless without a knowledge of where the agency stands with reference to the dollars and cents available for grant-in-aid programs. And if we can set up a turning clock in the lobby of the Department of Commerce which tells us how many people live in the United States now, with all the complex possibilities that go into that little determination, it seems to me we ought to be able to do roughly comparable work in the dollar category with how deeply the Federal Government is in debt or what the specific economic status of the Federal Government is, which, of course, is a total of inputs from all the agencies and all the money that they are spending and all the funding that they have available from the Congress.

Mr. MAYO. I will, of course, let you in on a great big secret. The Department of Commerce's population clock is automatic. It assumes a constant birth rate and a constant death rate and cranks these factors in at the same speed throughout the year.

If I am wrong, and these factors are changed quarterly, someone can correct the record. But it is my impression that that is the way it is

done. Federal spending does not occur that way, as we all well know, and I guess we can all be thankful that it does not. Decisionmaking is involved in the Federal spending rate and I hope it is correct decisionmaking.

So what I am saying is that I do not quarrel with the objective of giving the State or local government unit some indication as to whether it is going up a blind alley or not. But I am not sure that the catalog can do this beyond a point.

The catalog can usefully give the magnitude of the program. For example, if the fellow on down at the local level sees that the program for the whole United States is only \$2 million and he has got a \$1 million project, he knows pretty well what the answer is without any further information on how the program is moving along. But I would emphasize that the appearance of global data on an up-to-date basis, though theoretically very desirable, can impose a burden out of all proportion if we pursue it too far. I favor the idea of a general guideline being provided by the catalog which would then be augmented by direct conversation with responsible people. That I think, is the key to the problem that you are raising. Too often in the past the inquirer was probably referred to a staff member somewhere who said: "Well, yes, this money is moving along, but I really don't know how fast."

I am not defending that employee. He shouldn't give that answer. He should be more knowledgeable. Admittedly, despite all the controls we have established, we often cannot give a timely answer to where the neighborhood development program stands as of a given instant much less a given day of the month. What we can do for that inquirer, however, is to tell him whether he is wasting his time or whether he should try to get his application in because there is a deadline of some kind. And I think that is the sort of information that can be better provided through personal contact than in a catalog.

Representative BROWN. Well, my time is up, but I just want to draw the conclusion in this area of inquiry to the idea that it is a waste of time, the economic resources of local taxpayers for the local mayor, or city manager, or whoever it is to run to Chicago, to talk over the program, to spend a lot of time with some Government clerk, and so forth, when we might pick up the phone and call FEDERAL 8-2000 and find out that that program doesn't have any money in it.

Mr. MAYO. Right.

Representative BROWN. And that there is no use making the application.

Mr. MAYO. I couldn't agree with you more.

Representative BROWN. And really what you have said is that you don't have that information. And, of course, what we are talking about is computerization that would at least provide that information on some kind of, at the very least, monthly basis because this catalog, annual catalog of Federal programs is not going to be worthless if you don't know whether there is any money in the program. It would make interesting reading for what the country would like to do. But if you cannot tell what the country can do in terms of the resources available, it doesn't mean anything.

Mr. MAYO. I agree with you.

Representative BROWN. And I would suggest that the first step maybe of the Bureau of the Budget in making its own operation

economic and efficient is to put in a computer which would bring up to date the various, the funding of the various agencies so that within each agency you would have the answer to these problems. And, of course, then the sum is the total of the parts. You find out on a continuing basis, hopefully not more than a month tardy, just where the Federal Government stands with reference to all these programs. And it gives you some idea—Senator Proxmire points out what some of the needs of the country are and what the Government is going to try to do to meet those needs—some idea of what these demands are, how popular the programs are, what the needs are in this area so that the Congress when it reevaluates the program with assistance of the Bureau of the Budget can come to the conclusion as to whether the money ought to be put there or whether we make the sewer program one where you get your money 40 years after you make your application.

Mr. MAYO. I not only understand. We are working in exactly the same direction.

Representative BROWN. Very good. Thank you.

Chairman PROXMIRE. Senator Percy?

Senator PERCY. Mr. Chairman, I would like to say that my own experience with the conference of mayors that we had from Illinois here in Washington would lead me to believe that something like this would be exceedingly useful. They are an intelligent group of men, but they are also in a quandary as to what their relationship is with the Federal Government, what kind of help they can get and where they can go to get it.

I would like to comment on the SST. I did spend a couple of years on the Space and Aeronautical Sciences Committee of the Senate, and I am not surprised at the administration's decision. I have tried to put all the means tests to that decision. I take into account your comment that we are all concerned about allocation of scarce resources among competing uses.

Mr. MAYO. Yes.

Senator PERCY. But looking down the road the question just seemed to come to me, will American Air Lines want an SST? If it is going to want it, it will have to buy it and it is going to cost us heavily on the balance of payments if bought overseas for America must not only buy the aircraft, but then service the spare parts, which is a continuing cost.

The second thing, is there a market for the SST among foreign airlines? I cannot imagine every major country and every major airline in those countries not wanting to get to Asia faster than they now can, say, from Europe. If so, the tremendous lead we now have in aircraft, with service people and sales and everything all over the world servicing American aircraft might be lost. It is not just a matter of prestige, it is cold dollars and cents. It is hard business that we would forego and would mean sacrificing a great deal. So if there is a market there, then I think we have to find a way to develop this aircraft. And I hope that the Government is going to be tough about it. I was delighted to see that out of the profits the Government wants to get a return on its own investment.

Mr. MAYO. Yes, sir. This is very important.

Senator PERCY. I think it is a very bad precedent to have the Federal Government do research and development and prototypes for private industry. But you recognize that here is a project so big that the companies simply cannot finance it on their own. The Government has to be the catalytic agent using its credit to do the research provided we get a payback later. And we will get a payback in taxes. We will get a payback in balance of payments, which we desperately need. And I think if the final analysis showed the prudence of the investment, that I would tend to support it despite my high regard for the reasoning of the chairman.

I would like to ask a question on the allocation of resources, because it was so current yesterday in the floor program.

I did quote the Bureau of the Budget figure that it would take \$2,930 million in fiscal 1970 to feed hungry Americans. Would you consider hunger a very high priority since we do have malnutrition in this country that is injurious to the health of our children and citizens?

Mr. MAYO. Of course, it is an important priority, Senator Percy. It concerns us so much that food stamps was the first major administration initiative sent to the Congress after the April 15 budget review. This was the only request for an increase in a domestic program that we decided to submit for a matter of months, and I think this gives a sense of the priority we place on meeting this need.

I don't want to get too deeply into the background. But I do want to say that we felt that with the infusion of, I believe the figure is \$270 million, additional spending in this fiscal year, we could make a responsible start on the program.

Senator PERCY. We still recognize that we are very deficient in meeting the need. I was asked yesterday by Senator Curtis to what extent the Bureau of the Budget did really study the need and whether the figure that you gave out was a sound figure.

Would you stand behind that figure and could you provide the data to me on which that figure was based that would enable me to support the need. I was extremely pleased at the initiative of the Bureau of the Budget in this area. It was very helpful work. It might have been a crucial factor in carrying the argument yesterday as to how high the priority on hunger should be. If that information could be furnished to me, I would very much appreciate it.

Mr. MAYO. I would like to speak to the record on that, if I may, and submit something to you for the record. As I mentioned, we do feel strongly that this is important. Again, this is an instance—and I say it with all the humility I can bring up—where the data are not the best in the world. We have a lot to learn about data gathering. We are proceeding to get smarter in the way we do these things. But I will be glad to provide such estimates as we have for the record.

Senator PERCY. Fine, thank you.

(The supplementary statement of the Bureau of the Budget follows:)

The figure of \$2,930 million appears in a Bureau working draft on hunger and malnutrition. It represents the Bureau of the Budget's best estimate of the size of the "hunger gap." The "hunger or food gap" represents the arithmetic difference between what the people defined as poor should be spending per year for food according to the Department of Agriculture economy food plan, and what they actually spend per year.

Based on Social Security Administration figures, which make use of the Department of Agriculture economy food plan, the hunger gap is calculated to be about \$2,930 million in calendar year 1970.

It is difficult to draw a clear relationship between the estimated hunger gap and the requisite size of the Food Stamp program in fiscal year 1970. First of all, the fact that we are in the second quarter of the fiscal year with no final Congressional action, places a limit on the amount that can be expended in the Food Stamp program in the remaining months of the fiscal year. Second, that the poor lack enough money for food is just an aspect of the fact that they lack money generally. The total resources available to the poor would be increased by the Family Assistance Plan, the increase in Social Security, tax reform, and other Presidentially proposed programs.

Since it is as yet impossible to tell how Congress will act on these measures, it is impossible to estimate their effect on the financial condition of the poor, and consequently the amount of aid that should be supplied through the Food Stamp program.

Senator PERCY. Could you comment on the adequacy of your staff and your own budget. I know you are a tough man not only with other Departments and agencies, but with your own team operation. You like to run a very taut ship.

But considering the pay-back that you can get from analytical studies, in talking with past directors of the Budget I have been shocked at the lack of resources available for the study of our defense expenditures. And in this regard I am very sympathetic with Senator Proxmire. We might disagree on details but certainly agree in the need for independent outside studies of defense expenditures. The need is very great, and I should think a Secretary of Defense would really want that kind of help.

Do you feel your resources are adequate? Do you project greater use of the Bureau of the Budget in appraising and providing to the President, the Congress, and the Secretary of Defense respective relative needs as against the total overall picture that you perceive? For instance, you can get into this whole question of whether or not it is necessary to maintain the principle of being able to wage two major and one minor wars at the present time?

That premise might and should be subject to challenge by someone. And I think the Bureau of the Budget is a fine place to challenge some of these premises on which these huge expenditures go forward.

Mr. MAYO. Senator Percy, I will mention that I think each Budget Director in turn when he comes to the job is a little bit shocked to find that there has really been no increase in the Budget Bureau staff for 20 years. There have been increases and decreases in the number of people assigned to various areas, but basically the total number of employees in the Budget Bureau has hardly varied from about the 500 level for quite awhile.

In making my first appropriation request for the fiscal year 1970 to the House Appropriations Subcommittee, I made it clear that I felt there was room for improvement. I am not aware of anything specific here that we are grossly neglecting. But I think we are thin in many areas.

I think we can do a better job for the President with, as you suggest, an important payback in terms of resources if our staff did have a few more people. I have nothing grandiose in mind, but I did suggest to the Appropriations Subcommittee that they probably should not be surprised if next year I came back and asked for some additions to our budget.

Senator PERCY. There are three agencies of Government that I feel, as long as they are prudently run, that we in Congress ought to encourage in expansion of their thinking, their thought, their budgets and their personnel and the quality of people that they have. One, Internal Revenue, where I think payback is very immediate and direct; two, GAO; and three, the Bureau of the Budget. And I certainly pledge to you that I would do everything I could to encourage my colleagues in the Senate to expand these agencies—to look on those agencies not as just accountants or statisticians recording past history, but there ought to be engineers, there ought to be sociologists, there ought to be economists, there ought to be a diverse group of people there. I am terribly impressed with the quality of people I have dealt with in the Bureau of the Budget, especially their dedication, but I think they could do a great deal more. The return on investment might be 100 to 1 for every dollar put in. And I think we would get a much more effective, efficient Government as a result of this.

Mr. MAYO. I think you have raised an important point. I am not only very proud of the staff, Senator Percy, for their capability, for their willingness to put in long hours and for doing all sorts of things above and beyond the call of duty, but I am also proud to say that the men who have consented to serve at the policy level in the Bureau in this administration are, without a doubt in my mind, of as high a caliber as we have ever had.

Senator PERCY. Thank you. I have enjoyed your testimony this morning.

Chairman PROXMIRE. Director Mayo, in response to the statement and the question asked by my distinguished colleague from Illinois, Senator Percy, on the supersonic transport, I think what we overlook is the fact that this is a commercial project. Senator Percy was very frank in saying that he does not like to see a precedent established, but that is exactly what we are doing. We are expending money for something that has no military value. Every Secretary of Defense has said that. We are spending money for a project that has no value other than the commercial value and that to a very, very small sector of Americans; maybe 1, 2, 3 percent who fly overseas.

As far as the cold dollar-and-cents value of this investment is concerned, it seems to me clear that the reason why private industry does not finance it is not because of its size. There are all kinds of institutional arrangements we could use to get around that. The communications satellite is one way. There are other ways.

The reason is because this is very risky and it is probably going to lose a whale of a lot of money for many, many years. The Department of Defense has made studies which show that the SST could not be feasible if a 4.5-percent discount rate, and that's a subsidized low rate, is used, even if the SST is allowed to fly on cross-country flights, where it really pays off. The glamor flights are overseas but the real payoff is when you fly over the oceans.

Now, the Interior Department said last year that the sonic boom which the SST generates would make cross-country flights intolerable for people unfortunate enough to live along the plane's route—a carpet of sound 75 miles wide, just a swath across the country, and

apparently these routes, if the SST is going to pay off, they would have to fly rather frequently. And although experts have been grappling with the sonic boom for many years they are no closer to a solution now than they were before.

Under these circumstances, for us at a time when the Government is cutting back its expenditures in so many areas in the health area, construction area, and so forth, for us to go ahead now with a commitment which as you say is \$81 million in the coming year but triggers \$1.2 billion in the next 2, or 3 or 4 years, it seems to me is a very, very hard thing for me to understand how you can justify.

Mr. MAYO. Mr. Chairman, I think again one has to step back a bit and look at the SST in perspective. I think some vision is necessary here, not just economic analysis as of this point in time.

Chairman PROXMIRE. Well, even economic analysis—I am sorry. Go ahead.

Mr. MAYO. I know that you are seeking improvements in the very things you are talking about, solutions to the sonic boom problem, to the commercial feasibility problem, and so forth. I do not think we are setting a precedent. We are following a precedent that, for better or worse—I won't exercise judgment on that at this point—is of long-standing in this country. One example is the development of atomic energy and its peaceful application. I don't propose to—

Chairman PROXMIRE. Oh, that has all kinds of social implications, Mr. Director, does it not?

Mr. MAYO. Yes, yes, that's right.

Chairman PROXMIRE. Well, what are the social implications in developing supersonic transport at the same time we are developing an advance manned strategic bomber which will test all the technological aspects of supersonic flight with a big plane?

Mr. MAYO. I do not think that the two are the same thing. They differ in size, technology, and purpose for which they are being designed. But, to return to the SST, I do not see any reason why the Federal Government should not have the vision to lead the way, even though in the long run this is basically what you would call a commercial airline proposition.

Chairman PROXMIRE. Why can we not for once—yes, go ahead.

Mr. MAYO. If it works, I think we will be getting our money back over the long run from royalties and a number of social benefits that I cannot measure today, Senator Proxmire.

Chairman PROXMIRE. Well, what good is economic analysis on the SST, though, if it tells us that it is not going to pay off with the most favorable assumptions, to wit: even if it is permitted to fly over continental America. And let me tell you, the B-58, a supersonic bomber, was tested over Milwaukee and the mail I got in protest against that would really make your hair curl.

But the reaction of people on the ground to these flights is very, very adverse. If it does not fly over continental United States, there is not a single bit of economic analysis that shows it is going to pay off.

Mr. MAYO. Well, it is—

Chairman PROXMIRE. By 1990.

Mr. MAYO. It is my understanding, Mr. Chairman, that the analysis that has been done on SST basically supports its justification short of

the cross-country flights, that is, even with the assumption that the SST would be flying only over oceans.

Chairman PROXMIRE. Well, I would sure like to see this analysis because it has not been submitted publicly.

Mr. MAYO. And, again, we all have to be practical about economic analysis, bear in mind its limitations, and not prejudice what future economic analysis may show some years down the road.

One other point. We have already spent half of that \$1.2 billion you mentioned, so only half of that is additional expenditure.

Chairman PROXMIRE. Well, it is my understanding we could spend a whale of a lot more than \$1.2 billion before we are through with this on the basis of our experience.

Mr. MAYO. Oh, it is possible.

Chairman PROXMIRE. And it involves a new design; and titanium. We haven't used titanium before in planes, and so this is a new state of the art. This kind of thing could go up to, not \$4 billion they expect the total cost to be, but, \$7, \$8 billion or more.

Furthermore, the present administration seems to be using the same cost figures for the SST as the Johnson administration used. Now they have a new design. How can you justify using the same cost figures? Who validated your cost estimates on this?

Mr. MAYO. I am not capable of, or competent to reply to that specific question, Senator. I can provide an answer for the record, if you would like.

Chairman PROXMIRE. I wish you would.

Mr. MAYO. All right.

(The Bureau of the Budget's additional reply follows:)

We are not using the same cost figures for the SST as were used previously. The current figures reflect more than the new design; they also reflect changes that have occurred in schedule since the original contracts were awarded and the effect of price level increases on the development program.

The costs currently projected for the prototype phase were validated by several different organizations in a comprehensive review process. The original estimates determining the effect of the change from variable sweep to the fixed wing configuration were validated in part by the Defense Contracting Audit Agency insofar as labor and overhead rates and their projections are concerned, and by several levels of review within FAA and DOT insofar as the overall cost estimates are concerned.

Chairman PROXMIRE. Let me just ask you about the space program now. Here is a program that seems to me to be even harder to justify than the SST, if that is possible. I am talking about manned lunar landings. Much of the space program, of course, is highly justifiable and the first landing on the moon did have prestige value that I think is very great, perhaps as great as the cost, although that is controversial. But the future, the second through the tenth manned landing, it is very hard for me to understand any benefits from this. I have written to the National Aeronautics and Space Administration. Dr. Paine replied to me there are two benefits. One, human fulfillment, which seems to mean you feel better when you watch it on television, and two, that this would give us a better understanding of the origin of the earth, the moon, and the sun.

Now, this is good to know, but why we have to know it in the next 3 or 4 years when it is highly inflationary, when the manned lunar

landing is costing us \$1.7 billion a year, when on the basis of the letter I received from NASA it would not help us in meteorology, it would not help us in communications, it would not help us in any of the areas where space is supposed to pay off, it seems to have a benefit-ratio infinity in reverse—now, how can we justify that kind of expenditure which is highly inflationary now? Where are the benefits if NASA cannot come up with any?

Mr. MAYO. Well, I think you will find that the Bureau of the Budget is not only very much aware of the points that you have made, but we are exercising our influence within the administration as we make budget decisions to move in the direction that you are talking about.

Chairman PROXMIRE. That is encouraging to hear.

Mr. MAYO. I would indicate further to you, Senator Proxmire, that this is not only a goal which has been embraced by successive Presidents as a matter of—and if you want to compare with the SST, of far greater—importance in terms of the national prestige, but it is also a goal embraced by the Congress of the United States with considerable enthusiasm. We will make sure, however, that we get the most for every dollar invested in the space program, and that the scientific programs are not neglected in the process. We are working on this very hard.

Chairman PROXMIRE. Are you examining carefully the alternative of confining manned landings in the next few years to instrumented landings? The President's Scientific Advisory Council a couple of years ago emphasized that this would give us the same information, or much the same information as the manned landings would, not quite as glamorous but—

Mr. MAYO. Yes. Those alternatives have been examined, and will continue to be examined. The President, I think, has made it very clear, however, in his public statements that the idea of manned space flight is not something that we want to abandon.

Chairman PROXMIRE. Well, at the same time if you cannot show any benefit to any human being here on earth other than greater knowledge of how the moon was formed a little earlier than we are going to get otherwise, I cannot see why we have to rush ahead with this. I am not saying we should abandon manned flights in the future for all time. I am just saying the Apollo program which is going to ask us to expend \$1.7 billion this year, and about the same amount I presume in each of the following 2 years, more than \$5 billion, this seems to me to be a hard one for us to go along with and support.

Mr. MAYO. Well, the space task force, I am proud to say, has—

Chairman PROXMIRE. Will you be able to give us an estimate of the cost of the Mars landing? I understand that it is scheduled for 1986. I have heard estimates that vary all the way from \$20 billion, maybe a little less than \$20 billion, up to \$200 billion. And if we are going to proceed in this area, this is something that can take a great deal of our resources. It would be something most useful for the Congress to know as we fund the current programs.

Mr. MAYO. Yes. You have available to you the space task force report which has such estimates in it, Mr. Chairman. The figures are in there.

Chairman PROXMIRE. As I have said, but let me just ask you this directly, the President has announced cutbacks in health research, in education, in food stamps and other vital areas. How do you square this with the go-ahead for the SST and the planned increase in our space effort including a manned landing on Mars? Does it not seem that our priorities are confused?

Mr. MAYO. Well, first of all, we have asked for an increase in the food stamp program that will over a period of years, total many times the commitment on SST. There is just no comparison. And this is an administration initiative. So I don't think we should include the food stamp program in your list.

Chairman PROXMIRE. Well, now, wait a minute. You say because the food stamp program is bigger than SST, therefore, you should not include it in the comparison?

Mr. MAYO. No. I am saying that the administration has taken the initiative to increase its efforts to meet precisely the kind of problem to which you seem to be assigning priority.

Chairman PROXMIRE. That means you are starting at a very low level. This is really a new program in terms of an effective program. And as you probably know, yesterday over the administration's opposition we were able to support and secure the passage in the Senate of the McGovern bill which would greatly expand the program beyond what the administration requests.

Mr. MAYO. Well, I want to be sure that care is exercised in the process of expanding the administration's program. What I have in mind, in particular, is the necessity for the proper integration of the food stamp program, Mr. Chairman, with whatever is done on the family assistance program.

Chairman PROXMIRE. I think you are right, but I would hope we have the same kind of concern and the same kind of integration with regard to the supersonic transport—

Mr. MAYO. We do have this concern.

Chairman PROXMIRE (continuing). Which are closely related programs and yet we are going ahead full tilt it seems to me with difficult justification.

Mr. MAYO. I think the administration has given you some evidence of its concern about possible duplication of effort. For example, the Defense Department's announcement in May that the manned orbital laboratory would be discontinued very definitely reflects our concern about possible duplication of effort, sir.

Chairman PROXMIRE. We got the same assurances on the manned orbiting laboratory, the MOL, right up until the day before it was canceled as being duplicating.

Mr. Brown.

I will be back. I have a few more questions.

Representative BROWN. I have been resisting manfully the temptation to get into the SST discussion between my colleagues in the Senate and have finally yielded to the temptation only to observe that atomic energy resources have been developed by the Federal Government in power and transportation, water resources for a number of years in both transportation and energy, and highway resources in spite of the fact that I am sure in some retarded communities there

may be some resistance to freeways, I understand. And in the rail transportation area we have had a long history of Federal involvement in the development of that, even though the Indians, I guess, didn't much care for it either. I do not know about the Menominees.

But it would seem to me that we have no precedent here being set but rather the continuation of an obligation that the Federal Government has felt in some time to develop the transportation resources of this Nation. And one of the benefits which I assume that has not been suggested is what we could derive in extending our involvement in international trade all over the world and reducing the cost of transportation in that area which certainly is involved in getting American products abroad.

I would like to get back, however, if I can from those high flown considerations into more mundane responsibilities of your Bureau and the Congress.

It seems to me that there is no single congressional overview anywhere of the budget except in this committee—this Joint Committee. And our powers are only those of observation rather than of legislation in these areas. Even the Appropriations Committee in the House—I cannot speak for the Senate of course, but in the House the Appropriations Committee does not start out with a total consideration of the budget and limit itself to spending only so much here and so much there, and so forth, all of which will come within the budget. They take up the items as the House itself does.

And, of course, this only after consideration or limitation of the authorization by the substantive committees.

Now, I think it is common knowledge to anybody that follows the Congress for long that there is a rather difficult game or cynical game made between authorization and appropriation. We never limit ourselves to what we anticipate we are going to appropriate when we authorize in the Congress. We authorize liberally. And then people cite the authorization as the amount that should be spent on the program.

Do you ever prepare an authorization budget or any kind of a guide based on what Congress has authorized for the expenditure of public funds on various problems of the country?

Mr. MAYO. Well, we, of course, include in the budget, Mr. Congressman, full information on budget authority and on budget expenditures.

We recognize the problem of always having more authority outstanding than will be appropriated or spent in the year ahead. We seek to limit these differences because we feel that it is, as you suggested, misleading the public to give nice broad authorities and then not follow through on the money side.

I am conscious—

Representative BROWN. Well, is there anything that can be done about that from your standpoint in terms of advice to the Congress or getting information to the—

Mr. MAYO. Yes, the—

Representative BROWN (continuing.) Or is there any procedural change that could be made in the Congress that we could accomplish anything in that area?

Mr. MAYO. Well, the last is a difficult area, and I am not sure I have anything to suggest there. But in our legislative proposals we are always very careful about the amount of authority we request. Otherwise, we will have a growing number of authorizations in a great many fields.

I want to make one other point, though, in response to what you are saying.

I share this feeling that the Congress ought to have more of a focal point for the consideration of the overall budget. The Ways and Means Committee and the Senate Finance Committee, of course, do consider the whole budget when they evaluate revenue needs or when they deal with the problem of the public debt limit. There are open discussions of the overall budget problem in the Congress to that extent. I am also aware that—

Representative BROWN. Well, we have never failed to raise the public debt limit. The Congress just automatically raises the public debt limit even though some of us don't vote for it. But they just raise it because somebody in the administration says we have got to have the money, and we have already spent it anyway. So where is that control?

Mr. MAYO. I am speaking not to your last point, which is very true as a matter of historical record, but rather to the point that this does provide a forum for discussion of the budget other than the Joint Economic Committee.

Representative BROWN. Or the Appropriations Committee. But like the Joint Economic Committee, it is largely academic, isn't it?

Mr. MAYO. On the tax side I don't believe it is, and to the extent that this discussion produces a fruitful interchange between members of the committees and the members of the administration, I think it has real significance. Also, the Appropriations Committee has usually had a kickoff session with the Secretary of the Treasury and the Budget Director testifying on the overall budget to at least give a framework in which the Appropriations Committees can operate.

Representative BROWN. I think that is a step certainly in the right direction. I would like to mention just one other game that I think is more cynical than ever that the Congress is playing at this moment, and individual Members of Congress are playing, and it is this business of having limited the President by law to what he can spend this year and then going ahead and appropriating.

Mr. MAYO. Yes.

Representative BROWN. Because, obviously, the President is limited by the admonishment of the original legislation which says you can only spend \$192.9 billion, and yet the Congress after that can then beat its breast about the needs of our society and go ahead and spend money, or appropriate money much like it has been authorizing in the past. And it seems to me that that is a vehicle which will get even to be a tighter pinch in years to come because it is sort of an extension of this authorization versus appropriations effort.

You get into this kind of a game, and, of course, an individual Congressman could really demagog it around about the needs of his own district versus the needs of the country.

Mr. MAYO. As the focal point of that pinch, I cannot help you but agree with you.

Representative BROWN. Well, what can be done about that? Is there not some way we can play the game a little more straight, tell it like it is a better than—

Mr. MAYO. I do not know what the answer is. I think I have made it very clear that the administration does not really think that the expenditure limit concept is the right way to approach it. It is an expression in many ways of, if I may use the phrase politely, a frustration among Congressmen themselves at not being able to get hold of the beast that we are dealing with.

We believe that the executive branch, given authorizations by the Congress in helping with the real needs of this country, can manage authorizations and expenditures in a responsible manner. Congress seems reluctant to give us this much flexibility. This year the question is a bit academic, of course, because the limit that was imposed on expenditures is less stringent than the limit we have placed on ourselves.

Representative BROWN. Well, I am wondering if this function—this is just off the top of my head—if this function that we have imposed on the President might not be a function that we could impose on the Congress itself through the Appropriations Committee by at the beginning of the session when you have this little session with the Appropriations Committee where you decide that this is the way the budget is going to be and this is the total amount, passing legislation that says the Congress will limit itself to that much appropriation. Then going ahead with a piecemeal appropriation as in the past. And if as the Congress takes up the appropriations piecemeal it exceeds that amount, then requiring the Appropriations Committee to come back and submit a total modification at the end of the session, or the fiscal year, whenever, having the Congress approve that modification, rather than presenting this admonition to the President and then being able to get up and demagog the issue from there on to the confusion and I think the detriment of the American people.

Mr. MAYO. Needless to say, Mr. Congressman, I would favor any responsible way of making the Congress more immediately aware of what you might call the elementary arithmetic, that two plus two equals four, not hopefully three.

Many different approaches have been tried to accomplish this. I recall that in 1950 the Congress experimented with an omnibus appropriation bill, but the next year reverted to its old practice of 11 or 12 separate bills. Still earlier, I am informed, the Congress tried for 3 years to make an overall appraisal of the budget though the desire of a joint committee on which the Appropriations Committee and the committees having jurisdiction over revenues were fully requested. That, too, did not work out as envisioned.

Whatever else may have been the matter with these proposals, they at least aimed at solving the problems you are concerned about.

The present process forces the administration into actions that will never please the Congress. If our devotion to the posture of fiscal responsibility and to meeting congressional ceilings is as great as I think it is, we are going to end up in certain instances making many Congressmen unhappy by not spending all of the money that has been authorized.

Representative BROWN. Well, it just seems to me that it is a two-way street.

Mr. MAYO. Yes, it is.

Representative BROWN. You present your list of priorities in the bucket at the beginning of the year, and the Congress particularly this year has said, well, we don't know about the individual priorities but we will accept the total package in terms of dollar amount. And then the Congress has gone along and played the game of setting its own priorities, and in total those priorities exceed the legal limit that it has previously set.

Mr. MAYO. That is right.

Representative BROWN. Now, if we could do that within the Congress, either approve or disapprove your list of priorities but still live within that budget limit, we have accomplished a good deal I think, for the American people.

Mr. MAYO. Yes. Well, that is what the appropriations process ideally is supposed to do, to give an independent evaluation of the way in which resources allocated. And I share with you the hope that that will be increasingly rather than decreasingly so.

Chairman PROXMIRE. I know you have great regard, Mr. Director, for your predecessor, Charlie Zwick.

Mr. MAYO. Oh, yes.

Chairman PROXMIRE. He was a witness before this subcommittee a few days ago and he made a very creative, thoughtful proposal which I wish you would comment on to alleviate the problem of economic analysis not provided to Congress. This is what he suggested, and I quote him, "The question of increased congressional involvement remains. Perhaps the time has come to create a commission on the appropriate control and limits of analysis on development of public policy. A commission could be created by congressional action or by Presidential initiative. If the commission is to be successful, it must include representatives of both the legislative and executive branches of Government. Hopefully such a commission would define a framework for the support and the use of analyses focused on public policy decisions. High on my list of concerns for the commission would be the issue of privileged information. I am normally suspicious of commissions but I believe the time is now appropriate for this one."

I would like your comment and whether you would in general support the formulation of such a commission.

Mr. MAYO. Like Charles Zwick, I am also suspicious of commissions, even though I was staff director of one that both Mr. Zwick and Charles Schultze were involved in, and I think we did make some valuable contributions.

Chairman PROXMIRE. That was the Kennedy Commission?

Mr. MAYO. That was the Kennedy Commission, yes.

Chairman PROXMIRE. That was a very constrictive commission.

Mr. MAYO. Yes, but I will still join Charlie in being suspicious of commissions as a general rule.

This suggestion has just come to my attention of course, and I do not think it should be turned down out of hand. I would consider that the idea is worth exploring to see whether this would be a constructive approach to the problem.

We are, I think, in the position of being willing to join you in trying to do whatever we can to make analysis more effective.

Chairman PROXMIRE. I think you are, too. I think that we can say that and I know you mean it very sincerely, but I think unless we do something of this kind we are not really going to make a great deal of progress.

Would you bring this up in the executive branch and at least press for a consideration of it—

Mr. MAYO. Yes.

Chairman PROXMIRE (continuing). So that we could get some notion of whether or not this would be something we could propose and explore.

We would like to propose it here, but we do not want to propose something that the administration could support and live with.

Mr. MAYO. I understand. And I know you understand my point, too, when I say that we are understandably a little timid at time in seeming to tell the Congress what it should do.

Chairman PROXMIRE. Along this line, I am frankly surprised at the reasons which you used to justify not releasing analysis done in the executive branch. You state that much of the data in some of these studies, and I quote, "Are not yet sound enough for public exposure."

In my view that is what the policy debate is all about—the focusing of discussion on the appropriate contents of inputs and outputs, the challenging of data and judgment supplied by experts and others and the ultimate resolution of the issue after debate is concluded. If this data is not sound enough, the data on which the decision is made in the executive branch, we ought to know it. We ought to be able to realize how unsound it is or the degree to which it is sound or unsound. And I think that our reaction would be much more intelligent if we had that kind of a notion. I cannot understand why you believe that all the numbers should be scrubbed clean, spic and span within a 2 percent margin of error or something of that kind before they are of use to decisionmakers. And particularly I am referring to the program overview sheets. Information on these sheets, even though highly controversial in some aspects, is precisely the kind of information which we in the legislative branch need if we are going to focus debate on the benefits and costs of programs and alternatives and the distributional impacts of different policy choices.

Could you stipulate for the subcommittee an approximate time when you feel that data in the program overview study will be sufficiently defined to enable it to be released to the Congress and the people?

Mr. MAYO. I cannot be as specific as you would like, Senator Proxmire. In the first place, we are experimenting. Let us face it. We are working on the frontiers of economic analysis. I am not quarreling at all about estimates where the margin of error is about 2 percent. I am talking about projections where—I hesitate to put figures on it—the margin of error may be as high as a hundred percent, and that is why—

Chairman PROXMIRE. Well, if you qualify it and explain that what is wrong with letting the public and the Congress know about it? You would have something you would not have otherwise.

Mr. MAYO. Well, you are leaving yourself wide open to the criticisms that you have no idea of what you are doing. Very honestly, in terms of—

Chairman PROXMIRE. Well, if this is the case, we ought to know it.

Mr. MAYO. Even if it were the case, don't you think we have a right to try to improve our analytical capability on our own as we go along? That is exactly what we are trying to do.

Chairman PROXMIRE. Of course, you do, but—

Mr. MAYO (continuing). But I think some of these figures at this point can be sheer guesswork, and my guess and your guess, sincere as they may be, may be at opposite poles. I do not want to see such guesses parade under the heading of sound economic analysis.

Chairman PROXMIRE. In the event that decisions are made without economic analysis, because the conclusion is the economic analysis is so unprecise, so indefinite, and so inconclusive that it is not of any value, we should be told that. Where it is based on some kind of economic analysis, I cannot see any reason why we should not know that and know what the economic analysis shows.

Mr. MAYO. Well, we do, of course, take account of the economic factors that enter into practically all of these decisions. Whether the relevant factors can be appropriately quantified, however, is another problem. Some of the time we are forced to rely on more economic judgment which must largely be qualitative. And if you take a qualitative judgment and just arbitrarily try to quantify it, I think you become vulnerable on professional grounds. Further, you run the well-deserved risk of impugning the accuracy of your other estimates that may be much more refined, much more sophisticated, and much more reliable. I am not certain about the extent to which the public or Congress or parts of the executive branch would appreciate the niceties of the comparative reliabilities of different economic studies.

Chairman PROXMIRE. Knowing we do not want to do anything that is going to stifle economic analysis, and conceivably if we press for a premature, inadequate analysis, it might have that effect and you and I would agree on that, I think.

Mr. MAYO. Yes.

Chairman PROXMIRE. We do want to do all we can to, No. 1, press you to use economic analysis wherever possible because we think you make more intelligent decisions, more logical decisions if you use economic analysis, and, No. 2, to let us in on it because we make the decision up here, too.

Mr. MAYO. Right. I must add again that there are certain "guesstimates," if I may use that word, that in some people's eyes parade in the guise of economic analysis. We will look at such "guesstimates," and we will give, tip our hats, give them what we think is appropriate minor weight in the decisionmaking process. If we were to publish some of these even with the necessary reservations—and you and I know what happens to reservations in our business—I think it would again be misleading. It would appear that a decision was made on the basis of not much more than a "guesstimate" whereas that is not true, since the "guesstimate" was given only minor consideration.

Chairman PROXMIRE. Well, let me ask you questions in just two other areas quickly. One, I would like to get your reaction and comments to

a number of possibilities for improving the budget document as an economic document. It seems to me that for the purpose of comparing alternatives and for making rational decisions the scope of the budget document is currently far too limited. The tax expenditure-direct expenditure problem is simply one manifestation of this narrow scope.

If the budget document is to really serve as a tool for economic decisions, then it should provide in an open and explicit form a wide range of information on the economic and equity impact of Federal spending programs, primarily—at the minimum it should enable any Member of Congress or interested citizen to find answers to these questions: One, what is the nature of the program, its objective and who administers it? Two, what have been the past budgetary costs of the program, and what are the future budgetary implications of decisions already made? Three, what is the character of the outputs of the program and the value of these outputs, and what is the relationship between economic costs and benefits of the program? And, four, what are the economic and social characteristics of the beneficiaries of the program? Would you agree that a budget document with such information would be a truly economic document which would be of great assistance to the Congress and the public in understanding what this Government is doing, why it is undertaking the programs which it is, how much these programs are costing, and what are the benefits being produced by these programs?

Mr. MAYO. Yes, I would agree that much of the information you mention would be in an ideal budget document. The present budget already tried to display some of this information, but I have to be practical and say we are not yet there.

Chairman PROXMIRE. Do you have plans for developing that kind of a comprehensive economic document?

Mr. MAYO. We have plans for moving further in that direction, yes; and we are trying to do so now.

The reason I may have bored you by reading the list of the special analyses in the budget, for example, was to provide for the record that we are already doing the kind of analysis that will permit some of these reflections, if you please, that will provide the basis for discussion and analysis by the Congress and by outside students. In these special analyses. I think we are searching more and more for effective economic measures.

In my simple-minded way of looking at it, I feel like the farmer who has a number of tools in his woodshed. Suddenly somebody invents the hoe and he discovers he can make his corn crop an awful lot better by using the hoe which he never had before. I think we have a very important hoe here.

I want to emphasize that we have added—and I am proud of this—we have added another tool in the decisionmaking process. We have not—and I am sure you would agree with this—invented the hoe as a replacement for the rake or the shovel or the rest of the tools.

Chairman PROXMIRE. Too often you have left the hoe in the barn on this kind of thing.

Mr. MAYO. Well, we are getting different kinds of hoes now and we are putting them to good use, Senator Proxmire. We are making our

analyses more responsible. We are developing analytical capabilities in the agencies, sometimes in the face of understandable objections that somehow it will torpedo some favorite programs. This is part of the name of our responsibility.

Chairman PROXMIRE. Let me be specific by referring to one hoe which I think has been left in the barn which I think could help a great deal.

You have stated, and I quote, "I do not now believe that tax expenditures should be added to the budget outlay estimates in the detail shown in the basic document."

Why don't you feel that way? You simply make that assertion.

Mr. MAYO. Yes, That is a fair question. I think that there I am talking about adding them to the budget outlay detail in the basic document. The outlay side of the budget is tailored to the requirements of the Congress in its consideration of spending programs, namely, in the appropriations process.

Chairman PROXMIRE. I think you are absolutely right, but I would like to say that I think that that is a great fault of Congress and a great weakness of Congress and one which puts us in a position of making some very, very bad decisions.

What I am getting at is a really effective comparison of alternatives that will be made only when an agency is forced to choose between \$10 million of appropriation and \$10 million of tax expenditure—we had testimony here that in the housing, for example, there is twice as much tax expenditure in that field as there is appropriation. And in other areas there is as much tax expenditure. So we should consciously and nationally choose between \$10 million of tax expenditure and \$10 million of direct expenditure in making out decisions. We don't now, and they are bad decisions. Only when both methods are within the jurisdiction of the agency can they make that kind of choice, it seems to me. But if the tax expenditure budget is simply tucked away as one of the special analyses, the real hard choices that are necessary in deciding between alternatives will just be obscured much as they are now.

Mr. MAYO. Well, I would say that the budget document has to concentrate on something, or everyone is lost. A choice must be made on its primary emphasis within the document itself. That does not deny in any way, Mr. Chairman, the importance of just what you say in terms of the usefulness of this sort of a tradeoff for the policymaking purposes. And I will cite an illustration.

The President when he asked for the removal of the investment tax credit in April or May—

Chairman PROXMIRE. April.

Mr. MAYO (continued). Noted that when the repeal was fully effective it would make funds available possibly for revenue sharing and some other programs. All right, he's already proposed a revenue sharing program, and I could talk for some length on the importance of that. Work is continuing within the administration, not far enough advanced to say anything about it yet, examining whether manpower training money is best put to work as expenditure through the Labor

Department, the JOBS program, and so forth, or, as a practical matter, should more be done on the tax incentive side.

Quite apart from the merits of these, I think it is an important illustration of what you are talking about, that tax expenditures and budget outlays be considered as alternatives in the policymaking process.

Chairman PROXMIRE. I have some other questions that I will put in the record and ask you to reply in writing when you correct your remarks.

Mr. MAYO. I will be glad to.

(The following questions were submitted by Senator Proxmire to Mr. Mayo who subsequently supplied the following answers for the record:)

Question 1: Would you comment on the application of beneficiary charges or user charges in selling the output produced by Government programs, as opposed to "giving it away?"

Has the Bureau of the Budget undertaken any effort to develop a comprehensive beneficiary charge or user charge policy for publicly-produced outputs? Is such an effort being contemplated?

Would you see any gains to be achieved in the development of a comprehensive user charge policy for the Federal Government?

Answer: A comprehensive user charge policy for the Federal Government has been in effect since 1957. The current policy is stated in Bureau of the Budget Circular No. A25, User Charges (copy attached). In brief, the policy is:

"A reasonable charge . . . should be made to each identifiable recipient for a measurable unit or amount of Government service or property from which he derives a special benefit."

Attachment.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., September 23, 1959.

To: The heads of executive departments and establishments.

Subject: User charges.

1. *Purpose.* Bureau of the Budget Bulletin No. 58-3 of November 13, 1957, set forth some general policies for developing an equitable and uniform system of charges for certain Government services and property. This Circular incorporates the policies contained in that Bulletin and gives further information with respect to: (a) the scope of user charge activities; (b) guidelines for carrying out the approved policies; and (c) agency submission of periodic status reports. It also prescribes Standard Form No. 4 on which periodic status reports are required.

Because this Circular applies also to the areas previously covered by Bureau of the Budget Circular No. A-28 of January 23, 1954, that Circular is hereby rescinded.

2. *Coverage.* Except for exclusions specifically made hereafter, the provisions of this Circular cover all Federal activities which convey special benefits to recipients above and beyond those accruing to the public at large. The specific exclusions which continue to be governed by separate policies are fringe benefits for military personnel and civilian employees; sale or disposal under approved programs of surplus property; postal rates; interest rates; and fee aspects of certain water resources projects (power, flood control, and irrigation). In addition this Circular does not apply to activities of the legislative and judicial branches, the municipal government of the District of Columbia, the Panama Canal Company or the Canal Zone Government.

3. *General policy.* A reasonable charge, as described below, should be made to each identifiable recipient for a measurable unit or amount of Government service or property from which he derives a special benefit.

a. *Special services.*

(1) Where a service (or privilege) provides special benefits to an identifiable recipient above and beyond those which accrue to the public at large, a charge should be imposed to recover the full cost to the Federal Government of rendering that service. For example, a special benefit will be considered to accrue and a charge should be imposed when a Government-rendered service:

(a) Enables the beneficiary to obtain more immediate or substantial gains or values (which may or may not be measurable in monetary terms) than those which accrue to the general public (e.g., receiving a patent, crop insurance, or a license to carry on a specific business); or

(b) Provides business stability or assures public confidence in the business activity of the beneficiary (e.g., certificates of necessity and convenience for airline routes, or safety inspections of craft); or

(c) Is performed at the request of the recipient and is above and beyond the services regularly received by other members of the same industry or group, or of the general public (e.g., receiving a passport, visa, airman's certificate, or an inspection after regular duty hours).

(2) No charge should be made for services when the identification of the ultimate beneficiary is obscure and the service can be primarily considered as benefitting broadly the general public (e.g., licensing of new biological products).

b. *Lease or sale.* Where federally owned resources or property are leased or sold, a fair market value should be obtained. Charges are to be determined by the application of sound business management principles, and so far as practicable and feasible in accordance with comparable commercial practices. Charges need not be limited to the recovery of costs; they may produce net revenues to the Government.

4. *Agency responsibility.* The responsibility for the initiation, development, and adoption of schedules of charges and fees consistent with the policies in this Circular continues to rest with the agency. Each agency shall:

a. Identify the services or activities covered by this Circular;

b. Determine the extent of the special benefits provided;

c. Apply accepted cost accounting principles in determining costs;

d. Establish the charges; and

e. In determining the charges for the lease and sale of Government-owned resources or property, apply sound business management principles and comparable commercial practices.

5. *Cost, fees and receipts, and their determination.*

a. *Determination of costs.* Costs shall be determined or estimated from the best available records in the agency, and new cost accounting systems will not be established solely for this purpose. The cost computation shall cover the direct and indirect costs to the Government of carrying out the activity, including but not limited to:

(1) Salaries, employee leave, travel expense, rent, cost of fee collection, postage, maintenance, operation and depreciation of buildings and equipment, and personnel costs other than direct salaries (e.g., retirement and employee insurance);

(2) A proportionate share of the agency's management and supervisory costs;

(3) A proportionate share of military pay and allowances, where applicable;

(4) The costs of enforcement, research, establishing standards, and regulation, to the extent they are determined by the agency head to be properly chargeable to the activity.

b. *Establishment of fees to recover costs.* Each agency shall establish fees in accordance with the policies and procedures herein set forth. The provisions of this Circular, however, are not to be construed in such a way as to reduce or eliminate fees and charges in effect on the date of its issuance. The maxi-

num fee for a special service will be governed by its total cost and not by the value of the service to the recipient. The cost of providing the service shall be reviewed every year and the fees adjusted as necessary. In establishing new fees and increasing existing fees the agency may make exceptions to the general policy (paragraph 3, above) under such conditions as illustrated below.

(1) The incremental cost of collecting the fees would be an unduly large part of the receipts from the activity.

(2) The furnishing of the service without charge is an appropriate courtesy to a foreign country or international organization; or comparable fees are set on a reciprocal basis with a foreign country.

(3) The recipient is engaged in a nonprofit activity designed for the public safety, health, or welfare.

(4) Payment of the full fee by a State, local government, or nonprofit group would not be in the interest of the program.

c. *Disposition of receipts.* Legislative proposals shall generally avoid disturbing the present rule that collections go into the general fund of the Treasury as miscellaneous receipts. However, exceptions may be made where:

(1) It is intended that an agency or program or a specifically identifiable part of a program be operated on a substantially self-sustaining basis from receipts for services performed or from the sale of products or use of Government owned resources or property.

(2) The agency can show that the initiation or increase of fees or charges is not feasible without earmarking of receipts.

(3) The receipts are in payment of the cost of authorized special benefits for which the demand is irregular or unpredictable, such as inspections performed upon request outside the regular duty hours.

This Circular is not intended to change the present system of sharing with States and counties receipts from the lease of certain lands and the sale of certain resources.

6. *Changes in existing law.* In cases where collection of fees and charges for services or property in accordance with this Circular is limited or restricted by provisions of existing law, the agencies concerned will submit appropriate remedial legislative proposals to the Bureau of the Budget under the established clearance procedure, as provided in Bureau of the Budget Circular No. A-19.

7. *New activities.* In the establishment of new Federal activities which would provide special benefits, the agencies concerned are to apply the policies and criteria set forth in this Circular.

8. *Reports to the Bureau of the Budget.* Each agency shall make a report by December 31, 1959, for each bureau or comparable organizational unit, of the costs and charges for all services or property covered by this Circular, and shall also make a report of changes not later than December 31 of each succeeding year as a result of its annual review of such costs and charges. The initial report for any new agency hereafter established (including those established by reorganization) shall be submitted on December 31 following the end of the first fiscal year during which the agency was in operation. Each report shall cover the situation as of the preceding June 30, and shall be prepared in accordance with the instructions set forth in the attachments to this Circular.

By direction of the President:

MAURICE H. STANS, *Director.*

INSTRUCTIONS FOR THE PREPARATION OF ANNUAL REPORTS ON USER CHARGES

1. *Form and coverage of reports.* Reports shall be prepared on Standard Form No. 4, as illustrated in Attachment B. An original and two copies will be required.

The initial report should represent a complete inventory of all services of the agency which provide a special benefit to recipients above and beyond those accruing to the public at large, and all activities under which federally owned resources or property are or could be sold or leased.

Subsequent reports covering the annual review of costs and charges shall cover only (a) services and activities not reported earlier; (b) services and activities for which charges have been changed; and (c) services and activities for which changes in the applicable category (as described below) have taken place.

2. Preparation of Standard Form No. 4.

(a) A separate form will be prepared for each of the following categories, where applicable:

(1) Special services for which existing charges are producing less than full cost recovery; and lease or sale activities which are returning fair market value.

(2) Special services for which existing charges are producing less than full cost recovery; and lease or sale activities for which less than fair market value is being obtained.

(3) Special services and activities for which no charges are currently being made, and for which charges are apparently required by the provisions of this Circular.

(4) Special services and activities for which no charges are to be made in accordance with the policy guidelines and exceptions provided in this Circular.

(5) Services and activities which have been discontinued or transferred to other agencies since the previous report. (This category is not applicable to the initial report.)

The category of items covered by each form will be identified in the heading by placing an "X" in the box corresponding with the number of the category as shown above. Forms need not be submitted for categories in which there is nothing to be reported.

b. Columns on the form will be completed as follows:

(1) Enter the identification number for the service or activity. Each service and activity shall be assigned an identification number which shall be retained from year to year, to facilitate identification in future annual reports. Agencies may devise their own coding systems for this purpose.

(2) List each special service provided under a heading "Special services", and each lease or sale activity under a heading "Lease or Sale."

(3) Enter the unit for measuring the service or property provided.

(4) Enter the amount of the charge being made for each unit as of the preceding June 30. In cases where there are various rates for differing situations, a summary schedule of rates may be attached in lieu of listing each rate individually.

(5) Enter the date the charge shown in column 4 became effective.

(6) Enter the amount of the charge which was made previous to the date in column 5.

(7) Enter the number of units of activity for the last completed fiscal year.

(8) Enter (in thousands of dollars) the cost of providing the service or the fair market value of resources or property sold or leased.

(9) Enter (in thousands of dollars) the amount of collections (net of refunds) during the last completed fiscal year.

(10) Enter the symbol of the receipt account, appropriation account, or fund account (excluding deposit funds) to which the collections were or will be credited.

(11) Enter any pertinent explanatory comments relating to the information shown in the preceding columns. On reports covering categories 2, 3, and 4, specifically note in this column, for each item, the reason(s) that full cost recovery or fair market value is not obtained. Also indicate whether full cost recovery for special services or fair market value for lease and sale activities can be obtained under existing law; the status of specific legislative proposals (e.g., under study, drafted, cleared, introduced, or reported); and the status of proposed administrative changes in fees and charges, including effective dates.

On reports subsequent to the initial report, indicate in this column the previous category in which the item was reported. On reports covering category (5), identify the services and activities transferred to other agencies or organizational units and the agency or organizational unit to which the transfer was made.

Standard Form No. 4
(September 1959)
Bureau of the Budget
Circular No. A-25

USER CHARGES REPORT

CATEGORY OF ITEMS (Check)

1 2 3 4 5

Agency Department of Government		Bureau Bureau of Public Affairs				Contact John Doe, Ext. 555			Date submitted December 15, 1959	
Identifi- cation Number	SPECIAL SERVICES OR ACTIVITIES	CHARGE AS OF JUNE 30				ACTIVITY, FISCAL YEAR 19				REMARKS
		Unit	Amount	Date es- tablished	Previous charge	Volume	Cost or fair market value (Thous.)	Collections (Thous.) symbol		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	SPECIAL SERVICES:									
PA-101	Licenses under Federal Licensing Act	Application and renewal	Schedule	12/12/58	Schedule	10,155	\$195	\$200	740899	See fee schedules attached.
PA-102	Entrance to Central National Park	Permit	\$1.00 per car	7/ 7/58	\$.75	49,765	48	50	740810	
PA-103	Registration of documents	Document	2.00	11/20/57	1.75	3,789	8	8	7490100	
	SALE OR LEASE:									
PA-105	Lease of land for commercial purposes	Acre	3.00 to 12.50	5/13/57	2.00 to 11.50	12,250	52	53	741830	

Standard Form No. 4
(September 1959)
Bureau of the Budget
Circular No. A-25

USER CHARGES REPORT

CATEGORY OF ITEMS (Check)

1 2 3 4 5

Agency Department of Government		Bureau Bureau of Public Affairs				Contact John Doe, Ext. 555			Date submitted December 15, 1959	
Identifi- cation Number	SPECIAL SERVICES OR ACTIVITIES	CHARGE AS OF JUNE 30				ACTIVITY, FISCAL YEAR 19				REMARKS
		Unit	Amount	Date es- tablished	Previous charge	Volume	Cost or fair market value (Thous.)	Collections (Thous.) symbol		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	SALE OR LEASE:									
PA-104	Rental of floor space for business concessions	Sq. ft.	10.00	6/18/59	8.00	8,150 to 10,000	85	79	745999	1,850 sq. ft. rented for part of year only.
	(Supplies of Standard Form No. 4 will be available in GSA Supply Center by October 30, 1959.)									

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Attachment B

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., October 22, 1963.

To: The heads of executive departments and establishments.

Subject: User charges.

1. *Purpose.* This transmittal memorandum amends Circular No. A-25 of September 23, 1959: (a) to change the date on which annual reports are due in the Bureau of the Budget, (b) to provide for additional information with regard to receipts derived from user charges and (c) to require the submission of a user charges inventory every fifth year beginning with the fiscal year 1964.

2. *Annual status reports to the Bureau of the Budget.* Paragraph 8 of the Circular is amended to read:

"Each agency shall make a report to the Bureau of the Budget by September 30 of each year (except that the report for the fiscal year 1963 is due November 30, 1963), for each bureau or comparable organizational unit, giving the following information as of the preceding June 30:

a. All changes in costs or charges for services or property covered by the Circular, as well as the establishment of new user charges. This report will be based on the agency's annual review of such costs and charges. (See Attachments A and B).

b. Total collections from user charges during the fiscal year. Negative reports for subsection *a* need not be submitted; however, in those instances, the report required by subsection *b* must be submitted."

New attachments A and B supersede the attachments to the original Circular.

3. *User charges inventory.* The Circular is amended by adding a new paragraph 9 as follows:

"Beginning with the report due September 30, 1964, and every fifth year thereafter, each agency will submit a complete inventory of all user charges in effect on the preceding June 30. This report will be submitted in lieu of the report required by section 8*a* for those years.

The initial report for any new agency hereafter established (including those established by reorganization) shall be submitted by September 30 following the first fiscal year during which the agency is in operation. This report will be an inventory of all costs and charges for services or property covered by this Circular."

KEEMIT GORDON,
Director.

Attachments.

ATTACHMENT A, CIRCULAR NO. A-25, TRANSMITTAL MEMORANDUM NO. 1

INSTRUCTIONS FOR THE PREPARATION OF ANNUAL REPORTS ON USER CHARGES

1. *Form and coverage of reports.* Reports required by this Circular shall be prepared on Standard Form No. 4 (see attachment B). Annual status reports will cover the changes in costs and charges for services and property and the establishment of new user charges occurring since the last report. Negative reports are not required.

Each status report will be accompanied (or if no status report is required, submitted alone) by a table showing total amounts collected from user charges for the preceding year. This table should show a total for amounts deposited to miscellaneous receipts, without identifying the receipt accounts to which the deposit was made. Collections deposited to the credit of appropriations or funds (reimbursements to appropriations, trust funds, and revolving and management funds) should be separately listed, identified by account title and symbol, and the amount credited to each.

Initial reports of new agencies and the inventory report required every five years, should represent a complete record of all services of the agency which provide a special benefit to recipients above and beyond those which accrue to the public at large, and all activities under which federally owned resources or property are or could be leased or sold.

An original and two copies of each report will be required.

2. Preparation of Standard Form No. 4.

a. A separate form will be prepared for each of the following categories, where applicable:

(1) Special services for which existing charges are producing full cost recovery; and lease or sale activities which are returning fair market value.

(2) Special services for which existing charges are producing less than full cost recovery; and lease or sale activities for which less than fair market value is being obtained.

(3) Special services and activities for which no charges are currently being made, and for which charges are apparently required by the provisions of this Circular.

(4) Special services and activities for which no charges are to be made in accordance with the policy guidelines and exceptions provided in this Circular.

(5) Services and activities which have been discontinued or transferred to other agencies since the previous report. (This category is not applicable to the inventory reports.)

The category of items covered by each form will be identified in the heading by placing an "X" in the box corresponding with the number of the category as shown above. Forms need not be submitted for categories in which there is nothing to be reported.

b. Columns on the form will be completed as follows:

(1) Enter the identification number for the service or activity. Each service and activity shall be assigned an identification number which shall be retained from year to year, to facilitate identification in future annual reports. Agencies may devise their own coding systems for this purpose. Agencies may revise identification numbers on inventory reports.

(2) List each special service provided under a heading "Special services," and each lease or sale activity under a heading "Sale or lease."

(3) Enter the unit for measuring the service or property provided.

(4) Enter the amount of the charge being made for such unit as of the preceding June 30. In cases where there are various rates for differing situations, a summary schedule of rates may be attached in lieu of listing each rate individually.

(5) Enter the date the charge shown in column 4 became effective.

(6) Enter the amount of the charge which was made previous to the date in column 5.

(7) Enter the number of units of activity for the last completed fiscal year.

(8) Enter (in thousands of dollars) the cost of providing the service or the fair market value of resources or property sold or leased.

(9) Enter (in thousands of dollars) the amount of collections (net of refunds) during the last completed fiscal year.

(10) Enter the symbol of the receipt account, appropriation account, or fund account to which the collections were credited. In cases where payments are credited to deposit funds until earned, report only the amounts actually paid to other accounts.

(11) Enter any pertinent explanatory comments relating to the information shown in the preceding columns. On reports covering categories 2, 3, and 4, specifically note in this column, for each item, the reason(s) that full cost recovery or fair market value is not obtained. Also indicate whether full cost recovery for special services or fair market value for lease and sale activities can be obtained under existing law; the status of specific legislative proposals (e.g., under study, drafted, cleared, introduced, or reported); and the status of proposed administrative changes in fees and charges, including effective dates.

Where there has been a change in category for an item, indicate in this column the previous category in which the item was reported. On reports covering category (5), identify the services and activities transferred to other agencies or organizational units and the agency or organizational unit to which the transfer was made.

USER CHARGES REPORT

CATEGORY OF ITEMS (Check one)
 1 2 3 4 5

AGENCY		BUREAU			CONTACT			DATE SUBMITTED			
Department of Government		Bureau of Public Affairs			John Doe, Ext. 555			September 15, 1963			
IDENTIFI- CATION NUMBER	SPECIAL SERVICES OR ACTIVITIES	CHARGE AS OF JUNE 30			PREVIOUS CHARGE	ACTIVITY, FISCAL YEAR 1963				REMARKS	
		UNIT	AMOUNT	DATE ESTABLISHED		VOLUME	COST OR FAIR MARKET VALUE (THOUSANDS) (8)	COLLECTIONS			
								AMOUNT (THOUSANDS) (9)	ACCOUNT SYMBOL (10)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
SPECIAL SERVICES:											
PA-101	Licenses under Federal Licensing Act	Application and renewal	Schedule	12/12/58	Schedule	10,155	~ \$195	\$200	740899	See fee schedules attached.	
PA-102	Entrance to Central National Park	Permit	\$1.00 per car	7/7/58	\$.75	49,765	48	50	740810		
PA-103	Registration of documents	Document	2.00	11/20/57	1.75	3,789	8	8	7490100	Reported in Category 2 for fiscal year 1962	
SALE OR LEASE:											
PA-105	Lease of land for commercial purposes	Acre	3.00 to 12.50	5/13/57	2.00 to 11.50	12,250	52	53	741830		

USER CHARGES REPORT

CATEGORY OF ITEMS (Check one)
 1 2 3 4 5

AGENCY		BUREAU			CONTACT			DATE SUBMITTED			
Department of Government		Bureau of Public Affairs			John Doe, Ext. 555			September 15, 1963			
IDENTIFI- CATION NUMBER	SPECIAL SERVICES OR ACTIVITIES	CHARGE AS OF JUNE 30			PREVIOUS CHARGE	ACTIVITY, FISCAL YEAR 1963				REMARKS	
		UNIT	AMOUNT	DATE ESTABLISHED		VOLUME	COST OR FAIR MARKET VALUE (THOUSANDS) (8)	COLLECTIONS			
								AMOUNT (THOUSANDS) (9)	ACCOUNT SYMBOL (10)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
SALE OR LEASE:											
PA-104	Rental of floor space for business concessions	Sq. ft.	10.00	6/18/59	8.00	8,150 to 10,000	85	79	745999	1,850 sq. ft. rented for part of year only.	

ATTACHMENT B
 GROUP 1
 Transmittal Memorandum No. 1

Question 2a: Has the Bureau of the Budget undertaken any studies aimed at discovering the distributional impact of Federal programs on a comprehensive basis?

Answer: Yes. The Bureau is developing experimental Program Overviews, which include estimates of some of the distributional impact of Federal programs. In addition, several individual analyses include consideration of distributional impacts.

Question 2b: Does the Bureau have any plans for studies which would determine these distributional impacts?

Answer: Yes. The analysis of major policy issues includes measurements of the distributional impact of various alternative solutions. In addition, improvements of the Program Overviews will provide better data on distributional impacts of Federal programs.

Question 2c: Are you able to provide this Subcommittee with some time perspective after which we could expect such studies to be made available to us?

Answer: As I stated in my testimony before the Subcommittee, we are fully committed to the use of analysis as an aid in decisionmaking in both the executive and legislative branches of Government, and we have adopted a less restrictive attitude toward the disclosure of the results of studies. However, no precise answer can be given as to when these studies of distributional impact will be available. The answer will depend upon when satisfactory analysis can be completed.

Question 3: What is your judgment on the need for eliminating trust fund financing in the Federal budget so as to regain control over the allocation of funds?

Would you support a major effort to abolish trust fund financing for this one-quarter of the total budget which is now operated through trust funds?

Answer: There would be little to be gained from the complete abolition or elimination of the trust fund method of financing. While there are some problems involved in using trust funds, eliminating trust funds would not necessarily remove the problems.

Basically trust funds are established for moneys held by the Government in a fiduciary capacity for the purpose of carrying out specific programs. For example, about 90% of the \$50½ billion of trust fund outlays shown in the 1970 budget is for carrying out social security and other insurance and retirement programs. In these funds, the moneys held in trust represent equities built up over the years from contributions and payments into the funds. The employee and employer contributions and benefit formulae are in the nature of trust agreements established by law. Largely for this reason, action to change the trust fund method of financing in these cases would likely result in strong adverse reactions. The Congress, of course, may—and often does—enact legislation that modifies the receipts and levels of benefit payments in these types of funds after full consideration of the scope and thrust of the individual program.

Other trust funds—like the Federal-aid highway program—are financed by earmarked receipts such as excise taxes. In this case, the present method of funding the Federal-aid highway program does reduce flexibility in the annual program and budget review. The "culprit," however, is not so much the use of a trust fund, as the granting of contract authorizations in advance of each fiscal year—especially the practice of granting them for several years in advance, as in the case of the interstate highway system. This system of "permanent" budget authority is what really reduces budget flexibility. If the trust fund were abolished, but the present system of contract authorizations retained, the problem described in the Weidenbaum quotation would still prevail.

Of course, against this disadvantage to resource allocation there must be weighed the advantage to program planning that results from the present arrangement. Undeniably, the system enables States to plan further ahead in their highway construction than they might find feasible under strictly annual authorizations, especially if the annual grants of funds were as late after the start of the fiscal year as is often now the case with Federal appropriations.

While, in principle, I personally take a dim view of a system of permanent budget authority for a construction program, I do not believe that this is adequate reason to support the abolition of all trust fund financing.

As a final point, the President's Commission on Budget Concepts observed that trust fund programs have grown rapidly and cover an important segment of Federal activity. The Commission's report noted (on page 26) that—

"Legislative changes affecting one or another of the major trust funds occur almost every year. Rather than removing funds from the influence of the administration or the Congress, the trust fund technique, in the case of major trust funds, earmarks certain expenditure programs for financing by specific taxes or other revenue sources. This couples the benefits and costs of these programs more closely, and it also lends a degree of assurance to beneficiaries and grantees that trust fund benefit or grant schedules once established will be protected."

Question 4: In your statement you refer to papers by Bureau staff members on the subject of 5-year projections presented at a professional association meeting earlier this year. Will you provide this subcommittee copies of those papers?

Answer: Copies of the papers are attached.

[Given before the New York Chapter of American Statistical Assn., New York City—
Apr. 24, 1969]

TRENDS IN FEDERAL RECEIPTS AND EXPENDITURES

Nancy H. Teeters

When I accepted this assignment in early February to talk about trends in Federal receipts and expenditures it seemed a fairly reasonable and straightforward assignment. Fortunately, I decided to discuss Federal receipts and expenditures in 1975, which is an easier task than discussing the outlook for the current year or fiscal year 1970.

But even the task of getting to 1975 was not as straightforward as I had naively assumed in February. My path is strewn with assumptions and some of them are monumental. And I must emphasize at this point that although I've had excellent advice from people more expert than I in many matters, the final product is my own and does not represent an official projection in any way.

I conceive of my assignment as one of projecting forward Federal revenues and base line Federal expenditures. I have also assumed that the war in Vietnam will be over in the near future and that its budgetary effects will have completely disappeared by 1975. With my stringent definition of base line expenditures, the normal growth in Federal revenues and the decline in expenditures for Vietnam, predictably, produce a very large amount of unused resources by fiscal year 1975. This is the amount—call it peace dividend, fiscal dividend, or budgetary gap—which will become available either for expansion of Federal programs, for tax reduction, or for revenue sharing with States. I have not attempted to divide the dividend, because I have not yet met any two people with exactly the same priority list.

UNDERLYING ECONOMIC ASSUMPTIONS

To obtain estimates of future trends in Federal receipts, it is necessary to make some assumptions about trends in economic growth over the period ahead. The economic projection underlying the revenue estimates is derived from a supply-type calculation which makes assumptions about labor force growth, productivity, man-hours, unemployment and so forth.

As you are all aware, assumptions are fragile things and small changes in average annual rates of growth can frequently make billions of dollars of difference in an out-year estimate. Therefore, I would like to discuss briefly some of the reasoning which went into the selection of these particular assumptions and to indicate where slight changes in assumptions can cause major changes in results.

Between calendar 1968 and calendar 1975 the underlying economic assumptions are:

The labor force will grow at an average rate of $1\frac{3}{4}\%$ a year,

The armed forces will have declined to pre-Vietnam levels,

Federal civilian employment will gross by less than $\frac{1}{2}\%$ per year, reflecting some workload increases offset by personnel ceilings and reductions resulting from the end of the war,

The rate of growth in State and local employment will taper off as the growth in the school-age population declines,

The real private productivity per man-year will grow at 2.8%, and

The implicit price deflator for private GNP declines from 3.6% in 1968 to 2% by the end of the demobilization period and that the Government deflator follows a similar pattern but at a higher level.

Combining all these assumptions yields a real GNP in calendar 1975 of \$940 billion (in 1958 dollars), an average increase of 4.1% per annum between 1968 and 1975 and current dollars GNP of \$1,385 billion or a 7% per annum average increase.

TABLE 1.—LABOR FORCE, GROSS NATIONAL PRODUCT AND COMPONENTS

(In thousands)

Calendar years	1968 (actual)	1975
Labor force.....	82,272	92,900
Armed Forces.....	3,535	2,700
Civilian labor force.....	78,737	90,200
Federal civilian labor force.....	2,736	2,800
State and local employment.....	9,462	12,300
GNP and component:		
Real GNP.....	706.9	940
Current dollar GNP.....	860.7	1,385
Taxable personal income.....	624.0	1,000
Corporate profits before tax.....	92.3	148
Wages and salaries.....	463.5	740

TRENDS IN FEDERAL REVENUES

From this estimate of GNP, estimates of corporate profits, taxable personal income, and wages and salaries were derived. Using the 1970 budget as published as a starting point, I assumed the following:

that the surcharge would be dropped when the war ends;

that the prescheduled reduction in automobile and telephone excise taxes would be permitted to take place after the war ends;¹

that the highway trust fund would be extended (now scheduled to expire in 1972); and

that the social security tax increases would take place as scheduled under existing law (the combined OASDHI tax rate is currently at 9.6%; it is scheduled to go to 10.4% in 1971, to 11.3% in 1973, and to 11.4% in 1976).

Under these assumptions, and given the economic assumptions, Federal revenues (unified budget basis) in fiscal year 1975 would total \$270 billion, more than \$115 billion above fiscal year 1968. Of this increase, \$12 to \$13 billion is the result of actual (i.e., 1969) or scheduled increases in social security taxes. These tax rate increases are partially offset by reductions in the automobile and telephone excise taxes of about \$3½ to \$4 billion, which are scheduled to be completely removed by fiscal year 1975. This works out to be an average annual increase in Federal revenues from *normal economic growth* of \$15 billion a year under my assumption of continued *high employment*. The annual increase is less than that in the near term and somewhat more than that as we approach 1975.

¹ The reductions of the automobile tax which is currently 7% and the telephone tax which is currently 10% was rescheduled in the Revenue and Expenditure Control Act of 1968. Under current law they are scheduled to drop to 5% January 1970, to 3% in 1971, 1% in 1972, and be completely eliminated by 1973. These revenue estimates assume that those taxes have been removed by 1975. The new Administration has requested that these scheduled reductions be delayed one year.

TABLE 2.—FEDERAL REVENUES, UNIFIED BUDGET

(In billions)			
Fiscal years		1968	1975
Individual income taxes.....		68.7	125
Corporate profits taxes.....		28.7	50
OASDHI.....		28.4	57
Excises.....		14.1	16
All other.....		13.8	22
Total Federal revenue.....		153.7	270
Contingencies:			
Higher productivity than assumed.....			+5
Greater elasticity of personal taxes.....			+7
Changes in social security tax rates or wage ceiling.....			+3-+13
Repeal of highway trust fund taxes.....			-6

In addition there are some contingency allowances:

- \$5 billion more if productivity is 0.2% higher than assumed,
- \$7 billion more if the elasticity of personal taxes to taxable personal income is greater than assumed,²
- \$3 to \$13 billion more if social security tax rates and/or wage ceilings are changed,³ and
- \$6 billion less if the highway trust fund revenues are repealed.

² Built-in to these estimates of Federal revenue is an implicit assumption about the elasticity of Federal *individual income taxes* to taxable personal income. This projection assumes an elasticity of 1.33—that is for every 1% increase in taxable personal income, personal taxes increase by 1.33%. It is extremely difficult to estimate what the elasticity assumption should be. Before the 1964 tax cut, the elasticity of the individual income tax was about 1.25. The new rate structure in the 1964 law apparently increased the elasticity but by how much is unknown. Other changes in the tax laws—the two-step nature of the 1964 tax cut, graduated withholding, and now the surcharge—have resulted in different relationships each year. In addition, the rate of current dollar economic growth must affect this relationship. During a period of inflation with current dollar GNP rising rapidly, individual incomes rise rapidly and people pass into higher tax brackets more quickly. Therefore, the elasticity would be higher during periods of rapid growth in current dollar GNP than during periods of steadier growth or of recession. Only two fiscal years since 1964 were relatively unaffected by tax changes—1966 and 1968. In 1966, the elasticity was 1.33 and in 1968, 1.5. In this projection, I have assumed that the elasticity will decline as inflationary pressures ease. However, to give you some idea, if the elasticity stayed at 1.5, in fiscal year 1975 individual income taxes would be \$7 billion higher.

³ *Social security tax rates*, as mentioned earlier, are already scheduled in existing legislation to increase in 1971 and 1973. There is no provision in the legislation for increasing the wage ceiling beyond the current ceiling of \$7,800. The two tax rate increases and normal growth in the tax base result in an increase of \$28½ billion in the combined tax receipts of OASDHI by fiscal year 1975 over fiscal year 1968. As will be discussed more later, OASDHI benefits, *under current law*, are expected to rise by \$14 billion. If periodic cost-of-living increases are legislated, total benefits would increase by \$6 billion more. Consequently, the OASDHI funds will be in substantial surplus each year and their holdings of U.S. Government security will be between \$40 to \$50 billion higher by fiscal year 1975 than they were at the end of fiscal year 1968.

However, if cost-of-living increases are legislated, in all probability additional tax rate and/or wage ceiling increases will also be legislated. When a benefit increase in social security is proposed, the revenue needed to finance the benefits is calculated in tenths of a percent of payroll taxes. A 7% across-the-board increase in benefits would be expressed as costing .6 of a percentage point, for example, in payroll taxes. The amount of tax rate increase needed is suppose to pay all of the costs of the benefit over the next 75 years. The average payroll on which this cost is figured is assumed to be the same 75 years from now as it is today. This is the calculation which is used to keep the Funds "actuarially sound." Because payroll does rise over time, the requirement to keep them actuarially sound results in continual overfinancing. As time passes, and payrolls rise, an actuarial surplus is discovered and this could be used to finance cost-of-living increases. However, the benefits legislated have not in the past been confined to what could be financed from the actuarial surplus so that each revision of benefits has resulted in occasional increases in the ceiling and in a new and higher schedule of social security taxes, not only in the next full calendar year but in future years also.

EFFECT OF ALTERNATE ASSUMPTIONS FOR OASDHI REVENUES FISCAL 1975

	Wage ceiling	Combined tax rate (percent)	Revenue (billions)	Change from current law
Current law.....	\$7,800	11.3	\$57.2	-----
Alternate I.....	9,000	11.3	60.5	3.3
II.....	12,000	11.3	66.2	9.0
I II.....	7,800	12.0	60.6	3.4
IV.....	9,000	12.0	64.1	6.9
V.....	12,000	12.0	70.6	13.4

TRENDS IN FEDERAL EXPENDITURES

The new Administration has reviewed the 1970 budget left by President Johnson. The total of \$195.3 billion published in January has been revised to \$192.9 billion and copies of the statement about the revised budget are available.

Defense Expenditures. The scenario in the January 1969 *Economic Report* spells out a fairly rapid Defense demobilization which applies to the period after redeployment begins. A time lapse is assumed in the scenario between the time of a truce and the time of redeployment. The scenario in the *Economic Report* has a reduction in real Defense expenditures (i.e., in 1968 dollars) of \$8 billion by the end of four quarters, \$16 billion at the end of six quarters, and \$19 billion by the end of 10 quarters after redeployment begins. The *Economic Report* scenario is priced in 1968 dollars; my scenario of \$20 billion is priced in 1970 dollars. This pattern of expenditure reduction could be shortened somewhat, or it could be stretched out depending on the nature of the truce and the extent of our residual obligations in Vietnam.

Total Defense expenditures, as revised, DOD-Military expenditures plus Military Assistance (MAP), totaled \$78.4 billion. Of this, \$24.8 billion is for expenditures in Southeast Asia. Assuming a truce and redeployment, Defense expenditures in 1970 dollars would decline about \$20 billion. This is \$5 billion less than the amount now attributable to Southeast Asia. If fighting completely stopped and both sides laid down all their arms, we might recoup part of the residual \$5 billion. Part of the \$5 billion represents a rough guess about continuing U.S. support of South Vietnam armed forces. However, part of the \$5 billion represents the cost of manning and using certain equipment which when the war ends would probably be redeployed elsewhere—the naval ships are fairly clear examples of this type of redeployment.

The problems of price and pay over the coming years are important in projecting Government expenditures. This projection for fiscal year 1975 assumes that Federal civilian and military pay will be kept comparable with civilian pay over the period, without specifying when the pay increases occur.⁴ These pay increases, amounting to \$12 billion, except for the one in fiscal year 1970, require legislation. The civilian and military pay increases projected are tied to the movement projected in the GNP deflator.

Another contingency allowance, for both Defense and nondefense expenditures, is one for an increase in the cost of goods purchased. This, too, is directly tied to movement of the GNP deflator and would add \$3½ billion to Defense expenditures by fiscal year 1975 and approximately \$1 billion to civilian expenditures.

Non-Vietnam Defense Expenditures. The \$70 billion shown in this projection simply backs-out the Southeast Asia expenditures and prices-up the remainder. However, there are two categories of additional Defense expenditures which have to be considered. First, there are in the 1970 budget several programs, each of which is funded at a low level which by fiscal year 1972 could grow to a total of \$7.0 billion. The best known of these programs is the Safeguard ABM, although the ABM does not account for all of it. The new Administration is currently reviewing the longer-term Defense programs so that the status of these programs is uncertain. In addition, last January, Defense had another \$6½ billion of new expenditure programs to which it gave high priority. What the level of Defense expenditures will be in fiscal year 1975 is ultimately a decision of the Congress and the electorate. The \$70 billion as shown in the projection is but one of the possibilities. The level could be about as it is now, that is \$78-80, or it could be higher.

⁴The problems of price and pay over the coming years are important in projecting Government expenditures. The most recent Federal pay legislation provides for a three-step increase in Federal pay—civilian and military. The first step took place in October 1967, the second step July 1, 1968 and the third step is scheduled to take place July 1, 1969. With the pay increase this July, Federal pay scales will be brought into full comparability with nongovernment jobs. The law further provides that each year the Bureau of Labor Statistics will make a study as to whether Federal pay scales are remaining comparable or not. They are to present their results to the President. The President and the Congress then have the responsibility of deciding whether or not a Federal pay increase will be granted. It places future pay increases in a rather peculiar position. The BLS findings could probably be ignored for a year or even two but probably not longer. The projection of Federal expenditures assumes, therefore, that Federal civilian and military pay will be kept comparable with civilian pay over the period. These pay increases, except for the one in fiscal year 1970, require legislation. The civilian and military pay increases projected are tied to the movement projected in the GNP deflator.

TABLE 3.—FEDERAL OUTLAYS, UNIFIED BUDGET

[In billions of dollars]

Fiscal years	1968	1970 January budget	1970 revenue	1975
DOD-Military plus military assistance.....	78.0	79.0	77.9	58.0
Southeast Asia.....	(26.5)	(25.4)	(24.8)	(—)
Military pay increases.....		1.4	1.4	1 6.0
Civilian pay increases.....		.7	.7	1 3.0
Price increase in goods purchased.....				1 3.4
Subtotal, DOD-MAP.....	78.0	81.1	80.0	70.4
Civilian Outlays:				
Old-age and survivors insurance.....	21.5	27.1	26.1	30.5
Disability insurance.....	2.2	2.9	2.9	3.5
Hospital insurance.....	3.8	5.0	5.0	7.5
Supplementary medical insurance.....	1.5	1.8	1.8	3.0
Railroad retirement.....	1.3	1.6	1.6	1.5
Federal retirement.....	2.6	2.4	2.4	3.5
Unemployment insurance.....	2.6	3.1	2.9	4.0
Veterans programs.....	4.9	5.9	5.9	6.5
Cost-of-living increase for OASDHI, VA, and R.R. retirement.....				1 7.0
Subtotal, transfer programs.....	40.4	49.8	48.6	67.0
Highway Trust Fund.....	4.2	4.9	4.8	6.0
Public Assistance.....	3.5	4.4	4.9	7.0
Medicaid.....	1.8	3.0	2.5	6.0
Vocational Rehabilitation.....	.3	.5	.5	1.0
Subtotal, grants-in-aid.....	9.8	12.8	12.7	20.0
Interest.....	13.7	16.0		
Less interest received by trust funds.....	-2.7	-3.6		
Net interest.....	11.0	12.4	12.9	12.0
Contingency for higher debt and/or interest rates.....				2.0
Subtotal, interest.....	11.0	12.4	12.9	14.0
All other.....	39.7	38.5	38.0	38.0
Civilian pay increase.....		.7	.7	1 3.6
Price increase in civilian goods purchased.....				1 1.0
Increase in Federal employment.....				1 2.0
Subtotal, all other.....	39.7	39.2	38.7	44.6
Total Outlays.....	178.9	195.3	192.9	216.0
Less Vietnam.....	-26.5	-25.4	-24.8	
	152.4	169.9	168.1	216.0
Additional Contingencies:				
Currently approved Defense program.....				+7.5
Effect of not having AFDC freeze.....				1.0
Continuation of congressional trend in vocational rehabilitation.....				.5
Total.....				225.0

1 Requires legislation.

Increases in Civilian Expenditures. Non-defense expenditures are split into two categories—those which are built-in under existing law, such as social security, and those which are not built-in. This is not a controllable vs. uncontrollable distinction. Some of the programs in the “all other” category are uncontrollable in the short run and all expenditures are ultimately controllable in some sense if the laws are changed. In addition, it has been assumed that the program level of the “all other” group does not increase or decrease from what is forecast in the 1970 budget as revised. Obviously, these programs are going to cost more in fiscal year 1975 than in 1970, but part of that is covered by the projected pay and price increases discussed earlier. An additional part of the increased cost is covered in another contingency—the allowance for an increase in Federal civilian employment. By 1975, just because there are more people in existence, there will be more applications for social security, more mail to deliver, more tax forms to check, etc. This allowance for an increase in Federal employment

is essentially a proxy for the increased workload which will result from a larger population. If the assumptions about level program, pay, price, and employment are combined, the same level of civilian program in fiscal year 1975 will cost about \$5½ billion more than in fiscal year 1970.

The built-in increases are shown in Table 3. The built-in increases fall into two general categories—transfer payments, grants-in-aid to State and local governments, and interest.

All the *transfer programs*, except railroad retirement, will have increased expenditures because the number of people eligible increases over time. In addition, all the retirement or disability programs—old-age and survivors insurance, disability insurance, railroad retirement and Federal retirement—will have under current law an increase in the average size of the benefits paid. This is because the average payroll history of the retirees on the rolls in 1975 will be higher than it is in 1970. The payroll history of a person 65 today would cover wages earned up to 1970. The payroll history of a man 65 in 1975 would cover wages earned up to 1975. The person retiring in 1975 will have had six years of wage history under the \$7,800 ceiling; the person retiring in 1970 will only have had two years. Of the retirement and disability programs, only the Federal retirement program has a built-in legal provision that raises benefits automatically with cost-of-living increases. However, the other retirement programs, including veteran's compensation and pensions have been kept up, with a lag, with the cost-of-living by recurring legislative enactments. To reflect this there is an allowance to cover cost-of-living increases in those programs.

The increase in Medicare expenditures reflects not only the increase in the number of people eligible but also an assumed increase in the price of medical services. Hopefully, the rate of price increase in medical services will be lower than in the recent past and it has been projected that way.

Of the grant-in-aid programs, there are four which are essentially open-ended, that is if a State provides funds for a specified purpose, the Federal Government must provide specified amounts of matching funds. These four programs are the Highway Trust Fund, Public Assistance, Medicaid and Vocational Rehabilitation.

As mentioned earlier, it was assumed that the highway trust fund would be extended. Under present law, the money must be used for approved highway construction but this could be changed when the fund is renewed. The upper limit on highway trust fund expenditures is the available revenues and this projection of expenditures reflects the normal growth in revenues under present tax rates.

Public assistance consists of four parts—aid to the aged, aid to the blind, aid to the totally and permanently disabled and aid to families with dependent children (AFDC). The payments to these welfare recipients are determined by each State and the Federal share of those payments is determined by a complicated formula. As you know, the cost of public assistance has been climbing rapidly, both for the Federal Government and for the State governments and this is a phenomenon which has occurred in the past three years. If the programs are taken separately, it is immediately apparent that the increase in the number of people on welfare is not among the adult categories—i.e., the aged, blind, or disabled. It is in the aid to families with dependent children that the rate of application for welfare and the rate of acceptance has risen so dramatically.

Almost all of these families are headed by women; very few States have adopted the option of providing aid to children with an unemployed parent, i.e., a father. This increase in welfare recipients is the reverse of what had been expected in a situation of high employment. Why has it happened? First, the large increase has been among female-headed households with small children, so unless day care is provided, they cannot take a job. Second, the pool of eligible families has always existed but the individuals have not known they were eligible for welfare. The increase in the welfare rolls has been an almost direct result of public and private efforts to help the poor. Moreover, the pool of families eligible for welfare but not yet on the rolls is still so large that the rapid rate of increase of the past three or four years could continue right through fiscal year 1975.

However, in the 1967 social security amendments, an "AFDC freeze" was legislated. In the Revenue and Expenditure Control Act of 1968, this freeze was subsequently postponed until July 1, 1969. The "freeze" limits Federal sharing of AFDC welfare payments. It is related to the number of children on the welfare rolls, because of the absence of one parent, relative to the total number of

children in the State as of January 1, 1968. As a guess, this permits about 7% of the increase in the children on the AFDC to be covered by Federal matching funds.

No one really knows what will happen if the freeze goes into effect. President Nixon's revised budget for 1970 proposes that it again be deferred. However, assuming that the States maintain their effort to provide welfare payments and that the rate of application and acceptance continues as it has in the past few years, the Federal cost would rise from \$4.4 billion in 1970 to \$6½ billion by 1975. State costs under this assumption would rise from \$1.8 billion in fiscal year 1970 to \$4.5 billion in 1975. If the freeze is successively postponed, the Federal share would rise to \$7½ billion and the State costs to \$5.2 billion by 1975. There are obviously all sorts of possibilities in this area. New York, as you know, already has a proposal before the Legislature to change the welfare laws. Negative income taxes and other welfare revisions are being promoted by some in Washington.

Directly related to the welfare problem is Medicaid, which provides health care to the poor. It is not a requirement that a family be on welfare to receive Medicaid assistance but if a family is on welfare, it apparently is taken as *prima facie* evidence that the family is also entitled to Medicaid assistance. Federal Medicaid expenditures, under current law, and given the assumptions about the increasing number people on the welfare rolls would rise to \$6 billion by fiscal year 1975. These estimates of public assistance and Medicaid could be low, especially if major revisions in the welfare laws are made.

The vocational rehabilitation program is fairly small. Congress sets a limit on the annual amount of funds which the States can draw for vocational rehabilitation programs. These annual limits have been set every three years and as the State programs have gotten larger, Congress has raised the annual limit.

Successive postponement of the AFDC freeze and continuation of the trend in vocational rehabilitation programs could add an additional \$1.5 billion to fiscal year 1975 expenditures.

The final area of built-in increase is that of *interest on the public debt*. The interest payments are a function of the size of the debt and the interest rates. There is currently something of a problem of defining public debt.⁵ The concept of interest shown in Table 3 is net interest paid to the public. Interest is the only built-in expenditure not projected to rise, mainly because of the two other assumptions that had to be made in order to derive an interest estimate. First, the unified budget was assumed to be in balance. Second, interest rates were assumed to come down from their present peak. Because of the uncertainties involved with either of these assumptions, there is another contingency allowance for higher debt and/or interest rates, of \$2.0 billion.

GETTING TO FISCAL YEAR 1975

As usual, if one takes a long enough view of the Federal budget, there is always a surplus eventually. By 1975, under this projection, between \$45 and \$50 billion of funds would become available for either program increases over the levels in the revised 1970 budget, for tax reduction, or for revenue sharing. However, \$9 billion of these funds could be pre-empted if all of the second bank of contingencies occurred. In addition, \$6 billion of the funds available are the result of trust fund surpluses, and raise questions as to what should be done with these surpluses. To keep the unified budget (and the economy) in balance, the Federal funds budget would have to run a comparable deficit.

⁵ The President's Commission on Budget Concepts, which created the unified budget, recommended that the debt be defined as debt held by the public. As of the end of fiscal year 1968, public debt issued by the Treasury totaled \$345.3 billion, while debt subject to limitation was \$350.7 billion under the old and the new law. In addition, there was \$24.4 billion of debt issued by Government agencies outstanding. Offsetting this was debt held by Federal agencies of \$78.1 billion of which trust fund holdings were \$74.4 billion. By the end of fiscal year 1970, trust fund holdings are expected to raise to \$95 billion and by fiscal year 1974 to \$145 billion under this projection of trust fund receipts and expenditures. As a result, there are three interest figures; there is the gross interest on the public debt which is estimated at \$17.3 billion for fiscal year 1970, the interest as defined by the functional classification of \$16.5 billion (some of the interest received is offset against the gross), and net interest paid to the public of \$12.9 billion which is the functional total less interest received by the trust funds. The interest shown on the table is this latter concept of net interest paid to the public.

The remaining problem is how to get to 1975. There is a problem of fiscal transition when the war in Vietnam ends. Even under the rapid demobilization scenario of the last *Economic Report*, it requires a year after redeployment begins for Defense expenditures to decline \$8 billion and 2½ years before the entire decline in expenditures is achieved.

The removal of the 10% surcharge is linked to the end of the war in Vietnam. Removal of the surcharge results in an immediate loss of revenue, but the end of the war does not result in as large or as immediate reduction in expenditures. Not only is the path to 1975 strewn with assumptions, but there are also some sizable potholes along the way.

FINANCING STATE AND LOCAL GOVERNMENTS: THE OUTLOOK FOR 1975

By William H. Robinson

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[Revised August, 1969]

Americans look to State and local governments to provide most of their important domestic public services. The performance of these political institutions has an important bearing on the quality of community life. That quality of life is being challenged today, along with the institutions which brought it into existence. Much of the current dissatisfaction stems from the lack of sufficient resources for domestic programs. By the same token, much of the hope for the future hinges on cessation of the war in Vietnam, and an escalation of the flow of funds from Washington. This paper assesses the likely fiscal position of State and local governments in 1975. This position is then discussed in the context of a possible "fiscal dividend" accruing in that year—assuming a full-employment economy, and the existence of peace in Vietnam.

Briefly stated, the future will not be a great deal better than the past. In order to provide the same (or slightly faster) increase in the scope and quality of public services that was achieved in the past five years, State and local governments will have to find new sources of funds totaling \$6-\$15 billion by 1975. This is not a large order, given their impressive revenue-raising performance in the past. But, then again, we may not be satisfied with only slightly improved services. These funds will have to be raised from their own tax sources, through increased Federal assistance, or greater borrowing.

The choice of instrument will have an important influence on the distribution of political power in our federal system of government, the overall progressivity or regressivity of our tax system, and the general adequacy of domestic services.

Even in the absence of war, the difficult task of allocating scarce resources will remain. That is likely to be the case for as long as man possesses some measure of imagination and sets high standards for himself and his society.

I. Introduction and Summary

"The end of the Vietnam War would not make the United States suddenly able to do in unlimited amounts all the things its people have wanted to do. Nor would it suddenly confront the nation with a great problem of recession and unemployment, given reasonable execution of policies which are now well understood and accepted. However, reduction in the demands of the Vietnam War will permit us to devote more resources to other purposes, and it will be important to decide wisely how these resources should be used."¹

This statement by the Committee for Economic Development sets the proper tone for discussing the policy choices which a post-Vietnam economy is likely to pose.

In this summary of a much longer paper, I will outline briefly the techniques, findings, and implications of a projection of State-local finances to 1975.

¹ Committee for Economic Development (CED), *The National Economy and the Vietnam War* (New York: CED), 1968, p. 25.

The economic setting is the same as that outlined by Mrs. Teeters.² For convenience, I will restate the assumptions:

GNP (fiscal year 1975)-----	\$1,340,000,000,000
Nominal annual growth (1967-75)-----	7.0 percent
Real growth-----	4.1 percent
Population (1975)-----	219,000,000
Possible "fiscal dividend"-----	\$45,000,000,000-\$50,000,000,000

My "constituents"—State and local governments—are among the most vocal and aggressive claimants for any fiscal dividend to be declared in 1975. What will the likely state of their financial position be in that year?

A. *Other projections for 1975.*—There have been at least four major projections of State-local finances for the period ending around 1970.³ Since our main concern is with the more distant future, we will only refer to these earlier studies by author—in deference to their considerable contribution to our conceptual tool kit:

Eckstein, for calendar year 1968;

Colm and Helzner, for calendar 1970;

Netzer, for fiscal year 1970; and, most recently,

Mushkin and her Project '70 staff, for calendar year 1970.

For 1975, there have been at least five projections. Netzer, the Tax Foundation, and Kegan and Roniger projected State and local finances for *fiscal* year 1975 in the Governmental Finances framework of the U.S. Bureau of the Census. The Joint Economic Committee (JEC), and the National Planning Association (NPA) used the national income and product accounts of the Office of Business Economics in their projections for *calendar* year 1975.⁴ I attempted to translate these projections into comparable time periods, accounting concepts, and price assumptions—which is akin to translating Swahili into Yiddish. Needless to say, I am responsible for any errors in translation. The detailed results are displayed in Appendix I.

With the exception of Netzer, these studies foresaw an *approximate balance* between revenues and expenditures struck at about the \$160-\$200 billion mark. Netzer projected an \$11 billion deficit in constant dollars, which became a \$14 billion deficit when translated into current dollars.⁵

B. *Another projection for 1975?* Much has happened to alter the nature of the economic world from which earlier projections were derived. Combined, these changes were sufficient to warrant another look at the data. For example, since most of the prior projections were done in 1966 (using 1965 as the base year), they could not possibly reflect:

The rapid escalation of the *Vietnam War*—with its attendant impact on prices, potential economic growth, notions about what constitutes full-employment, and the diversion of economic resources to defense purposes.

² Nancy Teeters, "Trends in Federal Receipts and Expenditures," paper presented to the New York Chapter of the American Statistical Association, April 24, 1969.

³ For full citations of these studies and a debate over whether or not they have a "conservative bias," see:

(a) Dick Netzer, "State-Local Finance in the Next Decade," *Revenue Sharing and Its Alternatives: What Future for Fiscal Federalism*, Vol. III of a compendium prepared for the Joint Economic Committee of the U.S. Congress (Washington, D.C.: GPO), 1967, p. 1344.

(b) Selma Mushkin and Gabrielle Lupo, "Is There a Conservative Bias in State-Local Sector Expenditure Projections?", *National Tax Journal*, September 1967, pp. 282-91.

⁴ Citations below:

(a) Netzer, *Ibid.*, pp. 1332-1366.

(b) Tax Foundation, Inc., *Fiscal Outlook for State and Local Government to 1975* (New York: TF), 1966, 128 pp. The forecast was recently updated on an approximate basis by Dr. Elsie M. Watters, "Up-Dating State-Local Projections," in a paper presented to the National Association of Tax Administrators in Baltimore, Maryland, on June 10, 1968.

(c) Kegan, Lawrence R. and George P. Roniger, "The Outlook for State and Local Finance," in *Fiscal Issues in the Future of Federalism*, CED Supplementary Paper Number 23, (New York: CED), 1968, pp. 231-83. The basic model and conclusions were printed earlier in a policy statement issued by the CED in 1967 entitled *A Fiscal Program for A Balanced Federalism*.

(d) JEC, *U.S. Economic Growth to 1975: Potentials and Problems*, Joint Committee Print of the 89th Congress, 2d Session (Washington, D.C.: GPO), 1966, 63 pp.

(e) NPA, *National Economic Projections to 1975-76*, National Economic Projections Series, Report No. 65-2, August 1965.

⁵ This is one of the inherent problems in projecting State and local finances in real, as opposed to money, terms. Prices (or any change in GNP, for that matter) have a differential impact on revenues and expenditures—with much greater impact on the expenditure side of the equation. Netzer did allow for some price escalation in government compensation.

More recent data on State-local finances, which in turn showed a significant take-off in nearly every category of finance—with particularly marked increases in welfare, higher education, and Federal aid. (See Table 1, below).

Other factors—such as the continued leveling of birth rates, and recent research findings which pointed to the possibility of State taxes becoming more responsive to economic growth over time.⁶

TABLE 1.—RECENT TRENDS IN STATE AND LOCAL FINANCES¹ FISCAL YEARS

(In billions of Dollars)

Item	1955	1965	1967	Average annual percent change	
				1955-65	1965-67
1. Revenues:					
(a) Own sources.....	27.9	63.0	76.1	8.5	9.9
(b) Federal grants.....	3.1	11.0	15.5	13.5	18.7
(c) Total.....	(31.1)	(74.0)	(91.6)	(9.1)	(11.3)
2. Expenditures.....	(33.7)	(74.5)	(93.8)	(8.3)	(12.2)
(a) Elementary and secondary education.....	10.1	22.0	28.1	8.1	13.0
(b) Higher education.....	1.6	5.9	8.8	13.9	22.1
(c) Highways.....	6.5	12.2	14.0	6.5	7.1
(d) Welfare.....	3.2	6.3	8.2	7.0	14.1
(e) Health and hospitals.....	2.5	5.4	6.6	8.0	10.6
(f) Police and fire.....	1.9	3.9	4.5	7.5	7.4
(g) Other.....	8.0	19.0	23.5	9.0	11.2
3. Debt outstanding.....	(44.3)	(99.5)	(114.6)	(8.4)	(7.3)

¹ Governmental Finances "general" revenues and expenditures concept, which excludes insurance trust operations and utilities.

Notes: Detail may not add to total due to rounding.

C. *Projection approaches*.—There are three principal techniques for projecting State-local finances:

- (1) Intuition (unadulterated by analysis);
- (2) Extrapolation; and
- (3) Component analysis.

Like all arbitrary boundaries, there is inevitable overlap. Nevertheless, the extrapolative models tend to be more global in their treatment of causative factors than do those termed "component analysis" in this paper. For example, one prominent group (which shall remain nameless) assumes that State and local purchases of goods and services will grow \$2½ billion each quarter. (While lacking in conceptual elegance, the model admittedly yields quick results.) One could progress upward in sophistication to the econometric model of the Brookings Institution which involves several hundred interlocking equations.

Component analysis postulates a simplified model of public expenditure determination. It isolates three generic factors which influence the changes in spending for any given program:

- (1) *Workload*—usually gauged by changes in total population or some relevant subset (e.g., children between the ages of 5 and 17 for elementary and secondary education);
- (2) *Prices*—which influence the money cost of a specified level of service units per capita; and
- (3) *Policy decisions*—which extend the scope and/or improve the quality of services provided—above and beyond changes in workload and price. For convenience, this factor assumes the truncated terminological form of "scope-and-quality" changes.

The product of the first two factors is easily recognized as the minimum likely cost of providing the same level of service in real terms per unit of demand. The National Planning Association defines this level as the "pre-empted" demand for resources.⁷ However, the analysis cannot rest at that point. Simply postulating

⁶ ACIR. *Sources of Increased State Tax Collections: Economic Growth vs. Political Choice*, (Washington, D.C.: GPO), October 1968.

⁷ See Leonard Lecht, *Goals, Priorities and Dollars* (New York: The Free Press), 1966, p. 9.

no change in the scope or quality of public services in today's environment is not a reliable way to ascertain future demands on public funds.

Two approaches have been used to identify that elusive territory within which policy choices may operate. After isolating the "pre-empted" expenditure levels, NPA taps the views of program experts to construct a model which reflects realistic—but still optimistic—"aspirations." Since these goals are quite likely to exceed foreseeable resources, some normative "judgment" model must be employed, which trims back programs to fit within the budgetary constraint. The advantage of this approach lies in its specificity. Its subjectivity is the chief pitfall.⁸

The residual "scope-and-quality" approach employed by Selma Mushkin and Kegan and Roniger⁹ avoids the problem of subjective choice by projecting the same rate of quality improvement as occurred in the recent past. This defines a feasible rate of improvement without getting mired in debate over subjective value judgments.

This paper is eclectic in its methodological approach. Component analysis forms the base; that base is supplemented by "aspiration" level services for education, and a higher extrapolation for welfare (based on rapid recent growth in the program).

It should be stressed at the outset that, while "constant quality" projections were made for all programs, that assumption and its results were judged to be the least likely outcome. To make the analysis more meaningful, and to simplify its presentation, the only numbers discussed in this paper are those which assume the same degree of quality improvement as in the recent past (i.e., 1962-1967) or posit still greater quality improvement.

D. *The first factor: Workload.*—The growth and changing age-composition of the population has an important bearing on public service demand. The tremendous pressures created by the sheer numbers of the postwar "baby boom" are only now beginning to abate. Population projections for 1975 portend an absolute decline in that portion of the population which influences spending for government's biggest enterprise—elementary education. The relative growth rates of other age groups which disproportionately affect demands on the public sector are also expected to slacken.¹⁰

TABLE 2.—POPULATION CHANGES, 1962-75

Age	Population in thousands			Average annual percentage increase	
	1962	1967	1975 (Series C)	1962-67 actual	1967-75 projected
Under 5.....	20,746	19,191	21,212	-1.6	1.3
5 to 13.....	33,943	36,965	35,319	1.7	-0.6
14 to 17.....	12,764	14,625	16,896	2.8	1.8
18 to 21.....	10,761	13,632	16,236	4.8	2.2
22 to 64.....	91,131	95,909	108,544	1.0	1.6
65 and over.....	17,311	18,796	21,159	1.7	1.5
Total.....	186,656	199,118	219,366	1.3	1.2

Sources : Census Current Population Series P-25; No. 321 (11-30-65), p. 11; No. 385 (2-14-68), p. 12; No. 381 (12-18-67), pp. 57, 80, 91.

⁸ See the introduction by Gerhard Colm in Lecht, *op. cit.*, for a discussion of this approach. Interestingly, the cost of national goals projected in that volume exceeded GNP in 1975 by \$150 billion—or 15%.

⁹ S. J. Mushkin and G. Lupo, "Project '70: Projecting the State-Local Sector," *Review of Economics and Statistics* (May 1967). Kegan and Roniger first used this approach in a CED policy statement issued in June 1967 entitled *A Fiscal Program For A Balanced Federalism*.

¹⁰ These age brackets include: 5-13, 14-17, 18-21, and 65 and over—basically the young and the old who are most dependent on public services. *Population is definitely not sufficient as a measure of demand for public services.*

This inadequacy is particularly glaring for capital spending like highways, or social services like health and welfare (which must rely more heavily on income distribution, geographical location, race, and other data which are extremely difficult to subsume in a projection of this type).

When *weighted* by the relative importance of each age group in influencing total spending, workload increased at an average annual rate of 1.8% during the 1962-67 period. Population-workload demand is projected to increase at only 1.1% per year over the 8-year period 1967-75.

E. *The second factor: Prices.*—The contrast between gathering data on population and on State and local prices is striking. Leaving aside the really thorny conceptual problems (like inability to measure productivity of government employees, or to gauge qualitative improvements), the various price series on State-local expenditures are incomplete and do not lend themselves readily to analysis by function or program area. The result is usually a need to develop a price index *de novo*.¹¹ A special price index for 1962-1967 was developed for this paper in order to determine: (a) separate prices for education, (b) an index for welfare payments, and (c) the overall increase in prices for total State and local expenditures. (The process is discussed in section IV-D of the technical paper.)¹² Working from the basic economic model outlined by Mrs. Teeters, a set of internally consistent price assumptions was made for the future. The results are shown in Table 3. The overall price index for State and local expenditures is estimated to pick up somewhat in tempo, rising from 3.3% per year for the 1962-67 period to an estimated average of 3.4% per year during 1967-75. (It should be emphasized that these numbers are *averages*. The prices prevailing in the terminal year of the projection will be decidedly lower.)

F. *Scope and quality increases: 1962-67.* The scope and quality of public services provided by State and local governments increased nearly 3.8% per year over the 1962-67 half decade. Table 4 summarizes the results of component analysis for each function. The greatest increases in the residual scope-and-quality factor occurred in higher education (7.7% per year) and welfare (6.6% per annum).

TABLE 3.—AVERAGE ANNUAL PRICE INCREASES—BY FUNCTION

	1955-65 (BLS-CED)	1956-66 (Boyle)	1962-67 (This study)	1967-75 Projected
Education.....	4.1	3.9	3.0	3.2)
Elementary and secondary.....	(4.0)		² (2.9)	² (3.1)
Higher education.....	(4.8)		² (3.5)	² (3.7)
Health and hospitals.....	3.3	3.3	³ 3.7	3.7
Welfare.....	1.8	2.0	⁴ 2.0	⁴ 2.8
Highways.....	2.4	1.4	⁶ 3.6	3.6
Other (residual).....	3.3	3.0	3.7	3.7
Total (weighted).....	3.3	3.0	3.3	3.4
Memorandum: General government.....	[4.7]	[4.6]	[4.3]	[4.5]

¹ Same relationship to general government deflator as in 1962-67. (This also fits better with the most recent changes of 3.2 percent annually during the 1965-67 period.)

² Same relationship to total education as in BLS-CED study.

³ Medical care component of consumer price index.

⁴ Consumer price index.

⁵ See table IV-1 for derivation.

⁶ Bureau of Public Roads, highway construction index (98.6 in 1962, 117.6 in 1967).

¹¹ For an elaboration of these problems, see S. J. Mushkin and G. Lupo, "Is There a Conservative Bias in State-Local Expenditure Projections?", *National Tax Journal* (September 1967), pp. 282-91; Kegan and Roniger, *op. cit.*, pp. 250-55. Special functional price indices have been developed for earlier periods. See Joseph C. Wakefield, "Expanding Functions of State and Local Governments, 1965-70," *Monthly Labor Review*, (July 1967), pp. 9-14, and Gerald J. Boyle, "The Anatomy of Fiscal Imbalance," *National Tax Journal* (December 1968), pp. 422-24.

¹² Briefly, it was derived from separate indices for purchases of services ("general government compensation") purchases of goods, and the consumer price index for transfer payments. The purchases component was further broken down between education and "all other."

TABLE 4.—INFLUENCES ON STATE-LOCAL SPENDING 1962-67

[Dollars in millions]

Function	1962 Expenditures	Average annual increases due to—			1967 Expenditures
		Population (weighted)	Prices	Scope and quality	
Elementary education.....	\$10,679	1.7	2.9	3.4	\$15,885
Secondary education.....	7,060	2.8	2.9	5.3	12,181
Higher education.....	4,043	4.8	3.5	7.7	8,810
Highways.....	10,357	1.3	3.6	1.1	13,956
Welfare.....	5,084	1.4	2.0	6.6	8,249
Health and hospitals.....	4,342	1.3	3.7	3.7	6,647
Other general expenditures.....	18,641	1.3	3.7	3.3	28,042
Total.....	60,206	1.8	3.3	3.8	93,770

G. *Expenditures in 1975.*—It will cost us roughly \$40 billion more in 1975 simply to stand still. The constant-quality model, rejected for its lack of realism, would require more than \$134 billion to provide the same real level of public services per unit of demand which consumed less than \$94 billion in 1967. To provide for the same rate of quality improvement as in the preceding five years would necessitate a doubling of effort—to \$186 billion. Picking up the pace of improvement only slightly, to about 5% per year, would call forth nearly \$200 billion worth of spending by 1975.

Table 5 displays the range in spending by function, under the various assumptions for 1975.

TABLE 5.—STATE-LOCAL SPENDING IN 1975

[Dollars in millions]

Function	Average annual increases ¹			1975 Expenditures	
	Population-workload	Prices	Quality improvement	Higher quality	
Elementary education.....	-0.6	3.1	\$25,300	} \$56,000	
Secondary education.....	1.8	3.1	27,200		
Higher education.....	2.2	3.7	25,400		30,000
Highways.....	1.2	3.6	22,300		(²)
Welfare.....	1.1	2.8	18,700		22,900
Health and hospitals.....	1.2	3.7	13,100		(²)
Other general expenditures.....	1.2	3.7	53,600		(²)
Total.....	1.1	3.4	185,600		197,900

¹ From 1967 to 1975.

² Not estimated.

The highlights of the various "higher quality" models are discussed below.

In *elementary and secondary education*, the same rate of quality improvement as in the past is almost sufficient to reach aspiration levels of service because of slackening workload. For example, with about \$3.5 billion added to the projected "scope-and-quality" amounts, it could make possible:¹³

Lowering of student-teacher ratios (from 27.5 down to 20-to-1 in elementary, and from 21.4 to 18-to-1 in secondary);

Extension of the school age downward (to cover all 5-year olds, and many 4- and 3-year olds); and

Provision of teachers' aides for all pre-school teachers.

In *higher education*, the addition of roughly \$4.6 billion on top of the projected quality improvements, could make it possible to remove many of the financial barriers which now impede able, but impecunious, students from obtaining a col-

¹³ Much of this section and the one on higher education is drawn from a publication of the U.S. Office of Education entitled *Education in the Seventies* (GPO), May 1968.

lege education. It could raise quality standards to meet the interim goals of the Carnegie Commission, and reduce student-staff ratios to 13.5-to-1.¹⁴

The larger *welfare* number is not really so much "higher quality," as it is simply "higher cost," based on recent trends in caseload. Public welfare in the United States is experiencing a fundamental structural change, on which portends growing caseloads almost unrelated to aggregate economic indicators. For some time, as many as three-fourths of those potentially eligible for welfare were not receiving assistance. Due to the efforts of the National Welfare Rights Organization and other local action groups, the poor are now stepping forward and laying claim to those benefits. Built-in demand for such large sums poses the larger policy issue for public welfare in the years-ahead: What can be done to revitalize a program that is increasingly recognized as conceptually, morally, and financially bankrupt?

The most bothersome attribute of the residual category is its size and composition. Amongst all the Lilliputian miscellany rest two sleeping giants—pollution control and housing and urban renewal. Given the time available for this projection, and the unpredictable pattern of capital outlays, the residual remains. (Moreover, the hazy public-private division of costs in the housing field adds to the difficulty of trying anything too elaborate.)

Other financial requirements, outside the Census "general expenditure" definition, will exceed \$20 billion by 1975—raising the overall uses of funds to \$207–\$220 billion in that year.¹⁵

The table below shows the shifting emphases of State and local finances assuming they follow the path outlined in this projection. Higher education and welfare appear to be the dynamic growth areas for the future. Highways would recede significantly in importance, while health care and hospitals would decline slightly in relative emphasis.

PERCENTAGE COMPOSITION OF STATE-LOCAL EXPENDITURES, 1962-75

Function	1972 actual	1967 actual	1975 (projected)	
			Quality improvement	Higher quality
Elementary and secondary education.....	29.5	29.9	28.3	28.3
Higher education.....	6.7	9.4	13.7	15.2
Highways.....	17.2	14.9	12.0	11.3
Welfare.....	8.4	8.8	10.1	11.6
Health and hospitals.....	7.2	7.1	7.1	6.6
Other general expenditures.....	31.0	29.9	28.9	27.1
Total ¹	100.0	100.0	100.0	100.0

¹ May not add to total due to rounding.

Finally, the projected amounts of general expenditures would cause a continuation in the upward trend in the State-local sector as a claimant of national resources. Spending as a percent of GNP would increase from 11.1% in 1962, to 12.2% in 1967, and proceed still higher to 14–15% by 1975.

H. Revenues in 1975.—In the classic phrase of Professor James Duesenberry: "Money is one of man's greatest inventions."¹⁶ State and local government would go on to lament that its only weakness is scarcity.

¹⁴ *Quality and equality: New levels of federal responsibility for higher education* (New York: McGraw-Hill Book Company), 1968. See also a special O.E. report to the President, *Toward a Long-Range Plan for Federal Financial Support For Higher Education* (Duplicated), January 1969.

The former recommended expenditures of around \$40 billion for all higher education institutions in fiscal year 1976. The latter estimated a cost of \$41 billion by 1977. Assuming that roughly 70% of these funds would be spent by public colleges and universities yields a cost of about \$28–\$29 billion.

¹⁵ See Table 7 for the detailed tabulation of sources and uses of funds for 1975. The derivation of these "other" amounts is explained in the longer technical paper, of which this is a summary.

¹⁶ *Money and Credit: Impact and Control* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc.), 1967, p. 1. (The quotation is Professor Duesenberry's opening sentence.)

The revenue estimates in this paper are based on the automatic expansion in State and local receipts which is *attributable to economic growth alone*. The relative responsiveness (elasticity) of various tax sources to changes in gross national product is shown below, according to the assumptions which various studies have employed.¹⁷

GNP ELASTICITY BY MAJOR TAX

Tax	Netzer	Tax foundation	CED	This study
Property.....	1.0	0.9	1.0	0.9
General sales and gross receipts.....	1.0	1.1	1.0	1.0
Selective sales.....		.7	.7	.7
Personal income.....	1.75	1.7	1.7	1.7
Corporate income.....	1.15	1.2	1.2	1.2
Other.....		.7	.7	.7

The only departure from what have become almost standard assumptions, is the choice of the lower range of responsiveness for the property tax. Actual data for the period 1962-67 would not support an elasticity coefficient greater than 0.9—despite the fact that Netzer¹⁸ and others had found that coefficient to be equal to, or greater than, unity for earlier periods. (Data from the 1970 Census of Government would yield an estimate for 1962-67 of about 0.7—an unsustainable low point.)

Once this choice has been made, and the growth in GNP is projected for the period, a multiplier can be derived which when applied to tax collections in the base year will provide an expected value for that tax due to economic growth. Table 8 arrays the basic data for a projection of almost \$109 billion for State and local tax collections for 1975, *assuming no changes in the rates of base*.

TABLE 8.—STATE-LOCAL TAX REVENUES 1962-75

[Dollars in millions]

Tax	Elasticity coefficient	1962 actual	1967 actual	1975 projected	Average annual increase		Percent of total growth 1962-67 due to changes in rate and base
					1962-67	1967-75 (economic growth)	
Property.....	0.9	\$19,054	\$26,280	\$43,965	6.6	6.6	1.6
General sales and gross receipts.....	1.0	6,069	10,143	17,730	10.8	7.2	38.3
Selective sales and gross receipts.....	.7	7,424	10,411	15,865	7.0	5.4	27.9
Personal income.....	1.7	3,037	5,835	13,260	14.0	10.8	23.6
Corporate income.....	1.2	1,308	2,227	4,225	11.2	8.3	29.3
Other taxes.....	.7	4,662	6,346	9,670	6.4	5.4	19.7
Statutory revisions since 1967.....				4,000			
Totals.....		41,554	61,241	108,715	8.1	16.9	19.2
Gross National Product (billions).....		542.1	766.5	1,340.0	7.2	7.2	

¹ Excluding the \$4,000,000,000 in statutory revisions enacted since 1967.

Federal aid and fees and charges are projected in relationship to total spending for the programs they help finance. The conceptual support for this approach is grounded in the politics of federalism—where interest groups seek access to political institutions at all levels, and usually succeed in having their demands reflected throughout the system.

¹⁷ For references to the basic studies deriving the elasticity coefficients, see ACIR's *Sources of Increased State Tax Collections: Economic Growth vs. Political Choice*, pp. 3-4. For the range of values which these elasticities could assume, see ACIR, *Fiscal Balance in the American Federal System*, p. 114.

¹⁸ Dick Netzer, *Economics of the Property Tax* (Washington, D.C.: The Brookings Institution), 1966.

FEDERAL AID—1975

[In millions of dollars]

	Quality improvement	Higher quality
Elementary and secondary education.....	4,000	6,000
Higher education.....	6,400	7,500
Welfare (including medicaid).....	10,300	13,400
Highways.....	6,000	6,000
Health.....	1,000	1,000
Other Federal aid.....	5,300	6,500
Total, Federal aid.....	33,000	40,400

I. *Striking the Balance.*—Adding up all the sources of funds (including a rather optimistic assumption for new long-term debt issued), State and local governments will be left with an *estimated deficit of \$6–\$15 billion* depending upon which concept or quality improvement model is chosen. Table 9 shows total fund sources reaching \$200–\$210 billion in the face of fund requirements which total \$207–\$220 billion.

TABLE 9.—OVERALL FINANCES

[In millions of dollars]

	1975		
	1967 actual	Quality improvement	Higher quality
Sources of funds:			
General revenue.....	(91,627)	(173,600)	(183,100)
Taxes.....	61,241	108,700	108,700
Fees, charges, et cetera.....	14,881	31,900	34,000
Federal aid.....	15,505	33,000	40,400
Profit on liquor stores.....	314	600	600
New borrowing.....	12,843	25,900	25,900
Total funds available.....	104,784	200,100	209,600
Uses of funds:			
General expenditure.....	93,770	185,600	197,900
Long-term debt retired.....	5,886	10,900	10,900
Additional employee retirement.....	2,260	4,500	4,800
Deficit on utility operations.....	761	1,300	1,300
Additions to liquid assets.....	2,171	4,300	4,600
Total funds required.....	104,848	206,600	219,500
Surplus (+) or deficit (—).....	—64	—6,500	—9,900
[General fund surplus (+) or deficit (—)].....	[—2,143]	[—12,000]	[—14,800]

J. *Implications.*—The gap may be filled in any one of three ways (or some combination thereof):

- Increased State and local taxes;
- Increased borrowing; or
- Increased Federal aid.

It is certainly conceivable that State and local governments could *raise taxes* by the 8–15% required to fill the gap.¹⁰ The tradeoff is between State and local autonomy (through the use of their own resources), and the greater reliance on regressive or proportional taxes which could result if they chose to get those resources through property or sales taxes.

On the other hand, both autonomy and overall equity in the tax system could be served by increased State *income taxes*. In the aforementioned CED policy statement, as well as the ACIR study, a Federal tax credit is suggested to encourage States to occupy this field more substantially.

Debt increases beyond the amount already projected are highly unlikely and only a temporary solution at best.

Increases in Federal aid of roughly 25–40% would be required to fill the gap if this approach were used by itself. The assistance could take the form of additional categorical aid, broader purpose grants, or revenue sharing. The full

¹⁰ There is no dearth of studies showing that State-local revenues could be raised by nearly this amount through heavier reliance on income taxes, better administration of the property tax, etc. See Netzer, *op. cit.*, CED, *op. cit.*, ACIR, *Fiscal Balance in the American Federal System*, among others.

Federal financing of the welfare program would also release enough State resources to bridge the resources-responsibilities gap.²⁰

The choice of instruments is an important one—influencing the relative power of political institutions and the quality of American life in the years ahead.

APPENDIX—COMPARISON OF PROJECTIONS FOR STATE-LOCAL FINANCES IN 1975

[Dollars in billions]

Item	Netzer	JEC	NPA	Tax foundation	Revised tax foundation	Kegan-Roniger
A. Basic features:						
(1) Year published	1967	1966	1965	1966	1968	1968
(2) Base year	1964	1965	1964	1965	1968	1965
(3) Accounting concept	GF	NIA	NIA	GF	GF	GF
(4) Calendar/fiscal year	FY	CY	CY	FY	FY	FY
(5) Constant/current dollars	(³)	(³)	(³)	(³)	(³)	(³)
(6) Projection technique	WPJ ⁴	EXT ⁵	WPJ ⁴	WPSQ ⁴	WPSQ ⁴	WPSQ ⁴
B. Economic/Demographic assumptions:						
(1) Real growth in GNP	3.75	4.0, 4.5	4.1	4.0	4.0	4.0
(2) Price increases		1.5, 2.0	1.8	1.6	2.8	2.0
(3) Nominal growth		5.5, 6.5	5.9	5.6	6.8	6.0
(4) GNP (current)	\$1,141	\$1,205 to \$1,310	\$1,167	\$1,178	\$1,265	\$1,181
(5) Unemployment rate		4.0, 3.0	4.5	4.5		
(6) Population est.	225	About 220	226	218	218	223
(7) Census series	B			C	C	B
(8) Productivity increase		2.6, 2.8	2.6	2.6		
(9) Growth in man-hours		1.6, 1.7	1.4	1.4		
(10) Government compensation		4.2, 4.8		4.2		
C. Expenditures (dollars in billions):						
(1) Unadjusted	128-145 ⁷	164-178 ⁸	172	158	181-186	162-172 ⁹
(2) Adjusted to GF-FY	159-180	193-209	201	158	181-186	162-172
(3) Elementary and secondary education	37-46			37		40-43
(4) Higher education	13			14		20-22
(5) Health and hospitals				11		11
(6) Welfare				17		12-13
(7) Highways	18			17		23-25
(8) Other general	67-77			47		40-42
(9) All other	24			16		16-17
D. Revenues:						
(1) Unadjusted	131-134 ¹⁰	167-181 ⁷	172	164	177-191 ¹¹	157-172 ¹²
(2) Adjusted to GF-FY	163-166	193-207	198	164	181-191	157-172
(3) Personal income	13			10		10-17
(4) Corporate income				4		4
(5) Sales	23			28		29-31
(6) Property	41			38		41-43
(7) Federal grants	25	29-42	29	30	30	32
(8) All other	61-64			55		39-42
E. Debt Outstanding				169		184-203

¹ Constant.

² Both.

³ Current.

⁴ Function.

⁵ High and low.

⁶ Aggregate.

⁷ Range is between "competitive" model and "improvement" model.

⁸ Represents the mean of high and low projections for both ex ante and ex post full employment projections.

⁹ Maintenance of rate of improvement in scope and quality (a) for the entire 10-year period and (b) for the highest rate of growth during either 1955-60 or 1960-65.

¹⁰ Represents "elasticity" only, adjusted for charges under "competitive" and "improvement" expenditure models.

¹¹ Based on the statement that all general revenues would be \$160,000,000,000 to \$170,000,000,000 in 1975 as compared to \$147,000,000,000 in the original estimate. Keeping all other fees and charges constant yields a revised (conservative) total of \$177-191.

¹² Range is from "elasticity only" to "minimum strengthened structure" plus increases in net debt.

Legend: NIA=National income accounts as defined by Office of Business Economics. GF=Governmental finances as defined by the Governments Division U.S. Bureau of the Census. CY=Calendar year. FY=Fiscal year. WP=Adjusted for workload and prices. SQ=Also adjusted for scope and quality of services. J=Also adjusted for judgment quality services. EXT=Extrapolation.

General notes: (a) Calendar year to fiscal year adjustment was made by determining implicit average annual growth rate by function, and projecting that forward or one-half year less than original forecast. (b) NIA to GF adjustment made by assuming constant relationships between NIA data and GF data. (For expenditures: total NIA expenditures averaged 82 percent to GF expenditures during FY 1964-67. For revenues: exclusive of grants total NIA receipts average 80 percent of GF receipts over same period. Grants are virtually the same.) (c) Constant dollar to current dollar translations were made by assuming a 2-percent aggregate average annual price rise unless otherwise specified.

²⁰ Since the time this paper was first written, President Nixon has proposed partial "Federalization" of public welfare and a revenue sharing plan. Since the projection for welfare was based on possible demand factors, the spending for that category will not be changed, and in fact becomes much more feasible. The revenue sharing proposal does represent a net addition to receipts forecast herein, adding something on the order of \$5 billion to Federal aid and State-local receipts by 1975.

Question 5: Let me refer you to yet another proposal concerning budget projections and ask for your comments on it. This proposal was developed in a very thoughtful paper presented to this Committee by former Assistant Director of the Budget, Fred Hoffman. (. . .) [H]e states:

"The projection of commitments resulting from past or currently contemplated decisions is essential to avoid the problem of starting a number of programs which later will not only absorb the resources that might be wanted for future new program starts, but which themselves might be underfunded as a result of failure to take account of the future growth in the resources demands implied by current program decisions. If the kind of multitier planning discussed above is developed and applied, there should be much less sensitivity about making public the commitments implied by decisions already taken."

I gather from this statement that Mr. Hoffman, at least, feels that such five-year projections are not only possible but are also desirable to be made public to the Congress and the people.

Could we have your reaction to such a proposal and procedure?

Answer: Five-year projections of the sort Mr. Hoffman suggested are contained in the paper by Mrs. Teeters, submitted in answer to question 4.

Question 6: In the hearing we had a limited period of time to discuss Public Law 84-801. My interpretation of that law (. . .) is that each Executive department has the responsibility of providing Congress with annually updated five-year projections of each of the programs for which they are responsible. Would you agree? Because these projections have not been forthcoming, I request that you, in conjunction with the agencies, develop a comprehensive set of budget extrapolations (or projections) by detailed program categories and submit them to this Committee by June 1, 1970. It would be helpful if one of the bases on which these projections were constructed was the future year implications of decisions which have already been made. Can you comply with this request?

Answer: We do not interpret P.L. 84-801 as required that each executive department provide the Congress with annually updated five-year projections of each program for which it is responsible. P.L. 84-801 relates to *pending* or *proposed* legislation that

would, if enacted, entail estimated annual expenditures of more than \$1 million;

is submitted or transmitted to the Congress in compliance with law or on the initiative of the executive branch; and

proposes or recommends the creation of *new programs* or the *expansion of existing ones*.

As I stated in my testimony, there are formidable technical and policy reasons which would make it most difficult to submit the comprehensive set of five-year budget extrapolations you requested.

Question 7: Would you submit for the record the most current economic analysis of the SST. Would you specify the assumptions on which the cost and demand estimates are based and the discount rate which is used in the analysis? What is the current estimated rate of return on the SST?

Answer: The information requested is attached. The information was prepared by the Department of Transportation and is based on the economic analyses conducted by that Department.

Attachments.

FAA DEMAND ANALYSIS ASSUMPTIONS

[Prepared by the Department of Transportation]

The demand for SST aircraft as well as for all aircraft operating in the time period depends basically on the growth in overall demand for air transportation forecast for the period through 1990. The growth in air traffic is determined principally by the rate of economic growth forecast for the Free World and by the trend in the factors directly affecting demand, such as fares, speed and income distribution. The analysis assumed that both supersonic and subsonic service would be offered on all routes over 700 miles in length and that passengers would decide between the two on the basis of preference for speed or fare savings.

The following assumptions were made for the FAA demand analysis:

1. Free World traffic forecast from the base year 1965, using the following factors:
 - a. Growth in per capita income of 2.5 percent annually for U.S. air travel and 3.0 percent for foreign air travel.
 - b. Sensitivity of traffic to fare changes based on an assumed elasticity of -1.5 for U.S. air travel and -1.3 for foreign air travel.
 - c. Sensitivity of traffic to speed changes based on a speed elasticity of -0.6 applied to average speed of aircraft fleet, except a conservative elasticity of -0.4 was used to estimate SST induced traffic.
2. Subsonic fares in constant dollars estimated to decrease 25 percent for domestic fares from 1965 to 1978, and 23 percent for international fares for same period, and to be constant from 1978 to 1990.
3. In determining fare differentials of SST and Concorde above subsonic aircraft, fare yields for all aircraft assumed to be equivalent to operating cost, less depreciation, plus capital cost element equal to 30 percent before taxes on the flyaway price of the airplane. Subsonic fares were assumed to be the same for all subsonic aircraft over the same distance, calculated as the average of the derived fares for the 707-320B and 747 airplanes.
4. A passenger load factor of 58 percent was assumed for all types of aircraft.
5. The total air travel market will split between the supersonic and subsonic aircraft on the basis of those passengers whose earnings enable them to pay the fare differential for supersonic aircraft at a rate of 1.5 times their hourly earnings for each hour saved over subsonic aircraft.
6. All Free World airline routes over 700 statute miles and passenger traffic were segregated into three route densities according to passengers per week, and SST and Concorde aircraft assumed to compete against representative subsonic aircraft as follows:

	Route density		Competitive aircraft
	Domestic	International	
Light.....	0 to 1,500.....	0 to 1,000.....	Concorde versus 707-320B.
Medium.....	1,501 to 3,000.....	1,001 to 2,500.....	SST versus DC-3-S3 (stretched).
Heavy.....	Over 3,000.....	Over 2,500.....	SST versus 747.

Since competition is on a cost basis, the most economic aircraft were chosen in each route density category.

7. Aircraft utilization assumed to vary with distance, with SST and Concorde from 10 to 20 percent lower than subsonic aircraft.

8. SST will operate under sonic boom restrictions and will not fly over populated land areas. Therefore, extended subsonic flight legs and/or circuitous flight routings used where necessary. If the cost differential of the SST over subsonic aircraft exceeded \$25 per hour saved, the route was eliminated from consideration.

RATE OF RETURN ON INVESTMENT

[Prepared by the Department of Transportation]

The computation of the rate of return on investment (ROI) for the several parties in the program, based on the FAA base case market in 1990 or 500 airplanes under sonic boom restrictions and on a sales price of \$37 million, has been performed using the same general procedure as in the SST Economic Feasibility Report (EFR) of April 1967. Several changes in assumptions have been necessary, however, to reflect the changed posture of the program, the most significant being the adoption of 1978 as the year of first delivery instead of 1975, as in the EFR, and the acceleration of deliveries over a 13-year period of 16 years. As was done previously, all figures are based on constant 1967 dollars since attempts to project price level increases could result in obscured answers.

The ROI's after taxes, using the discounted cash flow method, are as follows:

Government	4.3%*	
Manufacturers:		
Boeing	15.0	
General Electric.....	11.2	(Preliminary)
Airlines.....	21.2	

*This is a return on royalties only and only reflects a small portion of the benefits returned to the Government and nation. Other benefits not included above are taxes paid by the contractors, subcontractors, airlines and their employees, favorable trade account balances, increased technological capabilities, increased worker skill levels, advancements in aeronautical science, and maintenance of aerospace industry capabilities.

The ROI for General Electric and the airlines is the same as estimated in the EFR. It is not expected that 11.2 percent ROI for General Electric will change radically in view of the offsetting effects of delay in initial deliveries to 1978 and acceleration over a 13-year period.

The airline ROI of 21.5 percent after taxes should not change significantly from the EFR, since operating costs have changed very little. While the decrease in initial investment from the lower sales price should tend to increase ROI's, the variability in fleet size of individual airlines and in route structure and operating conditions makes precision in this area based on a universal airline system of limited value. An attempt to introduce realism into the analysis of the SST impact on airline profitability was made by Boeing in a recent study of the dynamics of SST introduction on a route by route basis, which resulted in a range of ROI after taxes from 18 to 22 percent by 1990, depending on whether an economy fare yield or economy yield plus 10 percent surcharge was used.

The ROI's shown above are derived by using discount techniques. As is noted in the table, the Government return is only that represented by the direct cash recovery of the development investment through the contract recoupment. In terms of dollars, the 4.3 percent represents an approximate \$1 billion return beyond the basic investment.

ASSUMPTIONS USED FOR SST COST ESTIMATE

[Prepared by the Department of Transportation]

The basic production cost for the Boeing SST design 2707-300 was calculated from a combination statistical-engineering analysis using historical manhour-weight relationships for aluminum aircraft. A set of corrections called "complexity factors" was applied to account for the more expensive processes required in fabrication of titanium. These factors are based on actual fabrication experience and their usage is, of course, a function of the weighted distribution of processes that are to be utilized.

The next step was to utilize historical cost-quantity relationships based on aircraft manufacturing experience. A composite unit learning curve of 78% was used for the first 200 airframes, and it was assumed that no further learning curve reductions will take place for additional qualities because of the cost of model changes. In addition, the FAA increased the basic production cost estimate by 15% to compensate for anticipated engineering changes. It should be noted, however, that there is no commensurate improvement in airplane performance assumed.

Experience in engine manufacturing shows initial production efficiency to be historically high and fairly constant at approximately 90 percent learning curve slope. This is due to the fact that the major share of engine fabrication consists of large quantities of similarly machined parts that are usually produced on highly automated machinery. Therefore, the 90 percent slope was applied to the SST engine costs for all production quantities.

SUMMARY OF CURRENT ECONOMIC STUDIES OF THE UNITED STATES SUPERSONIC TRANSPORT, SEPTEMBER 1969, FEDERAL AVIATION ADMINISTRATION, OFFICE OF SUPERSONIC TRANSPORT DEVELOPMENT

EXECUTIVE SUMMARY

The three studies discussed in this report provide a range in their base case 1990 market estimates for the SST under sonic boom restrictions from 500 to 800 airplanes. The low market estimate of 500 SST's, the FAA base case, is sufficient to enable the Government to recover all of its investment through Phase III for development and construction of two prototypes plus a small return.

The basic conclusion is that the program is not only economically viable but reasonably profitable to all participants over a wide range of assumptions.

The forecasts of the market for SST's, assuming operation at supersonic speed only over water and unpopulated land areas, are as follows:

Study	Free World passenger- mile forecast [Billions]	Annual rate of growth ¹ [In percent]	1990 SST market
FAA economic feasibility report.....	1,339	10.0	500
Charles River Associates, Inc.....	1,820	11.3	805
Boeing.....	1,350	10.0	515

¹ Computed from 1965 base year used for FAA forecast.

The size of the market is relatively independent of the method of analysis, but is closely related to the forecast of traffic and fare assumptions for the SST vs. subsonic jets. Detailed route by route analyses of the SST in commercial operation show that the SST can compete effectively within existing fare structures, although a small surcharge may be deemed desirable by the airlines. There are indications that fare differentials will be minimized in the future, and differentials will be in terms of class of service. This favors the SST. There is a potentially strong passenger demand for the SST and if the prototype airplane demonstrates the capability of achieving assumed production performance levels, a very successful program is forecast.

The long range air travel market for which the SST will compete is projected by the FAA to increase eight fold from 1968 to 1990, representing an annual growth rate of approximately 10 percent. In the last 20 years, Free World revenue passenger miles increased almost 15 percent, and in the last five years, 15.9 percent. In view of this experience, the traffic forecast used to estimate the FAA base case of 500 SSTs by 1990 may well be conservative.

The total operating cost per seat mile for the SST over the 3,000-4,000 mile distance bracket, estimated to account for 54 percent of the SST traffic, is computed as 2.20 cents per seat mile, approximately the same as for the advanced subsonic jets such as the 747 and the stretched DC-8-63. SST costs for shorter distances are about 6 percent higher than the advanced jets. The Concorde cost per seat mile, computed on the same basis, is 2.80 cents, or 27 percent higher.

Research studies to date indicate that passengers would be willing to pay for time saved by supersonic flight, which indicate that the airlines should be able to add a small surcharge and attract a substantial share of the traffic. In addition, the faster speed of the SST should enable the airlines to operate the SST at higher load factors than for subsonic jets on the same routes. If fares are set at the same level by class of service for both the SST and advanced subsonic jets, most passengers would prefer the SST. However, subsonic jets would carry large groups of passengers traveling on group discounts and tour based fares for which the SST would probably not compete.

The following is a summary of the updated FAA program results:

Boom restricted market by 1990.....	500 to 800 SST's
Airplane sales price (1967 dollars).....	\$37,000,000-\$50,000,000
Airline investment/manufacturer sales 13 years including \$5,560,000 spares per airplane.....	\$21,300,000-\$34,300,000
Development cost through phase III pro- totype construction.....	*\$1,515,000,000
Government share.....	\$1,285,000,000
Phase IV (certification) cost.....	\$691,000,000
Government share (administration and R. & D).....	**\$24,000,000
Prototype first flight date.....	November 1972
Certification date.....	1st quarter 1978
First commercial service.....	2d quarter 1978

*In addition, manufacturers will invest \$182 million in facilities and in normal commercial expense.

**No determination has been made on the method for financing Phase IV and Phase V costs.

All production costs are based on 1967 dollars to exclude the requirement to project price level increases and possible inflation. Analysis of the effects of inflation, however, shows that it gives the SST a comparative advantage over subsonic jets, since a high percentage of SST costs are in fuel, which history has shown to have a lower rate of price level increase.

INTRODUCTION

This report has been prepared to present the results of three studies of the SST market and various supporting studies which have been undertaken since the issuance of the SST Economic Feasibility Report (EFR) by the FAA in April 1967. These studies reflect the change in the SST design from the variable sweep to the fixed wing design and present alternative methods of estimating demand for the SST, compared to the demand model developed by the Institute for Defense Analyses (IDA), which formed the basis for the 500 airplane market estimate in the EFR. All SST market estimates were based on the assumption that the SST would operate under sonic boom flight restrictions.

One study was conducted by The Boeing Company at the request of the FAA in order to evaluate the changes in the SST design, represented by the 2707-300, within the framework of the same assumptions used in the EFR and to determine if any revisions were required in the original conclusions concerning the SST market and the economic feasibility of the SST program.¹ In addition, Boeing analyzed alternative assumptions on traffic distribution by distance bracket and income distribution, which are based on data developed since 1966 and which result in a higher volume of SST traffic than estimated by IDA.

The second study was conducted by Charles River Associates, Inc. (CRA) under a FAA contract for the purpose of updating the 1967 review of the EFR because of the design change and analyzing the effects of changes in performance characteristics of competitive aircraft.² CRA included in the current study an analysis of the forecast traffic growth and the rate of return on investment and examined the sensitivity of the SST market to varying assumptions in the areas of total aircraft cost and travelers' valuation of time saved by using the SST.

The third study was undertaken by Boeing to analyze the dynamics of introducing the SST into commercial operation on 142 international routes, including "tag end" route segments not included in the FAA analysis.³ A 298-seat all-tourist configuration was assumed for the SST, operating at current economy fares in competition with subsonic jets. The study concluded that the economics of the SST are attractive without a surcharge and should earn a reasonable profit for the airlines.

NATIONAL ECONOMIC IMPACT

The national economic impact of the SST Program can be summarized as follows:

<i>National impact of the SST</i>	
Market	*500 to 800 aircraft
Sales	\$21, 000, 000, 000-\$34, 000, 000, 000
Direct jobs.....	50, 000
Secondary jobs created.....	150, 000
Balance-of-payments benefits.....	54 percent foreign sales

*Under sonic boom restrictions.

NATIONAL ECONOMIC IMPACT

Introduction

Consideration of the economics of the SST Program not only must include the effects of the SST on the participants in the program, Government, manufacturers and airlines of the Free World, but also, for a Government-sponsored program in particular, must examine the national benefits and the impact on the U.S. economy. These national benefits are realized in all areas of the economic

¹ FAA Economics Report, The Boeing Company, January 1969.

² Charles River Associates, *Review of the Economic Feasibility Report for SST and Supporting Materials*, April 1967; *Review of the Market for the Supersonic Transport—Methodology and Sensitivity Analysis*, April 1969.

³ The Boeing Company, *The SST in Commercial Operations*, May 1969.

life of the nation; in helping to maintain a strong, competitive aircraft and airline industry, providing employment to additional skilled and semi-skilled workers, contributing technological techniques in manufacturing and materials applicable throughout all industry, and providing a positive contribution to the U.S. balance of payments through the export trade account.

Growth of Aircraft Industry

It is apparent that the aerospace industry is a large contributor to the maintenance of our nation's economic growth. In labor costs alone, the U.S. aerospace industry paid out \$12.3 billion in 1966 and \$12.9 billion in 1967. The product of a relatively high average labor rate and a high proportion of the nation's total work force results in a significant contribution to the overall national labor income.

The backlog of orders for commercial jet transports committed to the U.S. aircraft industry amounts to an important factor in the nation's financial stability. Currently this industry has a 997-airplane backlog amounting to \$11.1 billion. This backlog supports a level of business that has not been exceeded since World War II. Growth in dollar value of aircraft of deliveries grew from \$813 million in 1964 to more than \$3.5 billion in 1968. By the end of 1968, over 80% of jet transports in operation throughout the world were manufactured in the United States.

Employment

Total Jobs in the Aircraft Industry.—The aerospace industry in the United States is the largest single production element of our total economy. Of a total national work force (excluding agricultural workers) of almost 69 million workers, the aerospace industry contributes 1,415,000 employees. This is even greater than the auto industry's 880,000 workers. The aircraft industry share of the aerospace total is 848,000 workers. This is more than one and one-half times greater than the steel industry's 523,800 employees.

Average Wage.—The average wage of the nation's aerospace employees is among the highest in industry. The relatively highly skilled work force currently commands an average hourly wage of about \$3.66 per hour. The aircraft production worker's average hourly wage is almost as great, being \$3.63 per hour. This compares to an average wage of \$3.01 per hour for all U.S. production and nonsupervisory employees.

Future Jobs.—Looking at the effect of the SST Program—prototype plus production—the prospective direct employment will involve approximately 50,000 persons at peak production. This means a figure in excess of 150,000, if secondary employment effects, including trade, professions, and services supporting the original 50,000, are considered. Those directly employed will be at a high average wage; they will include many at the top levels of skill and technical competence, so important to the continuance of our nation's overall capability; they will also include substantial numbers in semiskilled and unskilled categories. These trained employees constitute a reservoir of skills which are always available to support national security.

Airline Industry

Air transportation is the nation's seventh largest industry and growing faster than any other major segment of our economy. For the past 20 years, air travel has been growing at a rate of about 15% annually, which is nearly double the rate of the second most vigorous industry in our economy—electric utilities. Last year, total air travel in the Free World was 13%. The airlines have become the primary means of common carrier travel within the U.S., carrying more intercity passengers than trains and busses combined. Last year the airlines accounted for about 72% of common carrier passenger traffic between U.S. cities. This is almost double the share of the market the airlines had only ten years ago.

Air Transport Market Growth.—Long range air travel in the Free World is forecast to increase at least eight-fold between 1968 and 1990. One hundred twenty-five billion dollars worth of new commercial aircraft will be required to carry this traffic. Out of this total market, the SST market will total \$25 billion by 1990. The proposed American SST design can obtain at least \$20 billion of

this \$25 billion market through the sale of at least 500 airplanes, 270 of them to foreign airlines.

U.S. airlines employ over 300,000 people and have an annual payroll exceeding \$2 billion. While we can't forecast an exact figure for the contribution of the SST, it is obvious that an eight-fold increase in passenger traffic is going to require a substantial increase in employees and payroll. If our estimates are correct on the market potential, there will be about 780,000 employees of U.S. airlines by 1986, with an annual payroll of over \$12 billion.

Technological Benefits

The technological developments required in the aircraft industry has led to innovations in materials, structural techniques, and systems design and manufacture. Innovations developed by the aircraft industry are applied to the direct benefit of the industry and its products and, more importantly, are transferred by the so-called spin-off process into the products of other companies in other industries.

A few of the more important examples of aircraft technical developments that have laid the foundation for whole new industries or made large contributions to growth of existing industries are:

Due to the large quantities of titanium products, in all forms, that will be required for the SST, increasing uses for this material can be expected as it becomes more available and less expensive. In addition to the increased availability, new and improved manufacturing, fabrication, machining and forming techniques and new alloys are being developed that will make titanium more attractive for applications other than in aerospace industry.

The severe high temperature environment encountered by the SST has necessitated the development of new materials which will withstand this environment for prolonged periods. These new materials will be of great importance to advanced military aircraft, space systems, and should eventually result in improved service life of many consumer products. Examples of such materials include: Glass, honeycomb sandwich construction, hydraulic fluids and lubricants, wire insulation, fuel tank sealants, advanced high strength composite materials (boron and carbon fibers), and non-inflammable fabrics and materials for seats and furnishings.

ECONOMIC AND MARKET STUDIES

Throughout the design competition and during the detailed design work performed by Boeing since the beginning of 1967, economic viability of the SST in airline operation has been one of the principal criteria. In order to provide a basis for estimating profitability of an SST in a competitive environment, several studies of the demand for SSTs and of production and operating costs were performed for the FAA by reputable consultants during 1966. These studies were integrated into an overall economic report by the FAA Office of SST Development, and issued in April 1967 under the title *SST Economic Feasibility Report (EFR)*.

This report concluded that the SST market by 1990 should be at least 500 airplanes under sonic boom flight restrictions and in consideration of competition from advanced subsonic jets and from the Concorde; that it should earn for the airlines and manufacturers a profit commensurate with their risks; and the Government should recover its investment plus a return.

In the period since the Economic Feasibility Report was issued, Boeing has adopted a fixed-wing design to replace its variable sweep design. It has been necessary, therefore, to update the Economic Feasibility Report to determine the effect of changes in performance specifications. By holding constant all previous assumptions adopted for the demand model, it was found that the 500 SST market estimate by 1990 remained intact.

While the EFR was being updated, two other studies of SST economics were conducted by organizations outside the FAA: Charles River Associates, Inc. (CRA); and The Boeing Company.

CRA completed its study in April 1969, and issued a report under the title *Review of the Market for the Supersonic Transport—Methodology and Sensitivity Analysis*. CRA estimated a 1990 market of 805 SSTs, using a higher

traffic forecast than developed by the Institute for Defense Analyses, and changing a few other assumptions from the FAA base case. CRA, however, used the same speed-fare preference and fare surcharge methodology as contained in the FAA demand model.

In May 1969, Boeing issued a study of the dynamics of SST introduction into commercial operations, based on a detailed analysis of 142 international routes, operated at subsonic speed only over populated land areas and at tourist fares without surcharge in competition with subsonic jets. The major SST routes are shown on the map in Figure 1. The study concluded that a fleet of 500 SSTs by 1990 was entirely feasible and that the currently defined SST would not require increases in the relative fare structure to produce a reasonable profit for the airlines.

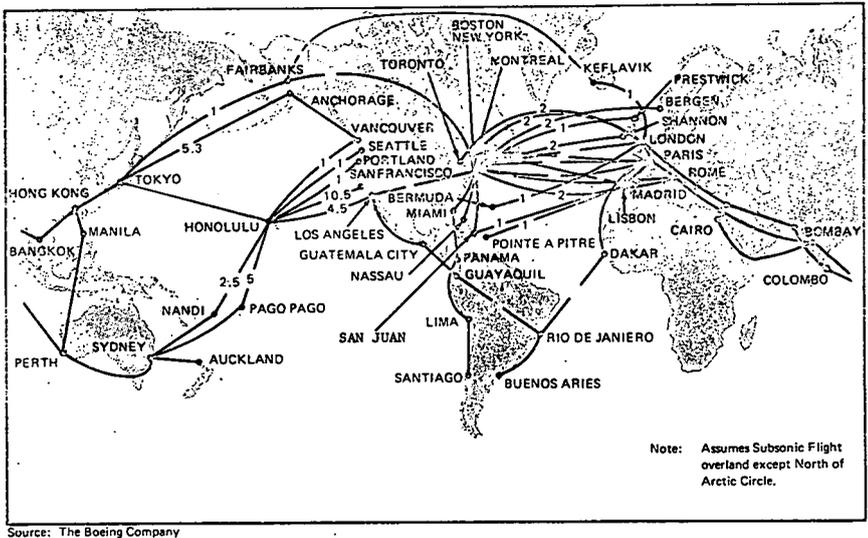


Figure 1. SST Routes (15 Months After First Delivery)

This study is the first performed that reflects a real world situation, utilizing real routes, curfew restrictions, and time-zone differentials. It reflects a practical approach to economic analysis and is, therefore, an outstanding addition to the many excellent studies of SST economics that have been performed.

Summary of Market Estimates from Economic Studies

The table below compares the FAA estimate of the 1990 SST market with the results of the CRA study. The Boeing estimate of 515 SSTs by 1989 is not shown in the table, since traffic volume was limited to 142 international routes whereas the other two studies considered all traffic over 700 miles. Furthermore, the 408 747 equivalents derived in the Boeing study is also limited to these same routes, omitting consideration of U.S. domestic and other Free World routes for which the 747 would be suitable, and, therefore, the 747 estimate is not comparable with the 747 and other subsonic equivalents shown for the other studies.

Table 1

SST 1990 MARKET ESTIMATES AND FLEET MIX WITH SONIC BOOM RESTRICTIONS

	FAA		CRA Model (-300) ^{1/}		
	EFR (-100)	EFR Update (-300)	CRA Assumptions and Base Case		CRA Model With EFR Assumptions
			CRA Traffic	IDA Traffic	
SST 2707-300 (281A)	497	447	687	465	501
SST 2707-300 (281B)		499	805	544	586
Concorde	131	115	2/	2/	2/
Jumbo Jets/Airbus	1,052	1,016	1,711	1,200	1,147
DC-8-63 (Equivalent)	642	656	977	649	649
707-320B (Equivalent)	816	850	1,192	776	776

^{1/} CRA model varies from the EFR in the use of differential load factors.

^{2/} CRA concluded that all Concorde would be replaced by 1990 and that light density routes would become medium and heavy density routes.

It will be noted that two SST models are listed in the table above, the -300 (281A) and the -300 (281B), representing the initial production airplane and a later model with improved performance, respectively, both containing 281 seats in a 10/90 mixed configuration. The -300 (281B) more nearly reflects the performance level assumed for the -100 design, on which the 1967 economics report was based.

In general, the two studies shown in the table used the same traffic distribution and speed/fare preference based on a value of time of 1.5 times earnings. The principal causes of variance in the estimates are the differences in traffic forecasts, the SST fare level, assumptions regarding Concorde competition. In addition, CRA's base case assumes a \$40 million sales price, compared to \$37 million used by FAA, and a lower rate of return of 21.3 percent and 27.5 percent for domestic and international operations, respectively, compared to 30 percent before taxes in the FAA/IDA model. In both instances, the rates of return are an input to the model.

TRAFFIC FORECAST

The forecasts of 1990 RPM's used in the three demand studies described above are shown graphically in Figure 2 and are compared with annual growth rates in Figure 3. It will be noted that the FAA forecast, adopted from the IDA Study and used in the EFR, is the lowest of the three, the CRA forecast being 36 percent higher. The Boeing forecast is about the same as the FAA and was made about the same time in 1966.

FREE WORLD AIR TRAFFIC FORECASTS - 1990

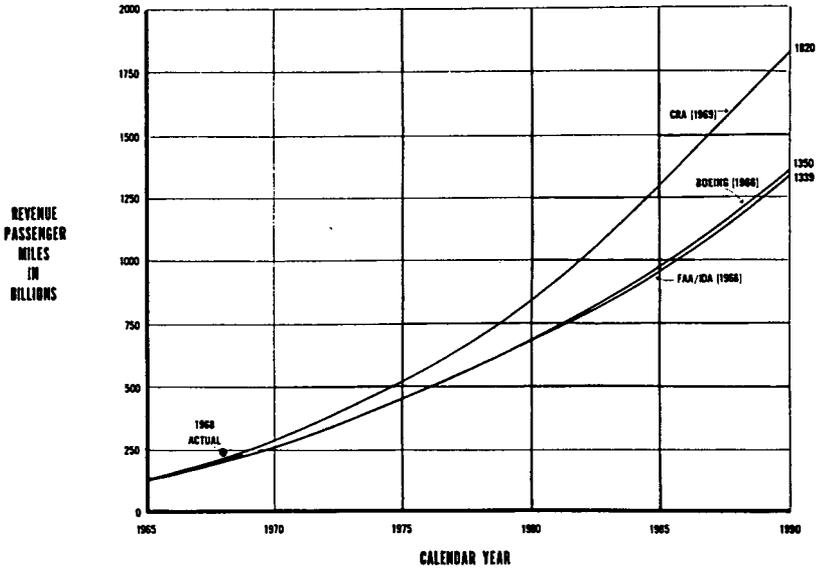
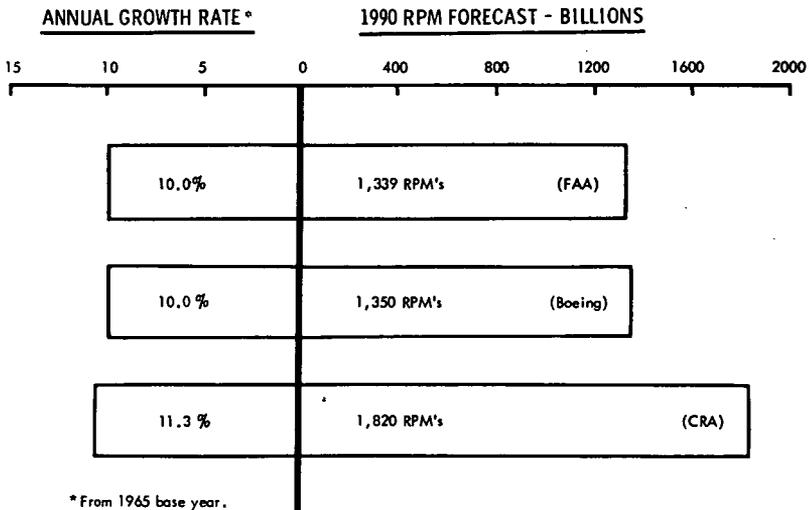


Figure 2

Figure 3



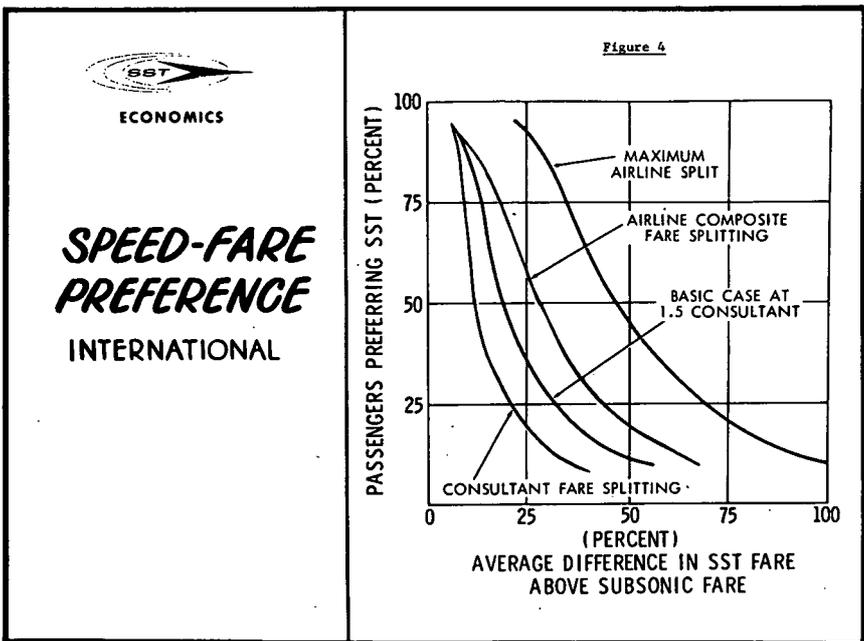
COMPARISON OF TRAFFIC FORECASTS



Passenger Preference for the SST

The FAA Economic Feasibility Report assumed that parallel supersonic and subsonic service will be offered on all routes and that the passenger will decide between the two on the basis of preference for speed or fare savings, respectively. The Institute for Defense Analyses (IDA) concluded that passengers, in the aggregate, value their time at approximately their earnings rate. A passenger pays a fare differential equivalent to his hourly earnings for each flight hour saved. The airlines consensus is that this time value is low and that a speed vs. fare choice should be weighted more heavily toward time. Accordingly, the FAA used a value of 1.5 times earnings.

The speed-fare preference curve for international operations is shown in Figure 4. Reading the "basic case at 1.5 consultant," the curve indicates that if the SST requires a 25 percent fare differential, 35 percent of the passengers will prefer the SST. Similarly, if only 12.5 percent difference in fares is required, then the SST will obtain about 75 percent of the passengers. At no surcharge, 100 percent of the passengers would prefer the SST. If the IDA assumptions are correct, reduction of the surcharge would achieve the same market estimate as the FAA assumptions.



These curves will shift depending upon year of projection, length of trip, and the particular market served. The graph is presented for illustrative purposes and assume a 3,500 statute mile international trip.

Revised Income Distribution

More sophisticated studies, which include the projection of income distributions, have been published since the FAA report was written. A well-documented study by Kahn and Wiener of the Hudson Institute provides income distribution projections for 1985 and 2000.⁴ Linear interpolation of the cumulated distributions was employed to develop a distribution for 1990. The Kahn-Weiner income distribution was then used to generate a speed-fare curve based on the IDA

⁴From "The Year 2000," by Herman Kahn and Anthony J. Wiener, p. 181.

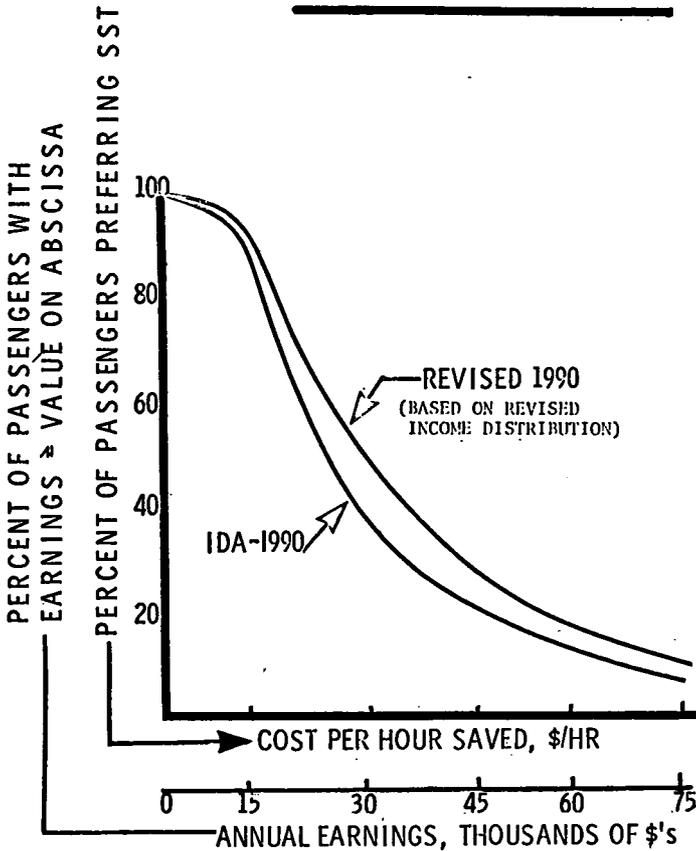
methodology. The Kahn-Wiener income distribution is related to a GNP per capita growth rate of 2.77 percent per year, compared to a 2.5 percent per capita income growth rate used in the IDA study.

The IDA speed-fare curve and the revised curve derived from the Kahn-Wiener income data are shown in Figure 5. Both curves are for a 2,000-hour work year and a time valuation of 1.5 times earnings.

Figure 5



INTERNATIONAL



1.5 x EARNINGS TIME VALUATION

2000 HOUR WORK - YEAR

REVISED CURVE DERIVED FROM
KAHN-WIENER INCOME DISTRIBUTION

The increase in the base case market for SST's as a result of revisions to the income distribution is summarized as follows :

Traffic Distribution by Range Segments and Densities

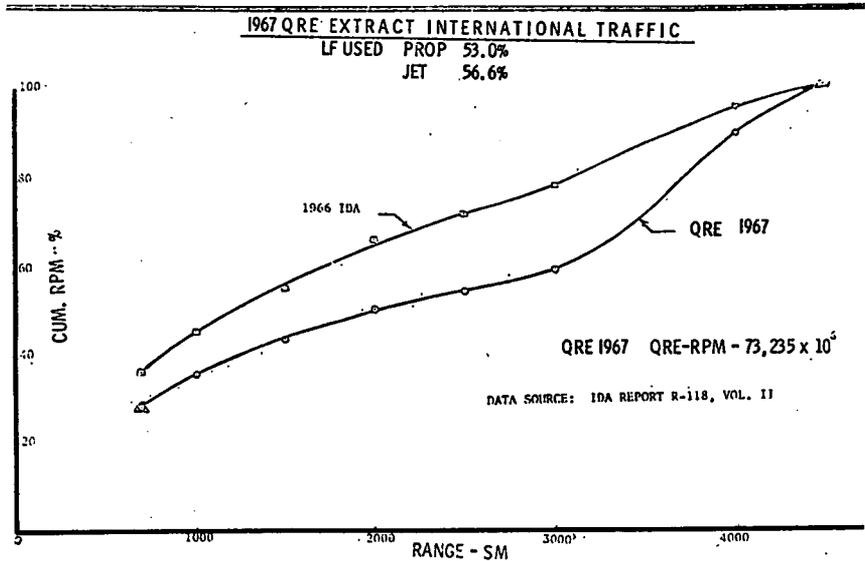
One of the tasks in updating the previous demand study was to check traffic distributions by range used by IDA in their SST market model. Boeing supplied IDA all the historical traffic distributions for years 1962 through 1965, obtained from the Official Airline Guide Quick Reference Edition (QRE) tapes via computer programs. Airport tapes with airport coordinates were used in conjunction with QRE tapes to generate city-pair distances.

Boeing supplied these data to IDA in 1966. Since then, a number of improvements have been made to increase the reliability of the data, which now make it possible to get directly from the Short QRE's ASM and RPM distributions by range, by airline, by aircraft type for domestic, international, or combined traffic.

Figure 6 illustrates the cumulative RPM international distribution for the year 1967. Since IDA did not have a 1967 RPM distribution, the 1966 RPM distribution was plotted. As mentioned earlier, the RPM distribution from the QRE varies markedly from that obtained by IDA, especially in the 3,000 to 4,000 mile range segment.

Using the international traffic distribution indicated by the shape of the 1967 QRE curve, as presented in Figure 6, the international SST demand was recomputed. The results indicate an increase in the SST market of 21.7% over that obtained using the IDA traffic distribution, or a 17% increase in total demand. The increase in number of SST's for the FAA base case would be 69 for the 281_B model, increasing the 1990 market estimate to 569. It is estimated the ORA base case of 805 SST's would increase 112 airplanes to 917.

FIGURE 6
DISTANCE PROFILES OF TRAFFIC FLOWS
INTERNATIONAL 1967



The effect of the changes in traffic distribution on the base case market estimates of the FAA and CRA are shown below :

TABLE 3

	1990 adjusted market estimates	
	FAA base case	CRA base case
estimated from model.....	500	805
increments for revised traffic distribution.....	69	112
Adjusted market.....	569	917

OPERATING COSTS

The operating cost estimates for the SST are based upon a production airplane of 281 seats carrying a payload of 60,200 pounds to a range of 4,000 statute miles. Total operating costs in cents per seat mile for international operations for the SST, the Concorde, and potential competitive subsonic aircraft are shown in the following table :

TABLE 4.—TOTAL OPERATING COSTS, INTERNATIONAL OPERATION

[Cents per seat-mile]

Aircraft	2,219 statute miles			2,644 statute miles			3,565 statute miles		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
707-300.....	1.18	1.41	2.59	1.12	1.30	2.42	1.06	1.14	2.20
Concorde.....	1.74	1.50	3.24	1.68	1.37	3.05	1.60	1.20	2.80
747.....	.95	1.49	2.44	.93	1.40	2.33	.90	1.33	2.23
C-8-63.....	.96	1.47	2.43	.96	1.44	2.40	.94	1.30	2.24
77-320B.....	1.05	1.48	2.53	1.03	1.32	2.35	1.00	1.30	2.30

It will be noted that the total operating cost of the -300 (281B) model is slightly lower than the subsonic aircraft for the 3,565 statute mile average range for routes in the 3,000-4,000 mile distance bracket. This represents the approximate range for North Atlantic flights between the major gateways. However, for the range of 2,644 miles, which approximates the average of the primary transocean routes where the SST is expected to operate, the SST is four percent higher than the 747. If allowance is made for circuitous routing and subsonic flying required on some routes to avoid populated land areas, SST operating costs may average about 10 percent above the 747, depending on where the SST is operated.

Aircraft Characteristics

Two SST production designs, shown in Table 5, have been selected to represent the logical development from the 635,000 pound prototype expected to be completed by the end of 1972. The initial production version, the -300 (281A) is estimated to have a high probability of attaining the performance objectives. The -300 (281B), used for determining the SST 1990 market, is given an average probability of attaining the desired performance objectives by the mid-1980's.

TABLE 5.—SST COMPARATIVE AIRPLANE CHARACTERISTICS

Characteristics	B2707-100		-300 (281A) (Production Technology)		-300 (281B) (Production Technology)	
	Cruise Mach No.-----	2.7		2.7		2.7
Cruise velocity (miles per hour)-----	1,780		1,780		1,780	
Gross weight (pounds)-----	675,000		750,000		715,000	
Operating weight empty (pounds)-----	288,100		311,380		302,300	
Airframe weight (pounds)-----	243,600		264,580		255,500	
Engine weight (pounds)-----	11,125		11,700		11,700	
Payload-----	60,000		60,200		60,200	
Range-statute miles-----	4,000		4,000		4,000	
Number of engines-----	4		4		4	

SEATS						
Split (percent)-----	10/90		20/80		10/90	
	10/90	20/80	10/90	20/80	10/90	20/80
First class-----	28	52	28	53	28	53
Tourist-----	252	217	253	209	253	209
Total-----	280	269	281	262	281	262

Source: B2707-100—FAA "EFR" Other Models—Boeing.

Competitive Aircraft Characteristics

Two sets of aircraft characteristics were used in the several demand models discussed herein. The data first used in the IDA model and in the EFR represented the characteristics of the Concorde and subsonic aircraft in 1966. These same inputs were used in determining the effect on demand for the 2707-300 fixed wing design, calculated by Boeing using the IDA demand model, with the coordination of the FAA.

Updated characteristics of the competitive aircraft used in analyzing the SST demand are shown in Table 6, which includes the DC-10 as representative of the trijets which will be flying in the SST time period. DC-10 operating costs were computed and were found to be about the same as DC-8-63 costs. Consequently, no substitution was made, and the DC-8 was compared with the SST on medium density routes, in accordance with the procedure followed in the EFR.

Productivity of SST and Competitive Aircraft

The primary deterrent of comparative operating efficiency is the productivity of an aircraft, which combines the speed, hourly utilization, and number of seats into one figure, expressed as seat miles or revenue passenger miles (RPM's) that can be operated per hour or per year. Table 7 below shows the average annual RPM's in international operations that can be operated by the SST and competitive aircraft. The 2707-300 will be 40 percent more productive than the 747, using a 25 percent lower utilization for the SST, almost 3 times more productive than the Concorde and DC-8-63, and almost 4 times more productive than the 707-320B.

TABLE 6.—COMPETITIVE AIRCRAFT CHARACTERISTICS, UPDATED

[Dollars in thousands]

Characteristic	DC-10										
	Concorde		747		DC-8-63		707-320B		Domestic		Growth international
Cruise mach number.....	2.05	0.86	0.82	0.82	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Cruise velocity (m.p.h.).....	1,350	580	540	540	570	570	570	570	570	570	570
Gross takeoff weight (pounds).....	137,000	710,000	350,000	333,600	410,000	500,000	410,000	231,700	245,800	245,800	245,800
Operating weight empty (pounds).....	166,200	353,621	159,000	144,175	231,700	245,800	144,175	231,700	208,300	220,600	220,600
Airframe weight (pounds).....	143,800	320,021	142,240	127,375	208,300	220,600	127,375	208,300	178,000	184,000	184,000
Engine weight (pounds).....	5,600	8,400	4,190	4,200	7,800	8,400	4,200	7,800	7,800	8,400	8,400
Number of engines.....	4	4	4	4	3	3	4	4	3	3	3
Engine thrust (pounds).....	36,000	43,500	18,000	18,000	41,000	45,000	18,000	18,000	41,000	45,000	45,000
Cost of total plane.....	\$20,000	\$20,000	\$9,800	\$7,800	\$15,670	\$16,500	\$7,800	\$7,800	\$15,670	\$16,500	\$16,500
Cost of one engine.....	\$1,000	\$800	\$300	\$300	\$624	\$701	\$300	\$300	\$624	\$701	\$701

Seats	Domestic		International		Domestic		International		Domestic		International
	Domestic	International	Domestic	International	Domestic	International	Domestic	International	Domestic	International	
Split.....	20/80	10/90	20/80	10/90	20/80	10/90	20/80	10/90	15/85	10/90	
First class.....	21	12	75	33	40	20	30	14	38	27	
Tourist.....	90	108	274	351	162	204	119	130	218	243	
Total.....	111	120	349	384	202	224	149	144	256	270	
Mail tons.....	0.42	0.65	6.00	10.70	2.23	4.0	1.50	2.75	2.7	4.8	

¹ Concorde weight has been increased to 385 000 pounds according to the Concorde cost manual dated March 1969.

Source: Concorde; BAC/SUD data in trade publications. 747 and 707; The Boeing Company. DC-8-63 and DC-10; McDonnell Douglas engineering data.

TABLE 7.—COMPARATIVE PRODUCTIVITY (FAA BASIS) AVERAGE ANNUAL RPM'S IN INTERNATIONAL OPERATIONS

Aircraft	Seats	Annual RPM's (millions) ¹	SST productivity ratio
SST-300.....	281	614	1
Concorde.....	120	219	2.8
747.....	384	450	1.4
DC-8-63.....	224	234	2.6
707-320B.....	161	168	3.7

¹ Revenue passenger miles (RPM's) are based on 58 percent passenger load factor and utilization for each distance bracket as used in the IDA demand model.

DEVELOPMENT AND PRODUCTION COSTS—SALES PRICE

As a result of the change from a variable sweep to a fixed wing SST design, the airframe structure has been simplified and manufacturing costs and risks reduced, because of the less complex fabrication requirements. The lower production costs are reflected in a lower sales price of \$37 million, compared to \$40 million in the EFR. The breakdown of both sales price figures for a 500 airplane program is compared in the following table:

TABLE 8.—SST SALES PRICE COMPARISON—500 AIRPLANE PROGRAM

[In millions of 1967 dollars]

	2707-300 (fixed wing)	2707-100 (variable sweep)
Airframe cost.....	18.1	21.4
4 engines (price less royalty).....	5.5	5.5
Total.....	23.6	26.9
Royalty payments to Government:		
Airframe.....	3.9	3.9
Engine.....	.7	.7
Total.....	4.6	4.6
Manufacturer's interest, markup, and commercial expenses.....	8.0	8.5
Total sales price.....	136.2	40.0

¹ Rounded up to \$37,000,000 for study purposes.

It will be noted that only the airframe costs and markup have changed, there being no change in engine costs and royalty payments. Although Phase III development costs have increased slightly, the Government share remains at approximately the same level due to the advance of funds by airlines toward prototype development, as explained in detail below.

The table below gives a breakdown of the development costs through Phase III and cost sharing by the parties in the program. Total development costs of \$1,515 million are \$60 million higher than the \$1,455 million estimated in the 1967 Economic Feasibility Report because of a higher escalation rate for labor costs than previously estimated and because of postponement of the first flight date to November 1972. The Government share has not increased, however, since the airline risk contributions of \$59.5 million reduced the Government's cost share by a like amount.

TABLE 9.—TOTAL DEVELOPMENT COSTS THROUGH PHASE III

[In millions of dollars]

	Government	Boeing	General Electric	Subtotal	Airlines	Total
Phases I and II (planning).....	1291.0	9.2	7.6	307.8	² (22.4)	307.8
Phase III (prototype design and construction).....	994.3	³ 105.0	³ 48.0	1,147.3	\$59.5	1,206.8
Total.....	1,285.3	114.2	55.6	1,455.1	\$59.5	³ 1,514.6

¹ Includes Government payments of \$136,000,000 to losing contractors.

² Represents delivery deposits in Treasury, excluded from totals.

³ In addition, the manufacturers will invest approximately \$132,000,000 in new SST facilities and normal commercial costs.

Out of the total of \$1,514.6 million in development costs through Phase III \$733.7 has either been appropriated or provided by the manufacturers and airlines, leaving a balance of \$780.9 million to complete the prototype phase of the program, including 100 hours of flight test.

Phase IV production development costs, culminating in airplane certification, are estimated at \$690.5 million. However, the method of financing Phase IV of the program has not been determined.

RATE OF RETURN ON INVESTMENT

The computation of the rate of return on investment (ROI) for the several parties in the program, based on the FAA base case market in 1990 of 500 airplanes under sonic boom restrictions and on a sales price of \$37 million, has been performed using the same general procedure as in the EFR. Several changes in assumptions have been necessary, however, to reflect the changed posture of the program, the most significant being the adoption of 1978 as the year of first delivery instead of 1975, as in the EFR, and the acceleration of deliveries over a 13-year period instead of 16 years.

The ROI's after taxes, using the discontinued cash flow method, are as follows:

Government (percent)-----	¹ 4.3
Manufacturers:	
Boeing -----	15.0
General Electric (preliminary)-----	11.2
Airlines -----	21.5

¹This is a return on royalties only and only reflects a small portion of the benefits returned to the Government and Nation. Other benefits include taxes paid by the contractors and their employees, favorable trade account balances, increased technological capabilities, increased worker skill levels, advancements in aeronautical science, and maintenance of aerospace industry capabilities.

The ROI for General Electric and the airlines is the same as estimated in the EFR. The G.E. ROI has not been recomputed pending clarification of method and inputs, but it is not expected that 11.2 percent ROI will change radically in view of the offsetting effects of delay in initial deliveries to 1978 and acceleration of deliveries over a 13-year period.

The airline ROI of 21.5 percent after taxes should not change significantly from the EFR, since operating costs have changed very little. While the decrease in initial investment from the lower sales price should tend to increase ROI's, the variability in fleet size of individual airlines and in route structure and operating conditions makes precision in this area based on a universal airline system of limited value. An attempt to introduce realism into the analysis of the SST impact on airline profitability was made by Boeing in a recent study of the dynamics of SST introduction on a route by route basis, which resulted in a range of ROI after taxes from 18 to 22 percent by 1990, depending on whether an economy fare yield or economy yield plus 10 percent surcharge was used.

COMPETITIVE IMPACT OF FOREIGN SST'S

In view of the current flight testing programs now underway for both the British and French Concorde prototypes and the Russian TU-144, these two supersonic airplanes will have a critical impact on the estimated SST market, depending on the years of lead-time over the SST. It is concluded from the data currently available that sales of over 200 Concorde or TU-144's can logically be expected if they are available four or five years prior to introduction of the SST. This assumes, of course, that the Concorde and/or TU-144 are relatively economical air transports within the limitations of their present specification and that no major problems develop to delay their entry into service in the 1973-1974 period.

The President's announcement on 23 September 1969, of a go-ahead on the SST program indicated that commercial service could begin in 1978. A late 1972 certification date for the Concorde, if met on schedule, would give that airplane a minimum five-year lead over the SST. The TU-144 may begin commercial service earlier, but on a limited scale over Free World air routes. Based on production rates of 4 per month for the British and French production lines combined, 240 Concorde should be produced by the end of 1977 as shown in the table below. The production of Concorde after 1978 has not been estimated, but if the U.S. SST is as superior as expected, it would result in the gradual retirement of almost half of the Concorde produced up to 1978.

TABLE 10.—SST AND CONCORDE ESTIMATED DELIVERIES (CUMULATIVE)

	SST (281 seats)	Concorde (120 seats)		SST (281 seats)	Concorde (120 seats)
1972.....			1978.....	30	240
1973.....		48	1979.....	85	(1)
1974.....		96	1980.....	140	(2)
1975.....		144	1985.....	335	(3)
1976.....		192	1990.....	500	-----
1977.....		240			

¹ No additional.

² Production.

³ Assumed.

Note.—A 281-seat SST is assumed to be 2.8 times more productive than a 120-seat Concorde.

During the monopoly period from 1973 through 1977, the Concorde will be operated on the high density routes at high load factors, enabling airlines to earn large enough profits that the investments in aircraft and spares could be paid off in 3 to 4 years. This is based on a rate of return of over 9 percent after taxes and a 70 percent passenger load factor. Rather than being removed from operation, these Concorde may be sold at half price or less for operations over light density routes, replacing the older subsonic jets which no longer have a significant cost advantage.

Probability of a Growth Concorde

The British-French combine consider that a growth Concorde is a "natural development" of a successful small Concorde, which they expect the current production model will be. However, as recently stated by the BAC Concorde sales manager,⁵ seating capacities of over 200 do not appear from their studies to be required until after 1978. Since the British expect sales of the Concorde will continue to the end of the century, there is good reason to believe that the Concorde will be either improved to be able to compete directly with the U.S. SST or to operate on the thin, long haul routes that are marginal for the larger U.S. SST.

Airline Strategy for Concorde Purchase

The probable strategy to be adopted by the airlines toward Concorde purchases will be determined in large part by the Concorde's profitability and by the schedule of the U.S. program. Those airlines that expect to operate SST's on high density, competitive routes will want to have only enough Concorde on hand to remain minimally competitive on their primary routes. As long as the Concorde will be able to pay off the initial investment in three or four years, an airline will feel confident that it can be in a position to meet its commitments for the SST at the appropriate time. As mentioned earlier, airlines will have an added cushion against high initial operating costs during the introductory period from high passenger load factors.

The Russian TU-144

The assessment of potential impact of the TU-144 on the U.S. SST market is a hazardous task at best, because of the absence of any empirical basis on which to build a market estimate. As far as is known, none of the major flag airlines of western nations has ever purchased Russian-built commercial transports, although United-Arab Airlines now operates several Russian-built airplanes.

Because the size and characteristics of the TU-144 are close to those of the Concorde and because the production timing is apparently about the same as the Concorde, it would seem that any sales obtained by the Russians would come from the market estimated for the Concorde. There is the additional probability that sales will be made to a few airlines that would not obtain access to Moscow traffic unless they purchased TU-144's. Asian countries such as Japan, India, and Pakistan would fall in this category, as well as the Scandinavian countries.

⁵ The Economist, November 1968.

Russia appears to be interested now more than ever in allowing foreign airline flights over Russian territory. It is understood that Japan Air Lines may be granted Tokyo-Moscow operating rights by the purchase of Il-62 jets, which may also apply to the TU-144. Discussions have also been held between BOAC and Russia concerning a route from London to Tokyo via Moscow. The Soviets were reported to be "well disposed" toward granting this route, which would reduce the current 17½ hour trip to 9½ hours. Whether the Concorde would be allowed to fly this route is a question to be settled later, but it is conceivable that BOAC may be required to purchase the TU-144. There are recent reports that KLM is interested in the TU-144, perhaps to encourage a grant of a trans-Siberian route to Japan. A KLM spokesman said arguments against such purchases "are becoming less and less important in civil aviation."⁶ According to recent reports, the TU-144 is now in assembly line production and should be ready for sale in two years, or about 1971, well ahead of the Concorde.⁷

The non-European airlines in the Russian sphere of influence that might be potential customers for the TU-144 and have sufficiently large international operations are the following:

- Air-India
- East African Airways
- Garuda, Indonesia
- Japan Air Lines
- Pakistan International Airlines
- United-Arab-Misrair

Air-India and Japan Air Lines hold a total of five Concorde delivery positions. The principal user of the TU-144, of course, will be Aeroflot, the Russian carrier, which will be extending its operations more and more over international routes. Based on approximately 35 billion RPM's carried by Aeroflot in 1968, allocated 50 percent to SST's, and assuming a 13 percent annual growth to 1973, it is logical to expect the production of about 130 airplanes of the current design to satisfy Aeroflot's requirements, plus a few for sales outside Russia. If the TU-144 proves to be a successful airplane, a larger, second generation SST could be produced in the late 1970's and early 1980's, which could have a definite impact on the market for the U.S. SST, although not of such proportions to affect seriously the base market estimate of 500 airplanes.

The projection assumes operations within Russia without restrictions because of the sonic boom. Operations on international routes would naturally be subject to sonic boom and noise restrictions where imposed. The Russians have stated that one of the reasons for proceeding with the TU-144 is to save manpower by providing shorter trip times. It seems logical that if a country whose average salary is but a fraction of that of the Western World can justify supersonic transportation on that basis, the argument should be even more compelling in the west.

BALANCE OF PAYMENTS

Summary

The FAA Economic Feasibility Report included consideration of the effect of the SST on international balance of payments. The FAA concluded that SST aircraft sales during the period 1975 through 1990 would result in a favorable balance of payments impact of \$17 billion based on the conservative market of 500 aircraft. Because of the redesign of the SST and a lower estimated sales price of \$37 million, the balance of payments impact of the SST has been recomputed, indicating a favorable swing of \$15.8 billion in the aircraft trade account for the period through 1990 as shown in the table below. These data reflect a \$20 million Concorde sales price plus spare parts and a slightly different allocation of SST's and Concordes to U.S. and foreign airlines than previously estimated.

⁶ Aviation Daily, June 9, 1969.

⁷ Aviation Daily, May 22, 1969.

TABLE 11.—FAA ESTIMATE OF SST PROGRAM IMPACT ON BALANCE OF PAYMENTS

	Amount per aircraft (including spares) [millions]	Effect on balance of payments [billions]
Without SST: 300 Concordes Imported.....	\$23.2	-\$7.0
With SST:		
60 Concorde imported.....	23.2	-1.4
270 SST's exported.....	42.5	+11.5
Total.....		+10.1
Additional subsonic exports without SST.....		+17.1
Swing in balance of payments by 1990.....		-1.3
Total.....		+15.8

One consultant, Institute for Defense Analyses (IDA), concluded that the favorable impact of SST sales would be offset by the unfavorable effect of increased tourist spending induced by supersonic air travel. The FAA disagreed with IDA and obtained the advice of other consultants who also disagreed with the IDA conclusion. The reasons for the FAA opinion follow.

Foreign Travel not Dependent on U.S. SST

American tourists are going to travel abroad whether a U.S. SST is built or not. They are going to travel on subsonic jet transports as well as supersonic transports.

Concorde vs U.S. SST is the Issue

The issue so far as supersonic transports are concerned is simply whether they are going to ride on Concordes or on U.S. SST's. Therefore, it is the sale of SST aircraft that will be important to our balance of payments position.

Other Factors need to be Considered

If one is going to consider other accounts that will influence balance of payments, then *all* other accounts must be considered, but the IDA report chose to ignore all other accounts except tourist spending.

Other Consultants' Views

Other economic consultants disagreed with the IDA report in this matter and their views are a matter of record. These consultants were the following:

Dr. Gerard Colm, National Planning Association, Washington, D.C.

Dr. C. P. Kindelberger, Professor of Economics, Massachusetts Institute of Technology

Dr. Walter Lederer and Miss Evelyn Parrish, Office of Business Economics, U.S. Department of Commerce

APPENDIX A—BLOCK TIME BY TYPE OF AIRCRAFT

Distance bracket (statute miles)	[Hours]						
	Average distance	2707-300 (281B)	Concorde	747	DC-8-63	DC-10	707-320B
Domestic:							
700 to 1,000.....	829	1.01	1.26	1.75	2.00	1.87	2.00
1,000 to 1,500.....	1,177	1.21	1.55	2.33	2.74	2.45	2.65
1,500 to 2,000.....	1,728	1.53	1.95	3.26	3.87	3.38	3.65
2,000 plus.....	2,409	1.94	2.45	4.38	5.33	4.45	4.94
International:							
700 to 1,000.....	825	1.01	1.26	1.75	2.00	1.86	2.00
1,000 to 1,500.....	1,196	1.22	1.52	2.38	2.77	2.60	2.70
1,500 to 2,000.....	1,680	1.51	1.86	3.15	3.80	3.35	3.58
2,000 to 2,500.....	2,219	1.82	2.26	4.09	4.93	4.40	4.57
2,500 to 3,000.....	2,644	2.07	2.54	4.77	5.85	5.10	5.33
3,000 to 3,500.....	3,565	2.60	3.15	6.35	7.77	6.72	7.09
4,000 plus.....	4,623	4.54	5.42	8.20	9.96	8.60	9.04

¹ SST block time for flights over 4,000 miles computed from two flights of 2,300 and 2,323 miles plus a 45 minute fuel stop.

Source: Aircraft manufacturers.

APPENDIX B—AIRPLANE UTILIZATION BY DISTANCE

Distance bracket (statute miles)	Average distance	Airplane utilization (hours per year)	
		Subsonic airplane	Supersonic airplane
International:			
700 to 1,000.....	825	3,625	2,675
1,000 to 1,500.....	1,196	3,800	2,900
1,500 to 2,000.....	1,680	3,950	3,100
2,000 to 2,500.....	2,219	4,030	3,240
2,500 to 3,000.....	2,644	4,015	3,325
3,000 to 4,000.....	3,565	3,840	3,425
4,000 plus.....	4,623	3,600	3,250
Domestic:			
700 to 1,000.....	829	3,625	2,675
1,000 to 1,500.....	1,177	3,775	2,880
1,500 to 2,000.....	1,728	3,970	3,120
2,000 plus.....	2,409	4,030	3,275

Source: IDA.

PRELIMINARY AIRLINE DELIVERY SCHEDULE

AIRLINE	1978												1979												1980				
	A	N	J	J	A	S	O	H	D	J	F	M	A	M	J	J	A	S	O	H	D	J	F	M	A	M			
TWA	1	6	11	15		26		33		47	55		61													115	121		
PAA		4	7	16				27	32	43	50	54	61	67	65														
AZ			5	9		21													91	96	101								
AAL				8	13	20		31		40																			
EL AL				10	14																								
BOAC					17	24			41					66	74														
INA					18	22	29					56														118	124		
JAL					19	23	30			46		57																	
QEA						25	28	34			49		60	68															
AF								29	36		51		62		71	75													
All									37	42																			
DIF									38	44																			
DAL									39	45		43																	
T-A															70	79													
CPAL															72	78	82												
TAL																76	81												
DLH																77	85												
IBERIA																	84	88	92										
YLI																	90	95								119	125, 131		
PIA																	89	93											
EAL																		94		102						116	122, 128		
WORLD																			97	104									
UAL																			99	106						107	113		
CAL																				99	106					112	119		
AC																										110	115, 120		
AIRLIFT																										112	117, 123		
DELIVERIES	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
CUMULATIVE	1	6	11	16	21	26	31	36	41	46	51	56	61	66	71	76	81	86	91	96	101	105	110	114	118	123			

SOURCE: THE TOWERS COMPANY

Appendix C

Question 8: Would you comment on this recommendation [that a substantial interagency effort led by the Bureau of the Budget be undertaken to develop a government-wide program structure and consistent definitions of costs and outputs in areas where agency programs overlap], Mr. Mayo, and in particular comment on the suggested leadership of the Bureau of the Budget in such an interagency effort?

Answer: I would agree with the view that the Bureau needs to provide leadership in an interagency effort to establish a pattern of classification which permits analysis of programs across agency lines for purposes of resource allocation. The complexities involved make it clear also that this will require a long-range effort. The work thus far under a contract between the Bureau and McKinsey & Company has revealed a number of complexities that simply cannot be resolved quickly.

My agreement does not imply necessarily that we ought to establish a *separate* Government-wide program structure. Instead, we might concentrate on refining our budget functional classifications and the program special analyses to permit identification and comparison of programs with similar objectives or similar outputs even if they are carried out in different agencies. Under this approach, functional classifications would tie back to the appropriation structure, and effort would be directed toward getting agency program structures to fit within that pattern of classification. There are many problems involved, but this approach would avoid establishing other "program classifications" that differ from the major classifications we already employ in the budget.

Chairman PROXMIRE. Mr. Brown?

Representative BROWN. I have just one other area that I would like to get into very briefly and that is this question of review of programs, the evaluation of their effectiveness, their efficiency, and the general question of after the fact where they ought to be put in future priorities.

You have suggested that several sources of information are available for the evaluation of the Bureau of the Budget and also for the Congress, but the problem being the political emphasis that gets into this kind of evaluation

Would it be appropriate for all programs to be evaluated by some independent agency to study their efficiency and whether the job is being done in accordance with the objectives laid out by the Congress when the program was established and, maybe to study whether the job should be done at all by the Government or can better be done by some private agency or done in some other way?

This was the objective, as I understand it, of the second Hoover Commission, and the whole structure of Government was reviewed with the thought of finding areas that maybe we should get the Government out of and put into the private business area.

Now, it seems to me that that on a continuing basis ought to be the objective of somebody within the Government. Can we get an objective analysis of this sort of thing from the GAO, for instance, and can we do it with the present structure of the GAO or the present budget of the GAO.

Mr. MAYO. Elmer Staats, of course, could respond to this more substantively than I can, but the answer is, yes, that I think you can and should continue to ask the GAO to provide this sort of staff assistance to you. The Library of Congress can be of help in many areas in this same respect, and of course the staffs of your own committees are not blind to this possibility.

We in the Bureau of the Budget, as I mentioned earlier, are almost continuously trying to ferret out marginal programs. Just recently, we have asked each cabinet secretary for instance, to identify the least desirable, least important, the most marginal programs in his agency.

But I would be completely remiss in my responsibilities if I did not encourage you to seek outside help on this, whether through GAO or through responsible private organizations, of which there are many.

Representative BROWN. Well, I am really talking about a continuing and ongoing effort in this regard, somebody who does this as a regular charge of their responsibility in the whole operation of Government.

Now, it seems to me that an agency is not terribly well qualified to evaluate its own operation, because the temptation there is to say,

we did not give proper attention to this area. We did not do it very well; therefore, it ought to be eliminated. And maybe that is because of the priority they set but not the priority which either the administration or the Congress would like to see set on this particular problem under consideration. And, conversely, of course, the effort to defend and justify some activity that the agency would like to get into a little more aggressively which may have no relationship to what the administration or the Congress would like to see done.

So I do not know that the individual agency is the area, and I am not really sure that the Bureau of the Budget is the area because it seems to me the Bureau of the Budget in the nature of the bureaucratic government would want to defend its setting of priorities from previous years and say, well, we still think this is an important function which ought to be continued.

Isn't there some independent group, independent of political pressures, within Government and outside, bureaucratic pressures I guess I should say within Government and political pressures outside, that can do this job?

Mr. MAYO. Well, yes, it can be done but, I think, within certain limits.

May I make the general point here that elected officials are always somewhat reluctant to take the advice of nonelected officials when it comes to the impact of a study on decisionmaking itself. I don't apologize for this. I say that it is one of the facts of life.

The Bureau of the Budget does do some of this. This is the purpose of some of our program overview. Where as I say very frankly, we are experimenting with new and better measures. I know you want us to continue this, all of you. I think we have to nurture the baby and feed it a little better before we can expose it, so to speak, because it would be killed if it were to appear while it is still in the guesstimate stage. Once it gets out of the family, so to speak, it is subject to very broad misinterpretation and a great deal of proper criticism by people who don't understand its role and conclude that, if that is the way the Government makes decisions, heaven help us.

Representative BROWN. Well, I think you drifted away a little bit—

Chairman PROXMIER. Even if that is the way you make the decisions?

Representative BROWN (continuing). From my point. I will let you make the decisions, or let you make the recommendations, rather, with reference to what the budget ought to be, but I want to know whether the program which you recommended last year really was operating successfully, was functionally economic and efficient. And I am not sure I trust you or the agency involved in administering the program to make that evaluation. It seems to me that Congress bears a responsibility in this area—too—

Mr. MAYO. Oh, yes.

Representative BROWN (continuing). Because as we look at some of the legislative proposals that the Congress has enacted and the purposes spelled out in these pieces of legislation, our effort is more literary than specific. We talk about vast objectives but nobody says that we want to get so many people employed in the underprivileged group,

or we do not get down to numbers and costs and cases very much. And somebody it seems to me ought to do that, and it ought to be done in as sanitary and objective a way as possible.

Mr. MAYO. I agree with this. And if the Congress in its wisdom does not feel that GAO could do this, maybe—

Representative BROWN. Well, what do you feel? Do you feel that GAO has that possibility: (a) the knowledge, the capacity, and (b) the budget to do it, or is it not independent enough to do it?

Mr. MAYO. Well, I think—I find it difficult to respond specifically to the degree of their independence. You would probably be more sensitive to that than I am. They are the creature of the Congress, and I would hope that they could do this sort of thing.

On the budget side, I am not competent to say whether their budget is adequate to take on such a task or not. I have seen many good studies coming out of the GAO. Some committees in Congress have shown some interest in this direction, not just trying to find out what analysis the administration used but developing its own independent evaluation. Now, this can be expensive in time, staff, and money. We quite appreciate that.

Representative BROWN. Well, yes, I would echo that. I would think that the Congress—Senator Percy suggested that the Bureau of the Budget, the GAO and—what was the other agency he mentioned—ought to be beefed up in their budgeting, their resources. I am inclined to think that the congressional committee staffs ought to be beefed up a little, too, so that they can really look back at the programs that have been enacted in the past and find out whether they are any darn good at all or not. There are times when I think we ought to give past programs some consideration; maybe we ought to take a session every 10 years and review everything that we passed previously and winnow out the stuff that is no longer productive, and then start over on new programs in the other four sessions of the Congress in that decade.

Mr. MAYO. I would like to see you do it every year.

Representative BROWN. But it is not done. It just is not done. It is not done by the substantive committees effectively. It is by some. It is not done to the degree it ought to be done and I think that perhaps because we spend our time looking ahead to new problems and not back at the old problems.

Chairman PROXMIRE. I would like to thank you very much, Mr. Mayo, and I would like to conclude by reaffirming my initial charge that you get much more deeply into the military area than you have in the past, and I think it is most important that you do it.

And second, that you expose that so-called baby—economic analysis. And I think it will grow and thrive and receive more acceptance and I think it will benefit from the debate and discussion once you do get it exposed more.

And third, I would hope that where you do have this kind of a situation where economic analysis does contradict the elected official, such as in the supersonic transport, that we don't just discard economic analysis and rely on vision. Now when economic analysis does not support you, it contradicts you then you go to vision. Maybe you should go to vision, but if you go to vision we ought to know that is

what you are doing and we ought to have the economic analysis available. On the SST we were able to get it, but I am not sure that we always do.

At any rate, you are an excellent Budget Director, a very able man, and I did not mean in the nature of my questioning, which sometimes was adverse, to in any way indicate anything but the highest regard and respect for you and your ability and the job you are doing in the toughest job I think in Government.

Mr. MAyo. Thank you, sir.

Chairman PROxmIRE. Thank you very much.

The subcommittee will stand in recess until Tuesday at 10:30 when we will have an explicit look at the PPB system with Dr. Jack Carlson, Assistant Director of the Bureau of the Budget who is here today, and Dr. William Kaufmann of The Brookings Institution.

(Whereupon, at 12:40 p.m., the committee recessed, to reconvene on Tuesday, September 30, 1969, at 10:30 a.m.)

ECONOMIC ANALYSIS AND THE EFFICIENCY OF GOVERNMENT

TUESDAY, SEPTEMBER 30, 1969

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON ECONOMY IN GOVERNMENT
OF THE JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The Subcommittee on Economy in Government met at 10:30 a.m., pursuant to recess, in room 5-407, the Capitol, Hon. William Proxmire (chairman of the subcommittee) presiding.

Present: Senator Proxmire and Representative Conable.

Also present: Robert H. Haveman and Richard F. Kaufman, economists; and George D. Krumbhaar, minority economist.

Chairman PROXMIRE. The subcommittee will come to order.

During the course of these hearings on economic analysis and the efficiency of Government, several important things have occurred time after time.

We have been told by several witnesses that those Government programs which we commonly think of as aiding the lower and middle-income groups often spread their benefits among the rich and the well to do.

We have been told that because of a neglect of incentives and penalties in the planning of programs, Federal Government efforts often elicit behavior which undermine the purpose of the program.

We have been told that because the Government has failed to make use of beneficiary charges and has, instead, given away public outputs at a zero price, inefficient and ineffective programs become entrenched and difficult to alter.

Perhaps most important, we have been told that the comprehensive application of economic analysis to policy decision can play a major role in increasing the efficiency and responsiveness of Government.

Today, we are going to focus on the role of economic analysis in Federal Government decisionmaking.

Our first witness, Dr. Jack Carlson, will discuss the progress of the economic branch in implementing the economic analysis through the PPB system.

Then, Dr. William Kaufmann will present a critique of the PPB system and discuss the need of Congress to gain access to policy analysis and program evaluation.

Dr. Carlson, as I mentioned, will present testimony on the planning-programing-budgeting system and the steps that are being taken to

make it more comprehensive and responsive to the needs of decision makers in both the executive branch and the Congress.

Dr. Carlson received his B.A. degree from the University of Utah in 1955 and a master of business administration degree from the same institution in 1957. In 1963, he received his Ph. D. in economics from Harvard University.

Dr. Carlson served as associate professor of economics at the Air Force Academy from 1959 to 1964 and from 1964 to 1966 was an assistant for special analysis in the Office of the Secretary of the Air Force.

Prior to joining the Bureau of the Budget in 1968, he was on the senior staff of the Council of Economic Advisers. Currently, he is Assistant Director for Program Evaluation at the Bureau of the Budget and, therefore, of course, is in an ideal position to give us advice and suggestions in this area.

Dr. Carlson, you may go right ahead.

STATEMENT OF JACK W. CARLSON, ASSISTANT DIRECTOR FOR PROGRAM EVALUATION, BUREAU OF THE BUDGET

Mr. CARLSON. Mr. chairman and members of the subcommittee.

I am pleased to appear before this subcommittee to discuss economic analysis and the efficiency of Government. Since the letter requesting my participation indicated that the subcommittee wishes me to focus on the status of the PPB system and the conduct of policy analysis, I will concentrate my remarks on this limited subject. The subcommittee has already had the benefit of Budget Director Robert Mayo's testimony on broader policy issues and on increasing the availability of policy analyses to the Congress.

The Bureau of the Budget was pleased to contribute to the subcommittee's extensive compendium, "The Analysis and Evaluation of Public Expenditures: The PPB System."¹ Our paper in volume 2 reflects our assessment of the PPB system as of the first of this year. It also sketched the directions in which we planned to go during 1969. I do not intend to duplicate that paper, but instead will simply update it.

As indicated in the compendium paper, we planned this year to concentrate on improvements in substance in contrast to changes in procedures. Our object was, and is, to increase the amount and quality of program evaluation and analysis produced and used in policy planning.

MAJOR POLICY ANALYSIS

Identification and analysis of major policy issues has been stressed during the past 9 months. At the outset, we established stringent ground rules on the selection of policy issues, designed to insure that Federal analytic resources are used most productively. An issue can

¹ A compendium of papers submitted to the Subcommittee on Economy in Government of the Joint Economic Committee, 1969. In three volumes; available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.

qualify as a major policy issue if the results of analysis might have "a budgetary impact of \$50-million or more in fiscal year 1971 and/or \$500 million during the next 5 years or an equivalent social impact." Eighty-five major policy issues were subsequently identified in general conformity with this principle. And we have tried to insure that these issues are evaluated. In the Bureau of the Budget, at least one person was assigned to each issue for liaison and to offer assistance to the agency or agencies conducting the analyses.

About the same number of other less important issues were identified for analysis if time and resources permitted. Also, still other issues were identified by agencies for their internal purposes, without any requirement of coordination or consultation with the executive offices.

The major policy issues and other issues were developed cooperatively by the affected agencies and the executive offices to a greater extent than occurred in the past.

Because the change in administration occurred on January 20, the issues for the fiscal year 1971 planning and budgeting cycle were not identified for analysis until March for most agencies and April for others. And some additional issues have been identified during the summer and fall.

In a letter to this subcommittee dated August 14, 1969, the Acting Budget Director listed the topics of 70 major policy issues which were not classified; for your convenience, the list is reproduced in attachment 1. There were a few errors in the original list; these have been corrected here.

(Attachment 1 follows:)

MAJOR POLICY ISSUES—PARTIAL LIST, FISCAL YEAR 1971 PLANNING AND BUDGETING CYCLE (CALENDAR YEAR 1969)

1. Commodity program decisions on price supports and acreage diversion.
2. Alternative Federal policies and programs designed to stabilize timber prices.
3. Evaluation of the status of current Federal direct loans to the rural electric and telephone programs.
4. Study of procedures to remove interest rate ceiling in Farmers Home Administration loan programs.
5. Improvement of the U.S. trade surplus.
6. Area and regional economic development program rationalization.
7. Construction of merchant ships abroad.
8. Federal food assistance programs.
9. Increasing the supply of physicians.
10. Health services research and development in the Department of Health, Education, and Welfare.
11. Community mental health services.
12. Health insurance and reforms in Medicaid.
13. Plan for experimental education programs.
14. Analysis of higher education student aid proposals.
15. Evaluation plan for education programs.
16. Extent and nature of financial crisis in institutions of higher education.
17. Impact analysis and improved data system for elementary and secondary education.
18. Relationship of Social Security benefit system to current prices and earnings.

19. Effectiveness of the social services provided to public assistance recipients.
20. Utilization of the minimum benefit under Social Security to support income of needy beneficiaries.
21. Short-term assessment and long-term evaluation plan for the WIN program.
22. Impact of new neighborhood development program on urban renewal program and on the budget.
23. Evaluation of water and sewer programs relative to stated or implied objectives.
24. Establishing priorities within and among the Federal agency land acquisition programs financed through the Land and Water Conservation Fund.
25. Analysis of reclamation construction policy.
26. Selection of reclamation new starts.
27. Effects of Federal reclamation fees on private provision of facilities.
28. Alternatives for utilizing Naval Petroleum Reserve No. 4.
29. Review of helium program.
30. Alternatives for more intensive use of plant and other fixed resources within Bureau of Indian Affairs school system.
31. Central Valley program special study.
32. Review of coal demonstration plant program and other research activities.
33. Alternative ways of meeting water demands.
34. Excess lands policy.
35. Impact of budget constraints on water resource project construction costs.
36. Relation of inputs and outputs in Federal crime reduction.
37. Crime statistics and information.
38. Configuration of manpower programs at different levels of economic activity.
39. Transition of youth from institutions to work.
40. Design and strategy for research, evaluation, and data collection for managing manpower programs.
41. Facilities planning and pending construction.
42. Internal management of postal system—potential for decentralization of authority.
43. Restructuring of preferential mail service and smoothing of postal operations workload peaks.
44. Role of postal source data system in fulfilling operational and fiscal management information needs.
45. Federal involvement in airports
46. Post-interstate highway program.
47. Federal role in urban mass transportation.
48. State and community highway safety grant program priorities.
49. Level of IRS audit coverage.
50. Standards of protection for Presidential candidates.
51. Future or uranium enrichment enterprise.
52. Costs and benefits of R&D on liquid metal fast breeder reactor.
53. International cost-sharing in high energy physics.
54. Optimum method of supply (for items in the Federal Supply System).
55. Financing of GSA real property activities.
56. Future requirements of the Advanced Records System.
57. Auto replacement policy.
58. Scope and rate of manned lunar exploration.
59. Development of a future space station.
60. Grand tour mission.
61. Future level of NSF's direct training programs in the light of the reduced rate of expansion of Federal research.
62. Graduate science development programs under reduced Government support of research.
63. Strategy for NSF's applied research program.
64. Priorities in astronomy.
65. Plan for organization and operation for OEO research and development effort.

66. English language broadcasting level and costs.
67. Impact of Medicare and Medicaid on medical care programs.
68. Veterans and survivors compensation: alternatives to achieve better goals.
69. Availability of mortgage financing for veterans.
70. Contingency reserves for health insurance.

Mr. CARLSON. The analyses of these and other policy issues have been in progress since early this year. I am pleased to report that analysis of two-thirds of the major issues and two-thirds of other issues appears to be progressing satisfactorily; analysis of the remaining one-third of the issues is progressing more slowly than anticipated or is no longer relevant. And, importantly, the results of the analyses have been and are being fed into the decisionmaking process. In the great majority of cases the analysis is relevant to the needs of decisionmakers. Consequently, decisionmakers in the areas where policy analysis is occurring will have more pertinent information than they have had before. It is interesting to note that most of the areas of concern to the subcommittee in this set of hearings are covered by some of the issues which are being evaluated.

The increase in policy analysis has not been uniform over all areas, however. Some areas which have not performed policy analysis in the past did so this year. Other areas with a long tradition of policy analysis performed less well.

Our intention is to place even greater emphasis on better identification and analysis of major policy issues during the coming year. As Director Mayo stated to this subcommittee:

The Bureau's firm commitment to systematic program evaluation is clear evidence of its determination to conduct, and to insist that other agencies conduct, substantive economic analyses of major problems of resource allocation in the Federal sector.

We have already begun to identify and analyze major policy issues for the fiscal year 1972 planning and budgeting cycle.

EXPERIMENTAL PROJECTS

In your invitation, you asked for progress reports on the program overview project; public expenditure model; regional expenditure analysis; and the social achievement indicators project. These projects are all aimed at improving program evaluation and planning. Each one is still labeled experimental and will be for at least the next 12 months, and possible longer.

I reported to this subcommittee, during your hearings on benefit estimation, on May 12, 1969, on the concept and format for the program overview project. For your convenience, I have reproduced in attachment 2 the format which was discussed at those hearings.¹

(Attachment 2 follows:)

¹ Statement of Jack W. Carlson, Assistant Director for Program Evaluation, Bureau of the Budget, before the Subcommittee on Economy in Government, Joint Economic Committee, on guidelines for estimating the benefits of public expenditures, May 12, 1969.

MANPOWER PROGRAM DATA ¹

Program (agency)	Participant unit cost										Benefit values				
	NOA ² 1970 estimate (millions)	Expenses ² 1970 estimate (millions)	Built-in growth to 1973 ³ (millions)	Man- years 1970 estimate	Average duration (weeks)	Allowance and sub- sistence	Other	Total Govern- ment ⁴	Private ⁵	Total	Trainees' average annual wage gain ⁶	Add to net national income ⁷	Benefit- cost ratio ⁸	Income transfer ⁹	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
On-the-job training.....	\$596	\$398	-----	180	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
MDTA Regular (Labor).....	64	66	-----	37	20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
JOBS (Labor/OEO).....	438	256	-----	89	24	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
JOPS (Labor).....	50	33	-----	11	24	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Vet's OJT (VAO).....	40	40	-----	42	21	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Indian OJT (Interior).....	4	4	-----	1	15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Institutional training.....	440	455	-----	90	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
MDTA.....	229	240	\$240	60	18	\$780	\$650	\$1,430	(((\$170))	\$1,600	(((\$700))	(((\$3,097))	((2.9)	(\$780)	
Job Corps.....	180	188	-----	22	24	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Indian training.....	31	27	-----	8	36	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Work support.....	337	334	174										
NYC Out-of-school (Labor).....	103	102	102	34	20	825	275	1,100	((0)	1,100	((190)	((775)	((1.7) (825)
NYC in-school (Labor).....	62	62		73	(28)								
NYC summer (Labor).....	121	120		53	(8)								
Operation Mainstream (Labor).....	41	41		10	34								
Foster grandparents (HEW).....	9	9		4	42								
Comprehensive.....	896	837	682										
Voc. rehab. (HEW).....	500	460	497	53									
Vet's voc. rehab. (VA).....	38	38	12	24									
Work incentive (HEW).....	130	148	135	(36)									
CEP (Labor/OEO).....	209	178	35	(16)									
Title V MDTA.....	20	13	3	18									
Labor market adjustment.....	459	459											
Employment Service (Labor).....	373	373											
CAP Manpower.....	17	16											
Equal Empl. Oppor. (EEOC).....	16	15											
Project Transition.....	18	18											
Indian mobility.....	8	10											
Project 100,000.....	27	27											
Research and development.....	23	24											
Other, incl. overall Admin.....	76	75											
Total.....	2,828	2,582	1,126										
National distribution.....													

MANPOWER PROGRAM DATA I—Continued

Program (agency)	Enrollee characteristics (percent)															Redirection potential ¹²
	Household income ¹⁰			Age 21 to			Education			Race		Location ¹¹				
	\$3,500 to			21	55	55+	—8	11	12+	White	Non-white	500K		Other		
	—\$3,500	\$10,000	\$10,000+									CC	Sub	Urban	Rural	
(1)	(16)			(17)			(18)			(19)		(20)				(21)
On-the-job training.....																
MDTA Regular (Labor).....																
JOBS (Labor/OEO).....																
JOPS (Labor).....																
Vet's OJT (VAO).....																
Indian OJT (Interior).....																
Institutional training.....																
MDTA.....	65	35	0	40	58	2	11	53	36	50	50	46	26	18	10	5
Job Corps.....																
Indian training.....																
Work support.....																
NYC Out-of-school (Labor).....	97	3	0	100	0	0	12	81	7	50	50	28	8	16	43	7
NYC in-school (Labor).....																
NYC summer (Labor).....																
Operation Mainstream (Labor).....																
Foster grandparents (HEW).....																

Comprehensive.....													
Voc. rehab. (HEW).....													
Vet's voc. rehab. (VA).....													
Work incentive (HEW).....													
GEP (Labor/OEO).....													
Title V MDTA.....													
Labor market adjustment.....													
Employment Service (Labor).....													
CAP Manpower.....													
Equal Empl. Oppor. (EEOC).....													
Project Transition.....													
Indian mobility.....													
Project 100,000.....													
Research and development.....													
Other, incl. overall Admin.....													
Total.....													
National distribution.....	21	49	30	41	41	18	8	8	12	22	21	27	30

¹ Parentheses indicate estimates are tenuous. Double parentheses indicate estimates have high potential range of error.
² Contained in revised 1970 budget request as of May 9, 1969.
³ Expenditure level in fiscal year 1973 necessary to fund program on an annual basis under current program levels and policies.
⁴ Includes Federal, State, and local.
⁵ Usually measures enrollees' foregone earnings net of allowances; for on-the-job training, measures employers' costs.
⁶ Estimated value of average increase in annual earnings as a result of participating in the program.
⁷ Benefits to net national income is net value of benefits; specifically, (a) discounted value of future earnings increase plus (b) value of work performed minus (c) economic costs.

⁸ B/C denotes efficiency benefit/cost ratio, specifically (a) present discounted value of enrollees' annual wage gain (discounted over 10 years at 10 percent) plus (b) value of work performed divided by (c) social costs, including enrollees' foregone earnings.
⁹ Value of cash or in-kind consumption items per participant while engaged in program.
¹⁰ \$3,500 denotes in poverty category; \$3,500 to \$10,000 denotes family income between poverty and \$10,000.
¹¹ 500K CC denotes central city of SMSA with 500,000 population or more; 500K Sub denotes corresponding suburbs; other urban denotes all other urban areas; rural denotes all areas with less than 2,500 population.
¹² Index of potential for redirection of program to specified target groups on scale of 1 to 10. Programs with low potential for redirection (formula grant programs) would be rated low, while those with high potential (operated directly by Federal Government) would receive high rating.

Mr. CARLSON. Since then, we have attempted to gather data for each functional area in the Federal Government—education, manpower, health, housing and community development, income security, natural resources, transportation, law enforcement, research and development, international development, international security, and general government. We were able to make crude estimates and judgments in many areas but, in other areas, we found virtually no reasonable estimates of the benefits and beneficiaries. An example is law enforcement where we desperately need more program evaluation information. The program overview project was intended to do two things: Summarize what we know and do not know about costs, outputs, benefits, and beneficiaries of all Federal programs. It certainly revealed both, especially our ignorance.

Our intent for the coming year, as indicated by Budget Director Mayo in his testimony last Thursday, is to move as much as possible from "guesstimates" and soft estimates to more reliable information. Also, we intend to bring the agencies into the effort, so that we get the benefit of their experience and expertise. To the extent that the data are useful, we will experiment with using it in broad priority analysis, especially for the spring planning review next year.

An example of a limited use of the health program overview is shown in attachment 3, a summary of programs related to the Hill-Burton program.

(Attachment 3 follows:)

COMPARISON OF ALTERNATIVES TO THE HILL-BURTON PROGRAM

Hill-Burton program and alternatives	Estimated expenditures fiscal year 1970 (millions)	Benefit-cost ratio ¹	Characteristics of beneficiaries											
			Age			Income			Race			Location—		
			—21	21–55	55+	—4,000	4,000–9,999	10,000+	Negroes	White	cc 250,000+	Suburbs of cc 250,000+	Other	
												Urban	Rural	
1. Hill-Burton hospitals.....	\$145.3	0.6	20	46	34	38	48	14	12	87	19	7	68	6
2. Neighborhood health facilities.....	84.8	^{2,3} (1.4)	60	23	17	95	5	0	65	20	45	15	20	20
3. Increase in physicians.....	133.0	1.9	35	42	23	24	50	27	8	91	24	23	27	26
4. Family planning.....	143.0	10.0	59	41	0	90	10	0	35	60	29	15	28	28
5. Maternal and infant care centers (Children's Bureau) ⁴	62.8	^{3,4} (.8)	43	57	0	100	0	0	60	35	29	15	28	28
6. Enrichment of foods commonly eaten by low-income groups.....	(⁵)	⁶ (8.0)	44	30	26	90	10	0	32	68	17	9	36	38
National distribution.....			41	41	18	21	49	30	11	88	22	21	27	30

¹ Parentheses indicate preliminary nature of estimates.

² Generally speaking, neighborhood health facilities have a benefit-cost ratio greater than unity because of the potential for preventive care after infancy.

³ A comparison of benefit-cost ratios between neighborhood and health centers run by OEO and HSMHA (line 2) and Children's Bureau (line 5) is not warranted.

⁴ This estimated benefit-cost ratio should not be interpreted as meaning that centers are not

socially efficient insofar as a range of health services is delivered. It means rather that care confined to prenatal and postpartum services dispensed on demand is probably not socially effective. The same caveat would apply to similar services given at neighborhood health centers.

⁵ Enrichment of foods can be undertaken by industry at only a negligible cost to the Government.
⁶ Presumes resources of the poor augmented by \$1.5B so that they can purchase an added quantity of food.

Mr. CARLSON. Also, the summary Program Overview for research and development programs was provided the Subcommittee on Science, Research, and Development of the House Committee on Science and Astronautics 3 weeks ago.

The regional expenditure analysis is a project designed to show the geographical distribution of Federal program expenditures with key economic and demographic characteristics. The key inputs are Federal expenditures by functional area—that is, education, manpower, health, et cetera—per capita personal income, net population change, and total construction activity. The lowest geographical unit for all data is the county and the analysis was initially done with Federal expenditure data for fiscal year 1968.

Our intent is to develop the analysis further and to move from the experimental to the operational. It should be helpful for basic analysis of such policy issues as alternative approaches to national development expenditures.

The public expenditure model is another experimental project intended to improve broad priority analysis. It takes as its input the Program Overview and the regional expenditure analysis and it uses the linear-programming technique. The intent is to show total benefits and distribution of these benefits by selected characteristics, so that with given alternative priorities we can identify those programs that best achieve those priorities. We have made some experimental runs and the approach shows promise. But it inevitably suffers from the weaknesses in the data input of the Program Overview and regional expenditure analysis, and, speaking professionally, we have a long way to go before we can be sure of its usefulness for decisionmaking. Our plan is to continue developing it during the next 9 months so that it can be of assistance during the spring planning review in 1970.

The Social Achievement Indicators project is progressing slowly. We have yet to complete a prototype. The intent is to select those statistical series which reflect social well-being and relate them to categories of public expenditures; they are to be used in connection with the Program Overviews. For example, morbidity, mortality, and disease incidence would be shown in relationship to public expenditures for health. Hopefully, changes in allocation of and aggregate health expenditures could then be related to changes in the statistical series showing well-being.

As anyone who has attempted to work with social indicators knows, our information is very, very sketchy. We plan to experiment further with this project during the months ahead, but results will be slow in coming. Because of the great need to improve the basic data, the Bureau has initiated a major effort to improve the statistical series on social well-being. An interagency group has been created, and its work should result in improvement in social statistics that matches the development of economic series.

IMPROVEMENT IN CALCULATING BENEFITS

Your letter also asked about our work in developing guidelines for calculating the benefits of Government expenditures. The answer is

that we are making progress in this area. This is evident from the improvement of estimating benefits that is occurring in the evaluation of major policy issues and the Program Overview project.

As a basic guideline we have and are stressing that the calculations of both benefits and costs must include costs and benefits to the whole society—not just to the Federal Government. Before the Senate Public Works Committee on September 4, we testified on the importance of looking at the total cost of public activities in deciding on public actions, not at just the partial costs primarily associated with the cash flow of governmental projects; we shall continue to stress this.

The Bureau of the Budget also published circular No. A-94, which provides guidelines for discounting benefits and costs and some guidelines for estimating benefits. First, it states that discounting must be done. Second, it establishes a rate no lower than the current yield on Government bonds, except for a provision limiting the rate of change in the discount rate when the yield fluctuates widely. Third, it refers to a study to measure a preferred discount rate calculated on the basis of loss to the private sector from a public sector investment. That study is now in first draft and hopefully will be completed before the end of the year. Fourth, the circular states that relative levels of risk that a benefit or cost will occur should be calculated explicitly in the calculation of benefits and of costs.

Circular No. A-95 was a major step forward. As to the advisability of a circular on estimating benefits, as recommended by several members of this subcommittee last spring, we have not fully determined exactly what would be useful. Generally, I favor establishing guidelines in this area, but I am not yet sure how far we should go. We plan to resolve this issue in the months ahead.

NEXT STEPS

We plan to make additional improvements in the planning-programming-budget system during the next few weeks. We have had the benefit of extensive evaluations of the PPB system. These include:

The three-volume compendium of this subcommittee;* the hearings of this subcommittee on benefit estimating, economic analysis and the efficiency of government, hearings of other committees of the Congress, Budget Bureau studies of the processes and outputs of PPB system, the Budget Bureau sponsored study of informational needs, other evaluations by members of the academic community and other parts of the private sector.

In addition, earlier this month, the chief program evaluation officers from each agency met for a 3-day conference to suggest improvements for the program evaluation and planning and the PPB system. The conference was very productive and the recommended courses of action point in the direction of our doing a much better job next year.

As you may have surmised, we think that we are making good progress on furthering the use of analysis in the Federal Govern-

*"The Analysis and Evaluation of Public Expenditures: The PPB System," a three-volume compendium published by the Subcommittee on Economy in Government, Joint Economic Committee, U.S. Congress, June 1968.

ment, and that this will continue. As Director Mayo said in a recent speech:

I firmly support the objectives of the PPB System. Indeed, it is very difficult for me to see how anyone would be opposed to the objectives inherent in that system. No one can seriously contend we do not want to know what our programs are doing now or will do in the future under present or alternative policies. No one would suggest that we adopt a know-nothing attitude toward the use of organized knowledge.

But, as this subcommittee is fully aware, we have a long way to go.

I should emphasize, however, that analysis does not make decisions; it only helps predict the range of future results of programs and measure the achievements of existing programs in terms of their objectives. Judgment must determine which objectives shall be pursued and whether the gain in terms of the chosen objectives is great enough to justify the costs. Your recent hearings on benefit estimation made this point very clear. However, analysis properly used sharpens the bargaining that is an essential ingredient in the decisionmaking process when participants in the process have different value judgments. It can also help eliminate obviously inefficient or ineffective choices. It has and should have an important place as a tool of Government decisionmaking.

This concludes my prepared comments, and I will be pleased to answer the questions of the subcommittee.

Chairman PROXMIRE. Thank you, Dr. Carlson.

(Supplemental information, subsequently supplied by Mr. Carlson, appears on p. 749 at the conclusion of today's proceedings.)

Chairman PROXMIRE. Dr. William Kaufmann will present a critique of the PPB system and discuss the need for Congress to establish an analytic capacity of its own.

Dr. Kaufmann received his B.A., M.A., and Ph. D. degrees from Yale University. From 1948 to 1956 he taught government at Yale and history at Princeton University. From 1956 to 1961, he served as senior staff and head of the social science department at the Rand Corp. Since 1961, he has been professor of political science at MIT, during which time he also served as consultant to the Department of Defense. Currently, he is on leave from MIT as senior fellow and is at The Brookings Institution for the purpose of establishing a program of defense analysis.

He has written extensively on the defense-decision process and authored an important book entitled "The McNamara Strategy."

Dr. Kaufmann, we are delighted to have you. Go right ahead.

STATEMENT OF WILLIAM W. KAUFMANN, THE BROOKINGS INSTITUTION; ACCOMPANIED BY DAVID MUNDEL AND DR. JOHN STEINBRUNER

Mr. KAUFMANN. Mr. Chairman and members of the subcommittee, I am honored, as always, to appear here to discuss the question of efficiency in Government and the use of economic analysis toward that end.

My colleagues, Mr. David Mundel and Dr. John Steinbruner, have prepared an extended statement for the record (p. 758); it discusses

some of the current problems of Government, the evolution of the planning-programing-budgeting system, and various ways in which the effectiveness and efficiency of PPB might be improved. Although this statement grew out of a series of meetings held in Cambridge, responsibility for its contents is ours alone.

It is our view that the PPB system is a beneficial institution, and we will continue to investigate ways of both focusing it more sharply on central issues of public policy and giving it a greater role in decisionmaking. In this connection, we believe that the Congress can not only profit from but also contribute to the development of the analyses and programing techniques that are at the heart of PPB. Since my time is short, I will concentrate the remainder of this statement on what systematic analysis and programing can do for the Congress and how these services might be obtained.

Systematic analysis concerns itself centrally with questions of supply and demand, and in the past has dealt very largely in areas where there is no marketplace. Accordingly, one of its functions is to provide intelligence about demand, whether it is the military capability of potentially hostile nations or the number of people near or at the level of starvation in the United States. Another function is the design of effective and efficient programs to supply these demands. Performance of the two functions can contribute to the development of legislation by the Congress, and the evaluation of legislation submitted by the executive branch.

By the same token, the products of systematic analysis can be of assistance in the process of authorization and appropriation. They can suggest alternative programs, evaluate existing programs, and provide the basis for questions about proposals of the executive branch.

Programing techniques, in conjunction with systematic analysis, can show the relationships between programs and help the Congress to avoid a piecemeal approach to authorizations and appropriations. These techniques can also display the future financial and other implications of decisions made during the current fiscal year. I feel confident, for example, that the recent debate over the defense authorization bill in the Senate would have profited from a display of the combined out-year financial implications of proceeding with such programs as Safeguard, AMSA, the nuclear attack carriers, the F-14, the C-5A, and the main battle tank.

While the debate on the defense authorization bill may have demonstrated the value of systematic analysis and the need for programatic techniques, I would judge that it has not resolved the problem of how the Congress is to obtain these services on a regular and sustained basis. One source is the executive branch, but I doubt that PPB can survive in the executive and serve the Congress as well. My own view is that the Congress must develop its own sources of supply. To the extent that it does so, I suspect that it will both stimulate and see more of the studies by the staffs within the executive branch.

I realize that consideration is already being given to charging the Comptroller General and the General Accounting Office with an analytical responsibility. Whatever comes of that review, I believe that the Congress must take other steps as well. Two steps, in particular,

are needed if the necessary analyses and analysts are to be forthcoming. Both are long term in nature, but they could have short-run pay-offs.

The first step is the creation of a number of policy research centers. Where they should be located is a question deserving further investigation. However, I must confess that, thus far, our universities—while providing the superficially logical location for such centers—have not shown any particular aptitude for producing or managing this kind of research. The reasons for this deficiency are numerous.

Good systematic analyses tend to be interdisciplinary in character, whereas the rewards within a university go to those who show individual creativity within a discipline. Systematic analyses are concerned with programs, evaluations of programs, and alternatives to or perturbations of existing programs. They give the appearance of applied research, although important theories may grow out of them. Faculty members, particularly in the softer social sciences, prefer for the most part to work on what they call basic research. Moreover, to the extent that members of the faculty develop the capability to investigate issues of public policy on a systematic and operational basis, they are inclined to do their work off the campus by means of contracts and consultantships. The universities usually do not have the incentive systems to keep these faculty members at home.

The Congress can help to change some of these conditions, and in my view, it should not hesitate to do so, even if university campuses prove to be the preferred location for policy research centers. Three measures, in particular, warrant consideration.

While the policy centers would probably have to be fairly specialized, it might well be desirable to have more than one center in each major subject area in order to stimulate some competition. Universities could be encouraged to permit the centers to pay consulting fees to faculty members in order to make such work competitive with outside offers. And, at the minimum, the Congress might set as a condition to the funding of a center, that it relate its research to major budgetary issues in the current or impending fiscal year and publish an annual report containing both its recommendations regarding these issues and the analyses which support them. Without some such condition, the research is likely to become nonoperational in character and the staffs will be tempted to resort to what has been termed the tradition of cottage industry.

The second step, which is closely related to the first, is the institution of programs for the recruitment and training of policy analysts. We are already short of well-trained analysts; many areas of policy remain virtually untouched; and at the same time, the demand for good analysts seems to be on the rise. The universities have begun to respond to this demand in some small measure, and the executive branch has sponsored midcareer training programs in systematic analysis originally at eight universities. The number fell to four, and I understand it is going back up to five. But a great deal remains to be done at both the undergraduate and graduate levels of education. Here again, the Congress could provide the incentives for the universities and other institutions to undertake the necessary programs.

What is needed at the undergraduate level is not so much a new department as a program of exposure and recruitment. Currently,

students who become concerned about public policy are inclined to turn to sociology or political science to satisfy their interests. This is usually a mistake. They should be encouraged to major in one of the harder disciplines such as economics, or some part of science and engineering, and, during their undergraduate years, should be offered elective courses on issues of public policy. This type of exposure should suffice to whet their intellectual appetites without taking them away from the challenges of the more serious of the traditional disciplines.

It is at the graduate level that the more specialized training should be undertaken. Here, degree programs in systematic analysis should be offered, and two types of experience made available. The first would be further classroom work in the substance of public policy, political institutions, and the various techniques of systematic analysis. The second and more important experience would require involvement in the equivalent of a laboratory. To the extent that we now train students for the analysis of public policy, we do so largely by way of the classroom rather than by having them try to solve problems. Gradual and carefully supervised introduction to increasingly complex issues of public policy—the actual practice of the arts of systematic analysis—is what is needed most of all. It would be worth considering, in this connection, whether some of the current research corporations should be given a major role in this type of graduate training since they are not as encumbered as the universities by the boundaries of the traditional disciplines.

While these laboratories should have graduate training as their primary function, they should also undertake policy-oriented research so as to hold faculty and involve the more advanced students. To this extent the laboratories could be part of the policy research centers. However, it might be desirable to give them greater latitude in the selection of their research than I have suggested for the centers. In both cases, however, devices must be found to maintain the focus on current and forthcoming issues of public policy. Detailed congressional direction and supervision is probably not the answer. Regular reports and a periodic review of programs by qualified boards may serve part of the purpose.

Although I am persuaded of the necessity for these steps. I realize that they are not likely to be taken without further investigation. Therefore, I would respectfully suggest the following.

First, the creation of the commission along the lines proposed by Mr. Zwick in his testimony before you on September 19, but with the additional function of determining the need and place for outside research and improved training.

Second, a review and analysis of the Report of the Special Commission on the Social Sciences of the National Science Board "Knowledge Into Action: Improving the Nation's Use of the Social Sciences," issued by the National Science Foundation, 1969. The Commission recommends the following:

\$10 million should be appropriated in fiscal year 1970 to the National Science Foundation for the establishment of social problem research institutes; this budget should increase in subsequent years as the institutes mature and to allow for increasing numbers with an objective of about twenty-five institutes.

Third, consideration of an amendment to the Higher Education Act of 1965 to provide funds specifically directed to the establishment of undergraduate and graduate programs in systematic policy analysis.

In conclusion, I apologize for riding this particular hobbyhorse while at the same time I appreciate the opportunity to appear before you. Thank you for your consideration.

I am available for questions.

Chairman PROXMIRE. Thank you, Dr. Kaufmann.

(Supplemental information, subsequently supplied by Mr. Kaufmann, appears on p. 752 at the conclusion of today's proceedings.)

Chairman PROXMIRE. Mr. Carlson, on the last page of your statement you state "analysis does not make decisions." I was about to say: "You can say that again." It seems to me that the present decisions of the administration on the SST and the C-5A and a number of other decisions made by the administration demonstrate that conclusion of yours quite clearly. The best and most current economic analyses of the SST and C-5A, both, demonstrate the benefits will not exceed the cost even at a low-discount rate. Director Mayo conceded as much with regard to the SST. I did not ask him about the C-5A in his discussion.

Yet, here is a case when the administration decided to choose the objective of national prestige above the objective of an efficient allocation of the Nation's resources.

It seems to me to represent a classic case in which the analysis was discarded because it failed to confirm preexisting prejudices. If it had confirmed these prejudices, you can "bet your boots" that the analysis would have been wheeled out and displayed for all to see.

I would like to make sure that this also happens in the case of the SST; consequently, I would request you to submit for the record the most recent and detailed analyses of the benefits and costs of the SST.

Would you be able to do this?

Mr. CARLSON. First, I will try to reply to you, Senator.

Let me comment on the multiple objectives of each of the projects you have identified. Efficiency is not the only criterion here. We are also concerned about international prestige, about the balance of payments and about other objectives that we must examine at the same time we look at the investment quality of these particular projects. The final decision really turns on how one weighs those various factors.

If one chooses efficiency as the sole decision criterion one might prefer one outcome, whereas emphasis on another factor might produce a different one. I think your recent hearings on benefit estimating showed the multiple objectives relevant to most Federal decisions.

Chairman PROXMIRE. I am sure of that. And I know when you said that analysis does not make decisions, that you were arguing very logically and properly that it should be simply one of a number of considerations. However, with respect to the SST, I think we can make strong argument on the balance of payments, too. I will not go into that now.

I think the balance-of-payments argument is against the production of SST's.

Then, you say you will secure and provide for the subcommittee the most recent and detailed analysis of benefits and costs of SST?

Mr. CARLSON. I think it would be most appropriate, Senator, if you could ask the departmental Secretary involved with each of those projects for that type of information.

Chairman PROXMIRE. Well, the Bureau of the Budget has access, does it not, to these analyses?

Mr. CARLSON. Yes, but we have a staff responsibility. The line agencies have the primary responsibility in those areas.

Chairman PROXMIRE. If you have access to it, it seems the Bureau would have full responsibility to make available to the public the SST analysis.

Mr. CARLSON. We will provide you a suitable reply, Senator.
(The subsequent reply follows:)

While the Bureau of the Budget has access to such studies, it would not be proper for the Bureau to preempt the more direct responsibility of the agency head in this area. Therefore, I respectfully request that the subcommittee address its request to the Secretary of Transportation.

Chairman PROXMIRE. I hope you will, because I would like very much to get it, and, of course, the decision really is made as much in the Congress as in the administration, and that decision should be as fully informed as possible.

Are you familiar with Public Law 84-801?

Mr. CARLSON. Yes, sir.

Chairman PROXMIRE. I will read you a part of it, which requires that "each report, recommendation, or other communication of an official nature of any department, agency or independent establishment of the executive branch of the Federal Government * * * shall contain a statement * * * for each of the first 5 fiscal years during which each * * * additional expanded function * * * is to be an effect of * * * the estimated maximum additional man-years of civilian employment * * * and expenditures * * * which are attributable to such function, activity or authority."

In your judgment, have the requirements of this law been fulfilled over the past years?

Mr. CARLSON. The law gives the primary responsibility to the agencies for carrying out its provisions, and in the Bureau of the Budget Circular A-19, where we provide for legislative clearance, we draw attention to it.

In the end, the effective use of this law depends on the committees of the Congress. It is difficult and expensive for the agencies to try to produce 5-year projections, especially when the congressional committees that are affected express no interest in them and do not use them. I know of no case where a request to an agency for this kind of information has been ignored.

Chairman PROXMIRE. Well, is there not a responsibility here in the executive branch?

You say that it requires the executive department to furnish the Congress detailed 5-year projections for each program. Would it not be the responsibility of the Bureau of the Budget to coordinate this effort and to supply the information to the Congress?

Mr. CARLSON. We have a coordination responsibility. We do not have the prime responsibility. Let me make myself perfectly clear, Senator, it is the law and the law should be followed. The agencies

have the responsibility to comply, and, with respect to requests from committees of Congress, I think they do.

Chairman PROXMIRE. Now, this is a committee of the Congress. Supposing I asked you to secure this data from the agencies and submit it to this committee for publication in the record of these hearings?

Mr. CARLSON. We would be glad to consider any request of Congress, although I think it would be appropriate to request it from the agency.

Chairman PROXMIRE. You are suggesting this committee make the request to the agencies?

Mr. CARLSON. Yes, sir.

Chairman PROXMIRE. In an excellent statement presented to this subcommittee week before last, former Treasury official Stanley Surrey described a tax-expenditure budget. He pointed out that tax expenditures swing the Nation's resources from one use to another in the same way that direct Federal spending does. He also pointed out that tax-expenditure policy should be subjected to the same kind of benefit-cost scrutiny as direct-expenditure policy now is subjected.

Does the PPB system now encompass tax expenditures as well as direct expenditures?

Mr. CARLSON. We would like to have policy analysis done anytime we consider major changes in tax expenditures. And, just for your interest, tax expenditures are included in our experimental efforts in the Program Overviews, so that they are considered in relationship with other types of expenditures in particular functional areas.

Chairman PROXMIRE. Now, to what extent do you go into there, then?

Do you feel, as I understand it, the PPB system has been tentative an experimental area expanded in concept and approach so as to provide decisionmakers with analyses of the benefits and the costs of specific kinds of tax expenditures?

Mr. CARLSON. Our intent is to have the policy analysis of tax expenditures just as complete.

Chairman PROXMIRE. Your intent may be, but is it actually accomplished?

Mr. CARLSON. I would think per dollar involved with changes in the tax law, there is as much analysis, if not more, than there is for program changes.

Chairman PROXMIRE. Have you done this, for example, with respect to the investment credit?

Mr. CARLSON. Analysis of the investment credit has occurred through the years. The location of that analysis may not be exactly the same as that of a program analysis, because there are some specialized staffs in the executive branch to look into these matters, including the Office of Tax Analysis in the Treasury Department and the Council of Economic Advisers.

Chairman PROXMIRE. How about oil depletion?

Mr. CARLSON. There is a commission looking into some aspects of the oil question, I believe its focus is on import quotas, which is probably a far more important issue than depletion.

Chairman PROXMIRE. This has been done independent of the Government.

Mr. Kaufman, I recently talked with Secretary Laird—this was after I had requested and finally gotten an analysis of the Office of

Systems Analysis—on the C-5A. They made two studies, both of which indicated their fourth squadron was not economically justified, and Secretary Laird pleaded with me not to make this public, the difficulty being, he said, that it could kill Systems Analysis if, every time they make a decision contrary to their analysis, the Congress tries to get that study to veto their decision. They get into a situation where they are very shy in asking for analyses in their own office. And the Secretary always ought to ask for these, of course, to make their decision. He suggested that we ought to have a System Analysis Office for the Congress.

It just occurred to me this morning, as I was reading your statement, that this probably could be best performed by the Joint Economic Committee. In fact, one of the top staff men on our committee says the Joint Economic Committee has the authority in law to do this now.

The Joint Economic Committee, it seems to me, might be able to do this with a staff of eight to 10 people.

How would this compare with your staff?

Mr. CARLSON. My immediate staff is 11 professionals, but we have a functional relationship to about a thousand people in all of the agencies. Also, other personnel in the Budget Bureau are becoming more oriented toward the use of systematic analyses.

Chairman PROXMIRE. I would presume they have a similar relationship, so that would enable them to secure information. With a relatively modest staff, though, I would think this committee could do a useful job with perhaps somewhat more objectivity than if we had it located in the various authorization committees in the Congress, and would, of course, economize because it would be centralized. How do you feel about this?

Mr. KAUFMANN. Two statements, Senator: First, I do feel, from my observation, that if there are persistent demands on the part of the Congress for studies that are done in the executive branch—and I am most familiar with the situation in the Defense Department—the upshot of it is likely to be either to drive those staffs so deep underground that they will never be seen again, or their actual abolition; and it has been my view and remains my view that their work is of sufficient value that it is to the interest of all of us to preserve them. So, I have felt, as I tried to indicate, that it would be desirable for the Congress to go to some outside source.

Now, as to numbers. A small number of highly competent people can do marvelous things in this area; however, I would point out that in the Office of Systems Analysis in the Defense Department alone I believe the staff, professional staff, is one of about 150 people. So, I am somewhat uncertain, given the concerns of the Joint Economic Committee, whether a staff as small as you have indicated would be really able to cover the wide range of both civilian and military outlays. I suspect it would have to be larger than you have indicated.

Chairman PROXMIRE. I will be right back. My time is up.

Congressman CONABLE?

Representative CONABLE. Dr. Carlson, with respect to the questions the chairman has been asking you about the C-5A and the SST, is there not a problem about when this analysis is applied and how far you are along in a program?

Presumably, with respect to the C-5A, most of the significant analyses should have been done several years ago, should they not?

Mr. CARLSON. Yes, sir.

Representative CONABLE. Timing is important if analysis is to be an important part of the decisionmaking process; isn't it?

Mr. CARLSON. Yes, sir; the analysis should lead the decision by a considerable period of time. We try to initiate analysis of major policy issues at least 1 year ahead of the final decision date.

Representative CONABLE. And the present administration is faced with the problem of a fait accompli to a certain extent, if they wish to have the facilities which have now matured to a rather substantial degree?

Mr. CARLSON. There is a long leadtime associated with the evaluations of major Federal programs.

Representative CONABLE. To what extent do we have economic reevaluations of things that are in the works?

I should think that frequently, as you proceed with the development or research project or even a social project of some sort, it may be apparent that our economic analysis is faulty. To what extent do we review analysis on a continuing basis as we go along?

Mr. CARLSON. The executive branch has a limited capability for evaluating programs because of its limited analytical resources, as has been indicated already today, and we may not do as much reevaluation as we should. But in terms of major policies that are obviously out of tune with current priorities, they are evaluated and reevaluated.

An example is the liquid metal fast breeder reactor, which is a \$3 billion-plus investment for the years ahead. We already have invested over a billion dollars in the program. But a reevaluation was done this year to see if it was worth continuing with the project. And the same thing has occurred for certain other projects which this committee has considered, including the helium program.

Representative CONABLE. A lot of times, economic analysis involves not only determination of whether this is the efficient way to solve a given problem, but also it has to concern itself with a situation where you have possibly a more efficient answer indicated, but you have already gone so far with the initial decision that it is no longer profitable to turn back.

Mr. CARLSON. Well, that is true. However, in those cases, we must then consider the future cost in comparison with the future benefits and beneficiaries. Past costs and benefits are only useful for predicting future costs and benefits. There are cases where the major costs of a project have been incurred and then it is recognized that total project costs are greater than the likely benefits, but the project benefits are nonetheless greater than the cost of completing the project, therefore, it is wise public policy to complete the project. However, measures should be made to insure that underestimating costs does not occur in similar projects in the future.

There is also the fact that people take governmental policy on good faith and make personal commitments, so that subsequent change in policy must consider the disruptive effect.

Representative CONABLE. This does not mean that it is not desirable to have economic analysis at all stages in the process?

Mr. CARLSON. It is desirable. Analysis should certainly be considered in the decision for policy change.

Representative CONABLE. I notice in your statement you said you found virtually no reasonable estimates of the benefits and beneficiaries of the Federal law enforcement program. It seems a little odd when law enforcement is an area in which we are aware of such voluminous statistical information.

We are always being thrown crime statistics and statistics relating to law enforcement. And yet you found that there are not any reasonable estimates available here of the benefits and beneficiaries of Federal law enforcement programs.

Is that because the Federal law enforcement programs are so relatively new?

Mr. CARLSON. The statistics we have collected in the past have been of a kind of bookkeeping nature. And they have been subject to great uncertainties of reporting and to fragmentation because of the number of different governmental units involved. We need better information here, and—even more—we need information that will allow us to compare the payoffs from different kinds of law enforcement activities. At present, for example, we cannot compare preventive activity with apprehension or rehabilitation.

We are also weak in some of the health areas, from the policy standpoint. From the reporting standpoint—the question of where society finds itself at the present time in terms of certain crude indicators—yes, we have a lot of partially useful information. That is helpful, but it is not very useful for policymaking in the sense that it tells us little about the effect of alternative policies.

Representative CONABLE. At the beginning of this year, HEW put out a document called "Toward a Social Report."

You are familiar with it, are you not?

Mr. CARLSON. Yes, sir.

Representative CONABLE. I wonder if you would appraise this document in terms of what you said in your testimony about the need to improve the statistical series on social well-being?

Mr. CARLSON. The report you have in your hand presented some ideas about statistics and measures of social well-being. What we are trying to do with our statistical series is to get better data so one can prepare a better version of a report like that in the future. We want to get better indicators of well-being, and in areas where we have no indicators at all we want to start some series.

Mr. KAUFMANN. Mr. Conable, I wonder if I could just add, I think—and here I speak largely on the basis of experience in the Defense Department—I think one of our weaknesses there has been in focusing the bulk of our analytical resources on new programs. There probably has not been enough of what is called zero-based budgeting, and looking at what tends to be over 70 percent of the budget, which is going into ongoing programs that have been established over time.

I think one of the efforts that needs to be made is to do more zero-based budgeting and to reevaluate programs that have been authorized and funded over a period of years. I think that is one of our problems.

Representative CONABLE. Thank you.

I have one last question. I guess this goes to Dr. Carlson, too,

Will you tell us: Is there any conclusion we can draw about the relative accuracy of Government expenditures in the form of tax expenditures as opposed to direct expenditures?

It seems to me that it is entirely likely that in a tax-expenditure budget we are going to come up with figures that are somewhat softer than the figures involved in the direct expenditure budget.

Are your techniques of measuring tax expenditures sufficiently sharp so that we can have complete confidence in statistics in this area? I am referring, of course, to the recommendation made by Stanley Surrey, which the chairman alluded to a few minutes ago. It has always seem to me that tax expenditures, because they partake at least of more indirection than the appropriations we make here in Congress, may not have the same accuracy always as the direct expenditures.

Mr. CARLSON. I think, generally, you are correct; program expenditures are usually more pinpointed and, consequently, one can estimate the beneficiaries and the benefits more easily than can be done for the more diffuse tax expenditures. But we have many program expenditures that are rather general in nature, where the final benefits are hard to determine. The highway programs are an example and there are others.

Representative CONABLE. Of course, a lot of times it is difficult to measure the net effect of a direct expenditure program simply because its stimulative results in the economy as a whole creates a kind of a wave action through the economy and therefore generates more tax revenues also.

Mr. CARLSON. We suffer from the lack of reliable information about these aspects. But to the extent we have general program expenditures that are similar to the general tax expenditures, the difference should not be very great. The important point is that some programs are more pinpointed and we can find out the characteristics of those who are receiving the aid and, also, we can evaluate, roughly, the impact on the economy, if that is one of the factors with which we are concerned.

Representative CONABLE. Certainly, as a joint committee concerned most with economics, the relevance of both types of expenditures is obvious.

Mr. CARLSON. I agree 100 percent.

Representative CONABLE. The difference in their measurability then is not sufficient so that this should be a matter of concern to us in deciding the value of the tax expenditure budget?

Mr. CARLSON. I agree with you.

Representative CONABLE. That is all.

Chairman PROXMIRE. Dr. Kaufmann, we were discussing the point of having an Office of Systems Analysis in the Congress, possibly in the Joint Economic Committee. You were saying that you thought the size might be a problem, if we thought we could get away with 6 to 10 and do a competent job.

Would it not be possible for us to use the policy research centers to which you refer and also to use the GAO, the universities, to use the executive branch?

If that were done, I imagine it would be possible, with a good, competent staff; even though it were fairly small, it would operate.

It may well be this is our only alternative. I do not think there is any prospect in the foreseeable future that the Appropriations Committees of the Congress are going to permit the creation of a staff of several hundred people. It would have to be a small staff, or it would not be practical, and there would not be any point in having that if it could not do the job.

Mr. KAUFMANN. I have been very impressed, over the last 2 months, Senator, as a neophyte to Capitol Hill, with the rapidity with which a number of members of the staffs have learned their way into aspects of the defense business. I think some of the products have reflected this great competence.

However, I think there are several problems here. As I mentioned earlier, trying to obtain studies from the executive when these studies are being conducted primarily for the consumption of the executive inevitably creates problems as to confidentiality, as to the relationship between the members of the executive and their staffs.

Second, on most of the major contract research organizations, they, too, are under contract with the executive branch in such a way that I think problems of conflict would also arise.

As to the GAO, I am not really familiar enough with the Comptroller General's attitude. I have been given to understand that while he was willing to undertake the postexpenditure auditing type of responsibility and to do the very useful case history, such as in the case of the Sheridan-Shillelagh, this was something he was more than happy to do; but when it came to issues of future choice, whether it is a fourth, fifth, or sixth squadron of C-5A's or CVAN-69, or one of these others, that he would be very reluctant to get into that more controversial area.

In a very tentative and diffident way, I have come to the conclusion that the Congress really needs to get the whole analytical community stimulated so that there is a range of studies on which it can draw, and, second, given the capabilities of the staff that have impressed me, that they then can be very discriminating consumers.

Chairman PROXMIRE. Why wouldn't this be a good way to do it, then? To have our own systems analysis section staff that could go ahead and do this?

To the extent that it was unqualified because of a lack of numbers, they could try and supplement it or they could specify that they simply could not do the job, and it would have to be done elsewhere. It seems to me it would advance both economic analysis and the quality of decisions if we have an independent appraisal of these very, very complex decisions that we have to make, vital decisions that we make—and we make them. This year, we lost on all of the crucial weapons decisions on our military procurement. But we are not going to continue to lose; we are going to start to winning, I am sure. There just is not any question, on the basis of America's history with regard to our Military Establishment—unless we get into another big war. These decisions are going to be made up here, in part. And if they are bad decisions, it could be very unfortunate. I think this would enable us to make much better and more thoughtful decisions.

Mr. KAUFMANN. I am sure that if a staff of 10 were available, it would be able to do that much better than was done this year. And I

repeat, I think many of the efforts were very impressive this year, but I think to try and cover the range, whether just of defense issues or defense plus civilian outlays; this is really an enormous task.

Chairman PROXMIRE. This is a little aside from the point, but I cannot resist it. You said in your statement that you thought the young men going into analysis, economic analysis, should steer clear of the "soft" disciplines—political science and sociology—and move into economics and science and engineering, and so forth. What was your background as an undergraduate?

Mr. KAUFMANN. Political science.

Chairman PROXMIRE. Mine was English literature.

I am inclined to think there is great value in an undergraduate course which exposes the undergraduate to a sweep of philosophical thought and gives him as deep a structure as possible as the basis for our value judgments, rather than moving right away from high school into the sciences and skipping humanism. I know you can press it too far. A student I knew at Yale went on and did his graduate work in English and wrote his doctoral dissertation on whether the bird that flew out of the window in Beowulf was real or symbolic. That was his contribution to human knowledge and understanding.

But I think at the undergraduate level a broader kind of approach can be useful to an analyst. He should not be somebody who is without that kind of a humanizing background, I would think.

Mr. KAUFMANN. I could not agree more, Senator, and it seems to me that with the existing flexibility of programs that at the undergraduate level he has that opportunity.

But I think one of the problems that I personally have encountered and I think some of my colleagues is that unless you catch them young and at a point where they are not afraid of numbers, certain types of analysis, it becomes increasingly difficult at the graduate level to get them really to concentrate on the modestly quantitative analysis that I think is involved here.

Representative CONABLE. I would like to put in the record at this point that I majored in medieval history, and there was not a thing soft about it. It was hard all of the way.

Mr. KAUFMANN. I excluded history, but I—

Chairman PROXMIRE. I think medieval history is an excellent background for a Republican Congressman.

Representative CONABLE. Well—

Chairman PROXMIRE. I think they all majored in medieval history.

Representative CONABLE. I acknowledge that we do not have the poetic flights of fancy that some of the Democratic Members of Congress do.

Mr. KAUFMANN. I am left speechless.

Chairman PROXMIRE. Dr. Kaufmann, I notice you have come equipped with a very large document entitled "Preliminary Evaluation of PPB," which you are inserting into the record (p. 758). You stated that this document grew out of a series of meetings held in Cambridge. In order to give the subcommittee a better understanding of the purpose and substance of the report, could you characterize the purpose of these meetings and the people whose ideas contributed to this statement?

Mr. KAUFMANN. I do not have the list of the membership with me. I convened the series starting in—I think it was in February, because I felt that after 8 years in the Defense Department, 3½ years in the other parts of the executive, it was time to take a serious look at what this system had accomplished, what changes, if any, seemed to be appropriate. So, a group met in Cambridge. There were four meetings, I believe. We tried to reflect the cross-section of members of the academic community and individuals from Washington, both former governmental officials and current Government officials. I am happy to say that Jack Carlson was an active participant in these meetings. Charles Schultze was also an active participant. William Gorham, Henry Rowen, Fred Hoffman—the membership was weighted rather heavily toward individuals who were now having or had had considerable experience in—

Chairman PROXMIRE. These are among the outstanding experts in this area, certainly. Would you, or one of your colleagues, Mr. Mundel or Mr. Steinbruner, summarize briefly the contents or recommendations contained in this document?

Mr. KAUFMANN. I can summarize—with due deference to them, and they may want to correct me—what I think are the major recommendations. They fall into two major categories.

The first we called widening the constraints or relaxing the constraints. These have to do with improving the system of information and analysis, trying to obtain better data on program impact and on the distribution of impacts in the way that I think that Charles Zwick emphasized to you, engaging more in systematic experiments and in trying to improve the output of analytical personnel.

Second, we addressed the question of congressional interest in the whole subject of PPB, and I think concluded that one of the strongest stimuli to fostering what I think all three of us feel is a very beneficial activity, is a growing congressional demand for this kind of analysis.

Third, we had it called very strongly to our attention in many instances, whereas the analysis may be absolutely first rate in terms of looking at costs and benefits, that insufficient account is taken of the organization that really has to implement the program. There are instances where a program which looked very satisfactory from an analytical point of view would not work out well because there was a mismatch between the organizational objectives and the program objectives, and therefore greater account was needed to be taken of how to mesh the organization that was to implement a program with the program.

Chairman PROXMIRE. What do you mean there?

Are you talking about the fact that the organization, the agency, might be interested in going ahead with it regardless, or are you talking about some other element here that makes it incompatible?

Mr. KAUFMANN. Well, to cite one example, I think, analytically, the M-16 rifle looked like a very interesting rifle for the Army. But its characteristics were not such as to appeal to the traditions of the Army.

Chairman PROXMIRE. I see.

Mr. KAUFMANN. And that part of the Army charged with developing and procuring that rifle. So that whereas analytically the rifle

looked good, things began to happen to it, as the development and procurement process went along, because the organizational preferences began to dominate this process. And if greater account had been taken of the limitation, if you will, the preferences of the organization, perhaps a more effective program could have resulted.

I think we also felt that analysis should not confine itself exclusively to consideration of programs which involved the provision directly of Government goods and services, but that major alternatives should be looked at, such as the provision of income transfers and the recreation of markets with Government playing more of a regulatory role, on the ground in some areas at least, there was a presumptive case for the latter course which would turn out to be more efficient than trying to provide the goods and services directly by the Government.

I would judge that that is a growing view of what is needed in the welfare area.

I think those really represent the more salient suggestions. There are more, but we did not try to say—and I do not think we were competent to say—how in detail the structure of PPB should be changed.

Chairman PROXMIRE. Do you have anything to add, Mr. Mundel or Mr. Steinbruner?

Mr. MUNDEL. That was a pretty good summary.

Chairman PROXMIRE. All right.

Mr. CARLSON, in testimony before this subcommittee, witnesses have pointed out that rulemaking and regulatory policy also have very serious resource allocation and equity impacts. Does the PPB system now undertake analyses and decisions which are taken by Federal agencies?

Mr. CARLSON. Only on a very limited basis.

Chairman PROXMIRE. Why wouldn't this be a good idea to do so?

Mr. CARLSON. I think it would be. I think this analysis should be done.

Chairman PROXMIRE. Those decisions are often far more important than appropriations decisions or tax-expenditure decisions.

Mr. CARLSON. Yes, sir. In the transportation area, there are many things that affect the ICC that are considered by the people in the Department of Transportation. The same is true, for example, for the Department of the Interior in relation to the Federal Power Commission. Nonetheless, I think that we could use more analysis in this area, although each of those regulatory agencies has a few people on their staffs who can do analysis.

Chairman PROXMIRE. But they are pretty inadequate staffs for this, are they not?

I think we were told by Mr. Nelson, who was a former principal economist for the Office of Transportation, that they had 50 economists in the entire Department, although they had, of course, tens of thousands of employees. He seemed to feel that their staffing was inadequate. The economists had to do all kinds of things, not just this but many, many other things.

Mr. CARLSON. I think there is generally a great inadequacy in analytical capabilities, as has been pointed out in the hearings this morning.

Chairman PROXMIRE. Is analysis done of the efficiency and equity impacts of a range of decisions on, say, the approval of a rate increase or decrease for ATT?

Mr. CARLSON. I simply do not know. Obviously, they should. But I believe you have testimony from the FCC which indicates that they are understaffed in this area particularly.

Chairman PROXMIRE. Do you feel it ought to be expanded so as to provide for explicit study and analysis of Federal decisions of this kind?

Mr. CARLSON. Yes, sir.

Chairman PROXMIRE. What are your intentions with regard to expansion of the PPB system to encompass these other resource allocating decisions by the Federal Government?

Mr. CARLSON. We do include these in our major policy issues where appropriate. It depends on the issue. If we should have a particular issue that is important to society, and it is a major policy issue, then we will pursue it.

Chairman PROXMIRE. I certainly hope you do. I hope you expand it to try to do that on a much more systematic basis than the past, because the investment will pay off richly, I think, in more sensible equity decisions, better resource allocation, better economic growth.

Mr. CARLSON. We have to be careful, Senator, because the regulatory commissions are creatures of the Congress and not the executive branch. Primarily we hope to develop their capability to do analysis and to work cooperatively on important issues.

Chairman PROXMIRE. That is why I am trying to speak out as chairman of this subcommittee and vice chairman of the full committee. I am sure this would be the general attitude on the basis of my conversations with other Members of Congress, and, of course, you have the capability to do it and we do not, or to recommend this, recommend this kind of thing be done.

You have referred to a study of the appropriate discount rate to be used in calculating benefits and costs. This, I take it, is the study which was recommended by the Subcommittee on Economy in Government in its report of last September. Is this correct?

Mr. CARLSON. Yes, that does refer to that study.

Chairman PROXMIRE. If the study is in first draft, you must have completed the statistical work; is that right?

Mr. CARLSON. We thought we had, but we find that we need to do more sensitive analysis concerning particular measurement techniques. There are two or three different approaches that we are thinking about in measuring the appropriate discount rate.

Chairman PROXMIRE. Are you at a point you could give the committee some indication of the appropriate level of the discount rate as developed in your statistical study?

Mr. CARLSON. I would prefer to insert that in the record, if I may, Senator.

Chairman PROXMIRE. We would like to have it.

Do you anticipate that the results of this study will be incorporated into a new discounting circular to be applied by all Federal agencies?

Mr. CARLSON. We certainly are going to consider its use,

(The following material was later received by the subcommittee:)

The study, "A Conceptual Basis and Measurement Technique for Computation of a Social Discount Rate," was initiated in response to both the Budget Bureau's desire to continue the improvement of evaluation techniques started by BOB Circular No. A-94 (which identified minimum standards for discounting) and the request last year by this Subcommittee. The study, now in draft form, considers alternative bases for determining the proper discount rate for evaluating Federal investment expenditures. Although we realize it is a matter of judgment, the draft study adopts the opportunity cost principle as the best criterion for selecting a social discount rate. No final determination on this point has been made, however.

In this initial effort, the opportunity cost of financing Government investment is estimated by calculating the incidence of corporate and personal income taxes, and the rates of return and time preferences displaced by these taxes.

Because it is preferable to eliminate inflation in the calculation of benefits and costs, as indicated in Circular No. A-94, expectations of inflation are removed from the initial estimates of a social discount rate. This has been done by scaling down observed market rates of return and interest rates by the amount of realized inflation. Adjustments have been made to account for the fact that some interest rates are sensitive to current inflation, whereas others are sensitive to long-term trends.

By using this technique, we have arrived, tentatively, at a discount rate of about 8 percent. If inflationary expectations are considered, then the basic technique used results in a discount rate of about 10 percent for last year.

However, these are preliminary results and need further refinements before the study is complete. Of course, any conclusions on this subject must be subject to change if better estimating techniques are developed or a different conceptual base is selected.

Chairman PROXMIRE. Mr. Kaufmann, quoting from your statement, you say:

I feel confident that the recent debate over the defense authorization would have profited from a display of the combined out-year financial implications of proceeding with such programs as Safeguard, AMSA, nuclear attack carriers, and so on.

I could not agree with you more. We certainly needed that kind of thing. I think we would have been able to pick up a few more votes, even if we could not have won, if we had that, and I think we are going to have this kind of debate on these various systems as time goes on. We are not through by any means, and I am hoping that we can get information of this kind in the future.

Have you prepared such a display of the budgetary implications of adopting these programs?

Mr. KAUFMANN. We are working on it, sir.

Chairman PROXMIRE. You are working on it now?

Mr. KAUFMANN. Yes.

Chairman PROXMIRE. When do you expect it will be completed?

Mr. KAUFMANN. I would hope that it would be available by December.

Chairman PROXMIRE. Would you at that time notify us? We would like to get it for our committee records at that time. By that time, the record on these hearings would be closed, but we would be very happy to have it. It will be a public finding, I presume?

Mr. KAUFMANN. Yes, sir.

Chairman PROXMIRE. Fine.

In your statement, you say, "I doubt that PPB can survive in the executive and serve the Congress as well." Would you elaborate on this assertion for the committee?

Mr. KAUFMANN. I come back to my feeling that—and I base this largely on my experience in the Defense Department—that the work that has been done, particularly in the Office of Systems Analysis, has been largely done on the assumption that this should be a matter for the Secretary, the Joint Chiefs, and the services, and therefore that some rather frank talk could take place.

My concern would be that if these documents then became available on a wider basis, it would be either a serious diminution of the candor with which these issues are discussed or that nothing would appear in writing.

Chairman PROXMIRE. I would like you to comment on the efforts of Defense Secretary Laird to “bring under control” the Systems Analysis Office in DOD as reported in yesterday’s New York Times.

The headline says “Laird Gives Back Key Budget Role to the Military—Young Civilian ‘Whiz Kids’ of McNamara’s Era Are Assigned Lesser Task”; “Change in Style Seen—National Security Council’s Guidance Also Stressed—Nixon’s Vow Kept.”

The lead says:

The new management of the Defense Department is completely revamping its budgetmaking process to give back to the military the principal role in shaping the budget request. Secretary of Defense Melvin R. Laird has decided to relegate to a much less influential role in the process the work of the young civilian analysts, once known as “Whiz Kids” whose services were valued by Mr. Laird’s predecessor, Robert S. McNamara.

It goes on to say:

Officials say that the new procedures also grew out of the realization that a reordering of national priorities would probably provide an evershrinking share of resources to the Defense Establishment.

(The entire article is included herein:)

[Reprinted from the New York Times, Monday, Sept. 29, 1969]

LAIRD GIVES BACK KEY BUDGET ROLE TO THE MILITARY—YOUNG CIVILIAN “WHIZ KIDS” OF McNAMARA’S ERA ARE ASSIGNED LESSER TASK

CHANGE IN STYLE SEEN—NATIONAL SECURITY COUNCIL’S GUIDANCE
ALSO STRESSED—NIXON’S VOW KEPT

(By William Beecher)

Special to the New York Times

WASHINGTON, Sept. 28.—The new management of the Defense Department is completely revamping its budget-making process to give back to the military the principal role in shaping the budget request.

Secretary of Defense Melvin R. Laird has decided to relegate to a much less influential role in the process the work of the young civilian analysts, once known as “whiz kids,” whose services were valued by Mr. Laird’s predecessor, Robert S. McNamara.

In addition, Mr. Laird is bringing guidance from the National Security Council to bear very early in the budget-making process.

Mr. Laird’s new policy is expected to produce a change in the style of Pentagon operations, but its practical impact cannot yet be assessed.

MORE VALID JUDGMENTS

The new procedures stem from Mr. Laird’s belief that the judgments of the more seasoned military personnel in the Pentagon are likely to be far more valid than those of the young civilians.

By shifting the key roles back to the military, Mr. Laird is not only fulfilling a campaign promise of President Nixon but he is also satisfying a personal philosophy developed over a 14-year period of sitting as a Representative from Wisconsin on the House military appropriations committees.

Officials say that the new procedures also grew out of the realization that a reordering of national priorities would probably provide an ever-shrinking share of resources to the Defense establishment.

And with the changes, officials are determined to give greater weight to military judgment in deciding what should be included in future Pentagon budgets. They also hope to provide the nation's policymakers with a clearer view than before of precisely what risks they run in their choices among competing demands for soldiers, weapons and long-range research.

On Wednesday, the Army, the Navy and the Air Force will submit to Mr. Laird's office their recommendations for the next Defense budget, which is to be presented to Congress in January. Ranking Pentagon officials say that the total figure should be much closer than ever before to the final budget that will emerge from Defense Department and White House review.

While they are reluctant to discuss dollar figures, it is understood that the next budget is expected to fall in the \$73-billion to \$75-billion range, compared with the \$77-billion to \$78-billion that is expected to be spent on defense in the current fiscal year, which ends June 30, 1970.

During their first year in office, Mr. Laird and Deputy Defense Secretary David Packard have employed a patchwork approach to budget-making until they could devise a totally new procedure. But even in the interim period, the Joint Chiefs of Staff and the armed services have played the dominant role.

Although they are scrapping many of the techniques devised during Mr. McNamara's tenure as Secretary of Defense, the new Pentagon chiefs are retaining some of the major reforms he initiated. These include the five-year budgets, which are organized along functional lines, rather than simply providing each service with a slice of the total Pentagon pie and letting it pretty much decide how it would spend its share.

So Mr. Laird will guide the services on approximately how much of their resources will go to strategic offensive and defensive weapons, how much to manpower, how much to tactical fighters, and how much to airlift and sealift.

But it is up to the services to decide—subject to his approval—about such things as what portions of dollars for strategic weapons should go to intercontinental ballistic missiles (as opposed to new strategic bombers) and what mix of smaller conventional war fighters and bombers will best perform assigned missions.

When he was Secretary of Defense, Mr. McNamara and his civilian analysts decided on the specific number and types of missiles, planes and tanks. Some programs, in fact, were entirely initiated by them. Senior military men were incensed by the frequent overruling of their advice by the "slide rule generals."

HOW IT WORKS

The entirely new approach, which will be applied for the first time to the budget for the fiscal year 1972, will work this way:

Next month, based on their evaluation of the worldwide threat, and supported by a special analysis by the intelligence community, the Joint Chiefs of Staff will turn out a Joint Strategic Objectives Plan. This will recommend a five-year strategy.

Studying this document, with the advice of the National Security Council and various Presidential economic advisers, Mr. Laird will draft in mid-November a Strategic Guidance Memorandum. After receiving comments from the military services and his Pentagon staff, he will revise the memorandum and issue it in mid-January as his decision paper on the strategic concept that will guide the budgetary process. It will provide fiscal guidance on roughly what will be available to Defense.

Before taking this fiscal guidance into account, the Joint Chiefs will, in February, turn out a second Joint Strategic Objectives Plan, recommending specific forces to meet the threat and assigning approximate costs to each.

MORE MEMORANDUMS

Then, after studying Mr. Laird's Strategic Guidance Memorandum, the Joint Chiefs will produce in April a Joint Force Memorandum in which they will scale

down their earlier recommendations for force levels, pointing out what risks they think would be inherent in each cut.

At this point, each of the services will work out its portion of the budget in great detail, combining the result into a Program Objective Memorandum.

Up to now, the Joint Chiefs got out of the budgetary act in the early spring, when they produced their Joint Strategic Plan. The principal work on the budget was done by civilian analysts in a Draft Presidential Memo.

Under the new approach, the Joint Chiefs will stay in the budget-making process to the end. And the critical, detailed package of programs will be written by the services, rather than by analysts in the office of the Secretary of Defense.

The analysts will now enter the picture to review the services' recommendations. They will judge whether the proposals are justified and ask whether each approach seems best to carry out a mission.

This review is expected to end in late July with a firm five-year budget program being presented to the Joint Chiefs and the services by Mr. Laird Aug. 15.

At that point, the Defense Controller, Robert C. Moot, and service representatives will strip off that portion of the Defense package that will be requested in the Pentagon budget for the fiscal year 1972.

In September and October the proposed budget will be debated between the Defense Department and the Bureau of the Budget. Any unresolved questions will be decided by the President in November or December.

Commenting on the new procedure, one high Pentagon official said:

"By getting fiscal guidance early, the services will come up with more 'real world' budget recommendations. We should be able to avoid the usual last-minute scramble and poor judgments involved in cutting \$5-billion to \$10-billion out of a Defense document. The services are as happy as they could be with this new approach."

Chairman PROXMIRE. Of course, they want to counteract that. What is your comment?

Mr. KAUFMANN. Well, sir, first, I am not sufficiently up to date to be able to say how accurate Mr. Beecher's account is.

Secondly, I think there has been a feeling for some time, within the Office of Systems Analysis itself, that certain changes were desirable, but I am not, I am really just not competent to say whether these are in line with the changes that Dr. Selin and others have advocated.

Chairman PROXMIRE. This seems to give the impression that the Defense Department is moving into the position of making these decisions more on the basis of the judgment of the Chiefs of Staff, and the military officials, and away from the notion of trying itself to place the decisions of the Defense Department into a framework that would consider other demands on our resources.

In view of the fact that Defense Department has such a huge proportion of our Federal budget, it would seem to me that this would at the very least require a far more vigorous role for the Bureau of the Budget to play with respect to the Defense Department and a more critical role on the part of Congress, and another reinforcement of the notion of having an Office of Systems Analysis up here—which Laird says we ought to have, he would like to see us have it. He thinks we need more staff.

He pointed out the House Appropriations had something like 54 people who worked for the Subcommittee on Defense. We have two in the Senate. And, of course, while I think your remarks about how the staffs up here have done a pretty good job or better job than in the past, with this kind of a situation we are going to have some real problems in trying to reconcile or determine our priorities.

This, it seems to me, is the fundamental problem of the Congress. This is the main challenge we have, ordering our priorities, certainly in deciding on our budget. That is our principal problem, and we do it in such a kind of a slipshod, emotional, illogical way, often.

And if the Defense Department is going to emphasize the military judgment much more than in the past, and leave out the kind of analysis that Secretary McNamara began—and I thought he made a great contribution—does that not mean that the Congress is going to have to do much more in this way than it has done?

MR. KAUFMANN. Well, I have felt for some time that it would be desirable for Congress to do more in any event, with or without Mr. McNamara.

Now, it was my understanding in reading Mr. Beecher's article, that they would be confronted much more than at least ostensibly has been the case in the past, with a budget ceiling. So if that is correct—

Chairman PROXMIRE. Yes, that is correct.

MR. KAUFMANN (continuing). Some initial decisions about basic resource allocation would have been made. I think the main problem—and again, without any particular knowledge, it would be presumptuous of me to judge it—the main danger in principle is that even with the budget ceiling, the most efficient allocation of resources between the services and among different programs would not be made.

In other words, I see no incompatibility between budget ceilings and a careful allocation of resources within the ceiling.

Chairman PROXMIRE. That is right. But here is the kind of thing I am getting at. The New York Times article reports:

And with the changes, officials are determined to give greater weight to military judgment in deciding what should be included in future Pentagon budgets. They also hope to provide the Nation's policymakers with a clearer view than before of precisely what risks they run in their choices among the competing demands for soldiers, weapons and long-range research.

That is fine. However, I have the feeling, as you do this—maybe I am wrong, maybe I am putting into this something that is not there—but I get the feeling you overlook what the choice is we have to make here in Congress. When Congress decided to go ahead and get those 23 additional C-5A's, which the Office of Systems Analysis says were not an efficient purchase, that is a billion dollar purchase roughly, before we finish paying for those planes.

A billion dollars is about as much as we put into all of the low- and moderate-income housing in the country this year. It is about half of what the Federal Government puts into all of the elementary and secondary education in the whole country.

Now, that kind of consideration, it seems to me, is not brought into the picture early enough. When we bring it in on the floor of the Senate, the committee has acted, the Bureau of the Budget has acted, the administration has swung into action. I just wonder if that kind of contrast is really brought into play in the executive branch, either by the President or in the Defense Department, soon enough, at least by the time the decision is made. This is what concerns me.

MR. KAUFMANN. I am not really competent to answer that question, because I have only seen parts of the process. I would say though that I think it is extremely difficult, in my observation, even with a first rate staff in the Defense Department, to be able to try and trade off an additional 23 C-5A's versus some increments in the housing program.

To the best of my knowledge, we do not have the analytical capability.

Chairman PROXMIRE. It sounds fanciful and ridiculous, but this is what we have to do. For instance, the other day, when the President made his recommendation that we proceed to spend an additional \$660 million on the SST, the Department of Transportation do it, there was no question in my mind it was going to make it much harder to get mass transportation out of the Department of Transportation. They have a limited budget. And that is the tough decision we have to make and we ought to be conscious of it when we do it.

Dr. CARLSON, if this Beecher article is accurate, assuming it is accurate, does this not put more of a burden on the Bureau of the Budget?

Mr. CARLSON. As the Director has reported to you, the Bureau's role has increased in this area. The Defense Department is treated like all other Departments of the Government insofar as our review and functional responsibilities are concerned.

Chairman PROXMIRE. With less manpower, I do not know how you can treat it the same when you give testimony that Mr. Mayo gave us, that it was about 25 percent of the Bureau of the Budget's personnel concerned with the Defense budget, although it constitutes 80 percent of the controllable expenditures and 40 percent of overall expenditures.

Mr. CARLSON. I think during this year we have increased our capability.

Chairman PROXMIRE. He said in the last few months they had not increased it.

Mr. CARLSON. There have been some qualitative changes, both in terms of new people and in terms of refocusing existing staff.

Chairman PROXMIRE. Of course, that is something that is hard for use to measure up here.

Mr. CARLSON. It is, but some results are being achieved, so there is revealed evidence that changes are occurring. The Bureau is playing a more active role in this area than it has in the past.

With respect to the article on the Defense Department, it is often hard to know the proper mix of judgment and analysis. It is also difficult to know what organizational unit should have initial responsibility for analysis. Part of the reason for this change may be because the services have increased their own capacity for this work. Certainly, we in BOB will be working to ensure that there is an increase in analysis in the Defense Department and not a decrease in it.

As far as the Congress is concerned, I personally think the Congress ought to do more and I agree with your statement of pluralsim. It is important that the Congress get information from many sources, so you can use the biases of each source as a kind of triangulation.

Chairman PROXMIRE. You have stated the basic principle that the calculation of benefits and costs must refer to the total benefits and costs to society and not just to the Government. This, I take it, is in your judgment a basic rule which could be applied to any alternative which is under consideration by the Federal Government and which could be expanded to include appropriate procedures for dealing with secondary benefits, regional impacts, distributional impacts, and environmental effects. Is this not true?

Mr. CARLSON. There are two features to it. If in fact you wish to measure benefits and costs based on an objective of efficiency, then you should measure total dollar benefits and costs. But if your objective is primarily to redistribute income, then costs and benefits should be related to beneficiaries. From the analytic standpoint, and to be most useful to the multitude of decisionmakers usually involved, each of these objectives should be displayed separately. Then each decisionmaker can determine the importance of the efficiency or equity objectives by placing his own weight on each. This is currently of interest in the water area; however I am afraid the distinction between efficiency and redistributive objectives is being blurred, to the likely future confusion of decisionmakers.

A problem we have in the executive branch is that people look upon the Federal Government as being another General Motors, and so they do not look at all society's costs because of Government activities. That is inappropriate.

Chairman PROXMIRE. When you say as being another General Motors, the notion is—what is good for General Motors is good for the country?

What is good for the Federal Government is good for the country, and that is what they overlook?

Mr. CARLSON. I am saying that the Federal Government should take explicit account of the external costs its activities impose on other parts of society, whereas a private firm may ignore these externalities.

We are moving in the direction of including all of the relevant costs in analysis. In the testimony to which I referred, the question was whether we should lease or purchase building space for Federal activities, and we were discussing how to calculate the present value of the costs of both lease and purchase. Some of the real costs of Federal Government ownership—such as the additional cost of police protection and road repairs which are usually paid out of property taxes—are not paid. Some people advocate we should not include these costs because they do not appear as a Federal budget cost. However, if the objective is to minimize the Nation's cost of providing necessary public services—as I believe it should be—then all of the costs caused by Federal Government actions should be included in the comparison, whether it is paid for or not. We must know the full import of Federal actions in order to be responsible to the public.

Chairman PROXMIRE. Is the Bureau of the Budget now developing a specific guideline document which would require all agencies to adopt a uniform procedure for measuring the benefits of alternative expenditure undertakings?

Mr. CARLSON. As I stated in my statement, I do not know how far we can go in this area. Nor do I know if we should develop such a document or handle it through some other mechanism.

Chairman PROXMIRE. Would not such a document improve economic analysis across the Government?

Mr. CARLSON. It has the potential to do so.

Chairman PROXMIRE. But you do not know if that will be forthcoming or not?

Mr. CARLSON. I cannot give you any assurance we will have a document on the subject out next year. I can tell you, speaking personally, that I think it is something we ought to consider seriously.

Chairman PROXMIRE. What I had in mind was a guideline document analogous to the discounting circular which you released a few months ago, and I would hope you would and strongly recommend that you do prepare that kind of a document. It would be a major step in increasing the consistency and effectiveness of your program analysis throughout the Federal Government.

Mr. CARLSON. I understand.

Chairman PROXMIRE. Would you insert your statement submitted to the Senate Public Works Committee dealing with this total cost-total benefit approach for the record?

Mr. CARLSON. Yes, sir.

(The statement follows:)

STATEMENT OF JACK W. CARLSON, ASSISTANT DIRECTOR FOR PROGRAM EVALUATION, U. S. BUREAU OF THE BUDGET, BEFORE THE SUBCOMMITTEE ON PUBLIC BUILDINGS AND GROUNDS, SENATE PUBLIC WORKS COMMITTEE, CONCERNING POLICY FOR HOUSING FEDERAL AGENCY ACTIVITIES IN LEASED OR GOVERNMENT-OWNED BUILDINGS

Mr. Chairman and Members of the Subcommittee: We are pleased to appear before this Subcommittee on behalf of the Bureau of the Budget to discuss policies affecting the housing of Federal agency activities in leased or Government-owned buildings. As indicated in your letter to Budget Director Robert Mayo on August 13, 1969, "The Committee is most interested in providing buildings for the Federal Government in the most economical manner. . . ." The Bureau of the Budget shares the same objective, and the purpose of my presentation today will be to explain how we plan to achieve this objective through the proper evaluation of alternative ways to provide housing for Federal agency activities.

First, we should define what is meant by the Federal Government's being "economical." Being "economical" in the context of the Federal Government means minimizing the total of *all costs* sustained by all parts of society by each public project. In the case of the housing of Federal Government activities, this means including the cost of land; labor for maintenance and construction; materials; water, electricity, and sewer services; police and fire protection; schools for the children of personnel occupying the building; and others. Some of these costs are paid directly. Other costs, such as community-supplied facilities and services, are often paid solely through the collection of property taxes. If the Government inappropriately selects a way of providing office space which costs society more than another way would, because some costs were excluded in the evaluation, then the Government is not economical. Therefore, both the direct costs and the community costs must be included.

The inclusion of all costs occurs automatically when leasing is considered. The lessor sets a payment high enough to cover both direct and community costs; he pays property taxes. But this does not occur automatically when a Government-owned building is considered. With this alternative we must assure ourselves that these costs are included in the calculation. The best way to accomplish this is to include estimated property taxes in the calculation of Government-owned space.

Whether the Government actually pays the estimated property tax is a separable question and should be the subject of separate policy. The policy now is not to pay them. However, this is no justification for excluding them from the calculations of what is economical. Determination of the least cost alternative must be based on actual resources used, not just those paid for by the Federal Government alone.

Being "economical" also means that variations in time of payment of costs must be considered. "Time is money," as any banker or businessman will attest. The Government has long recognized this. For example, when I buy a \$100 Savings Bond every three months, I pay only \$75. In about seven years I will receive \$100. Therefore, the present value of the \$100 bond is only \$75. Obviously, a dollar returned to me seven years from now is worth less to me than the dollar

I pay today. The Government recognizes this by selling me bonds at 75c for that future \$1.00.

This fact is important when two ways of providing office space have different cost streams. Government ownership results in a cost stream which is high in the early years and lower in the later years. In contrast, leasing results in a more constant level of payment during the entire life of the project.

Not only does Government economy require recognizing that "time is money," but it also requires selecting an interest rate that represents the cost of money to society. This, in turn, requires consideration of where Government gets its funds for paying some or all of the costs of housing Government agency activities.

During years when the Government runs a deficit on its budget, a small portion of the Federal budget is obtained through issuance of new Government securities. The rate on Government securities is now over 6 percent. During years when a surplus budget exists, and even during years of a deficit budget, the largest sources of funds for Government expenditures are personal and corporate income taxes. The interest rate foregone by individual taxpayers and the rates of return foregone by businesses because of payment of taxes is considerably higher than the Government bond rate—closer to 8 percent, 10 percent or even a higher rate.

As a practical matter, two rates are now used for evaluation: 6 percent to approximate the current yield on Government securities, and 8 percent to approximate the cost to taxpayers for Government expenditures—without the anticipation of any inflation. If the current level of inflation were anticipated and reflected in the rate, the appropriate interest rate would be higher, perhaps 10 percent. However, Government stabilization policies should dampen inflation. Therefore, the 8 percent rate is the appropriate one for evaluating the most economical choice between lease and purchase; each cost estimate should likewise be devoid of inflationary expectations.

Another factor important in determining least cost choices is the value of Government-owned facilities at the end of their "useful life." For accounting purposes, estimates of the useful life of buildings are made, but buildings often last longer because of life-extending maintenance and modernization. The land on which the building stands does not waste away. In fact, the land usually increases in value, reflecting increasing scarcity of land as population and commercial densities increase and per capita incomes increase in most locations. The combination of the residual value of the building and the appreciating value of the land tends to offset the accountant's estimate of the depreciating structure. The magnitude of the residual value of the building and appreciating value of land can be only crudely estimated, unfortunately. From our examination to date, we feel it is reasonable to assume that appreciation and residual value offset depreciation; therefore, we feel it is reasonable to value the land and building at the original cost when the time of the lease or original estimate of physical life is ended. However, we realize that this judgment needs a more empirical basis, and we plan to improve the estimate of residual value over time. Nonetheless, it is clear that these values must be taken into account in order to determine least cost choices.

Let me summarize the factors discussed above that are necessary to determine the most "economical" choice when supplying housing for Federal agency activities:

1. All costs caused by each Federal project must be included, whether paid directly or not.
2. Adequate time cost of money must be included; 8 percent is preferred and 6 percent should be the minimum.
3. Residual values of Government-owned facilities must be considered.

Treating all of these factors properly, Table 1 illustrates the evaluation of lease vs. purchase of the Internal Revenue Service Automatic Data Processing Center for Fresno, California. It is one of the 11 projects recommended for lease this year. Note that proper use of all the relevant costs in the present value method shows that leasing is most economical, whether at a 6 percent or 8 percent discount rate.

In the past, we have not always adequately reflected all costs caused by a Federal project, the time cost of money, and residual values. The Fresno proj-

ect just considered is illustrated again in Table 2, using the annual partial cost method of previous years. Note that the calculations do not include the community costs caused by the building in the Federal ownership alternative despite their inclusion in the lease alternative; neither do the calculations include residual value of federally owned property. With these departures from total cost, the findings of partial cost calculations are therefore incomplete.

Although the most economical choice is to lease in the Fresno case, and similarly in each of 9 other leasing projects proposed this year (one is a borderline case), Federal ownership may be and is the favored alternative in other cases. For example, Table 3 presents the total cost calculations for the Court, Federal Office Building, and Parking Facility in San Diego, California, where the choice was Federal ownership. Local cost conditions determine whether lease or purchase is the better alternative. Therefore, *we believe the current policy of letting the analysis determine whether lease or purchase is most economical is an appropriate and wise policy.*

Only in the case of small Post Office buildings of less than 20,000 square feet is there a guideline which favors leasing. However, even this limited guideline should be and will be tested as all projects are tested. Such a reexamination is planned upon receipt of a General Accounting Office report which may be critical of the present limited guidelines for leasing small Post Office buildings.

The most "economical" choice is modified only to account for some other objective that is important too. For example, some of the important buildings in the Washington area are Government-owned to insure a continuing cultural and architectural heritage and to provide flexible use of the buildings and the land during the century ahead. These buildings serve the purpose of both floor space and a monument for the Nation.

The timing of needed projects is affected by Federal economic stabilization policies. When there is excessive purchasing power and excessive demand on the productive capacity of the Nation for buildings as well as other goods and services, the Government should consider reducing its demand for new floor space. Under the current inflationary pressures, and especially the inflation in the construction area, the Federal Government has sparingly approved projects. Only the more critical ones have been recommended, although all projects were reviewed. This restriction for stabilization purposes should apply to either lease or purchase if the buildings are to be newly constructed. Either alternative would cause additional inflationary pressures. In the case of purchasing or leasing an existing building, then the inflationary effect may be small. Once the need for stringent stabilization policies subsides, the long-term merits of each project should be the basis for approval or disapproval.

Seemingly, it may appear that economical choices are not accepted when short-term leasing is used for newly identified and critical needs. However, the uncertainties of future long-term needs and unexpected new needs make the flexibility of leasing desirable. When the longer-term needs are developed and the uncertainty is eliminated, however, the economical long-term choice should be made.

It is true that the effect on the U.S. Budget is different between lease and purchase. This becomes especially important when the Congress imposes a ceiling on Federal expenditures. Government purchases require relatively large amounts from the budget in the near term until the building is built or purchased while leasing requires a relatively small amount over a much longer period of time. Purchase reduces flexibility in near-term budgets but provides more flexibility in future budgets. Leasing provides more flexibility in near-term budgets but reduces flexibility in future-year budgets.

At the present time, GSA's annual costs associated with the use of leased space, including the 11 proposed leases, approximates \$200 million. However, the substitution of a \$200 million annual construction budget for the lease costs would fall far short, during the next few decades, of providing the space requirements that leasing is now providing. And the most economical choice would have to be based on each project.

In the discussion to this point, we have assumed that lease provides the same quality of floor space as Government purchase. This is true only when lease buildings are built to Government specifications. Usually, however, the buildings

that are leased have different characteristics. Care should be exercised when comparing dissimilar buildings. In addition, because technological change has accelerated in the buildings industry with new materials and techniques, care needs to be exercised to assure that Government specifications keep pace with technological changes. To this end, we could challenge the private sector to bid on new buildings both on the basis of design to achieve only given objectives (i.e., air conditioning to 70° F. for a 100° day with 70 percent humidity) and also on the basis of the best design (or the traditional Government specifications). We should consider this alternative and others to guard against obsolete specifications.

This concludes my prepared comments, and I will be pleased to answer any questions of the Committee.

TABLE 1.—PRESENT VALUE METHOD (TOTAL COST)—INTERNAL REVENUE SERVICE AUTOMATIC DATA PROCESSING CENTER, FRESNO, CALIF.

(In thousands of dollars)

Item	20 years		50 years	
	6 percent	8 percent	6 percent	8 percent
Federal construction:				
Improvements.....	21,325	21,325	21,325	21,325
Site, design, etc.....	2,851	2,851	2,851	2,851
Repair and improvement.....	964	785	2,190	1,452
Real estate taxes.....	5,339	4,570	7,337	5,695
Subtotal.....	30,479	29,531	33,703	31,323
Residual value.....	7,543	5,198	1,305	508
Total.....	22,936	24,333	32,398	30,815
Leasing:				
1 to 20 years (\$1,489,200 per year).....	17,081	14,619	17,081	14,619
20 to 40 years, (\$3,276,240 per year).....			11,716	6,903
40 to 50 years (\$4,467,600 per year).....			3,199	1,376
Total.....	17,081	14,619	31,996	22,898

Note: Maintenance and operation cost excluded from both construction and leasing alternatives.

TABLE 2.—ANNUAL PARTIAL COST METHOD (8 PERCENT)

(Internal Revenue Service Automatic Data Processing Center, Fresno, Calif., analysis of providing space by new construction compared with leasing)

	Federal construction	Leasing	Savings through new construction
1. Estimated amount of annual rental, \$2,795,000:			
Invested in:			
(a) Rental of leased space (unserviced) for 50 years.....		\$139,750,000.00	
(b) Project cost (site, design, and improvements).....	\$24,176,000.00		
(c) Interest at 8 percent for period required to amortize Government project cost.....	18,549,000.00		
2. Total investment.....	42,725,000.00	139,750,000.00	\$97,025,000.00
3. Repair and upkeep for 50 years at \$0.60 per square foot.....	12,240,000.00		-12,240,000.00
4. Total 50-year cost.....	54,965,000.00	139,750,000.00	84,785,000.00
(a) Annual cost (rounded).....	1,099,000.00	2,795,000.00	1,696,000.00
(b) Per square foot.....	2.69	6.85	4.16

NOTES

- Estimated useful life of new building—50 years.
- Amortization of the project cost of \$24,176,000 at 8 percent interest will require 15.3 years of annual payments of \$2,795,000, the rental rate for comparable leased space.
- Square footage in building—544,000 gross area; 408,000 net area.
- Normal operation and maintenance excluded since it would be the same in either situation.

TABLE 3.—PRESENT VALUE METHOD (TOTAL COST)—GENERAL SERVICES ADMINISTRATION, COURT, FOB, AND PARKING FACILITY, SAN DIEGO, CALIF.

[In thousands of dollars]

	50 years	
	6 percent	8 percent
Federal construction:		
improvements.....	26,315	26,315
Site, design, etc.....	4,152	4,152
Repair and improvement.....	3,807	2,524
Community costs (property taxes).....	6,305	4,893
Subtotal.....	40,579	37,884
Residual value.....	-1,654	-650
Total.....	38,925	37,234
Leasing:		
1 to 20 years (\$2,553,480 per year).....	29,288	25,070
20 to 40 years (\$5,107,680 per year).....	18,266	10,759
40 to 50 years (\$7,661,520 per year).....	5,483	2,366
Total.....	53,037	38,195

Note: Maintenance and operation cost excluded from both construction and leasing alternatives. Property taxes illustrated at \$6.56 per \$100 of assessed value. Assessed value assumed to be 20 percent of fair market value.

Chairman PROXMIRE. In your statement, you note that each of the four experimental projects in which the Bureau is now involved will be labeled experimental for at least the next 12 months. I take it from that assertion that sometime in 1970 we can expect to have the results of these analyses presented to the Congress and in particular to this subcommittee. Is this a correct interpretation?

Mr. CARLSON. I would hate to be so explicit about the timetable.

Chairman PROXMIRE. I said sometime in 1970. That is not very explicit, it gives you 12 months.

Mr. CARLSON. A great deal depends on the results of the experiments, and on when, and whether, the information becomes more helpful than misleading.

We have shared some of the results of the analysis. We have shared the format, and given you an example of comparing activities related to the Hill-Burton program. We have shared with the Congress the preliminary program overview for research and development. And, of course, in budget justifications and appropriations, we will have additional information that may well come from the Program Overviews.

Chairman PROXMIRE. Can you give us the results of the analyses? Some of them, anyway?

You say 1970 is too precise, and too limited.

Mr. CARLSON. You are asking for the timetable on additional outputs from our Program Overview project.

Chairman PROXMIRE. Right.

Mr. CARLSON. May I provide a statement for you to insert in the record?

Chairman PROXMIRE. All right. We would like to get those as soon as we can.

(The following statement was subsequently received from Mr. Carlson:)

We will be pleased to provide information from the Program Overview as the information proves to be accurate. So far, we have shared the Research and Development Overview, the Health Overview and several examples of the Manpower Overview.

Chairman PROXMIRE. Mr. Kaufmann, in which ways do you feel that the policy research centers which you recommend would be more responsive to Congress' need for analysis that would, say, the assignment of a major analytic responsibility to the General Accounting Office?

Mr. KAUFMANN. I based this very tentative thought on two grounds. First, as I mentioned earlier, my understanding that Mr. Staats was somewhat reluctant to get into a number of these forward policy issues, and second, that in principle, at least, if we are able to establish these policy centers on a national scale they have, I think, a much greater opportunity for tapping talents which might be more difficult for the GAO to do.

Frankly, I would emphasize my own feeling that we simply have to do something about increasing the supply of analysts, in order to cover a broader range of subjects and to cover them more intensively. I regard these two as interrelated.

Chairman PROXMIRE. GAO in some ways seems to be an ideal place for this. In other ways, it is kind of a difficult place to put it. There seems to be a lot of support in the Congress for giving the GAO more leeway. It has done a fine job, it has been able to give us some understanding of waste that we did not have before. It has been able to save a lot of money for the Government. At the same time, in our efforts on the floor, on the Defense procurement bill, we ran into a problem, because we had some initial success and then there began to boil up a resistance against giving the GAO things that they could not do.

The main sentiment on the part of Congress is that we in Congress have to make decisions, that GAO cannot and should not make decisions for us. They are the accountants and auditors and very capable and honest people, but they cannot make an analysis of the defense problem and give us any strategic recommendations. They do not have the military capability to do that. And for this reason, Congress is reluctant to go along very far with GAO.

Mr. KAUFMANN. From my very limited knowledge, I would see no objection to giving the GAO this function. However, I think it would require, as I understand it, the cooperation and support of the Comptroller General, and it would also, as far as I know, require some changes in the staffing. This might mean either the replacement of or the addition of something on the order, as I indicated earlier, of perhaps 150 to 200 people. If this could be done, why then I would certainly regard it as a serious alternative to what I have been suggesting here.

Chairman PROXMIRE. Well, I will discuss this with Senator Ribicoff. He is chairman of the Subcommittee of the Government Operations Committee, and he has been holding hearings on the GAO and is about to issue a report on what it can and cannot do in some of these

areas. I know he will be extremely interested in your recommendation, also.

In your statement, you mention the Program Overview related to the Hill-Burton hospital program. Could you describe and evaluate the contents of that Program Overview for the committee? What I want to know, how hard is the data in this program relative to the data in the other Program Overview sheets?

Mr. CARLSON. This data is firmer than that available in, for example, other parts of the health Program Overview sheet from which this was taken. As you notice on the sheet, we have put double parentheses around information that, though barely better than a guess, is good enough so that it may be useful. You notice the benefit-cost ratio column has several of those numbers. As far as the characteristics of beneficiaries, I think these are reasonable estimates.

As you see, the Hill-Burton program is primarily aimed at middle-aged and older people, and has about 38 percent of its beneficiaries earning \$4,000 or less. It serves Negroes and whites in about the same proportions as the national distribution, and the locations of the hospitals are primarily in the suburbs and small cities of less than 250,000.

Chairman PROXMIRE. You have a benefit-cost ratio of 0.6. Does this mean that the costs are that much bigger than the benefits, that this is a waste of money to that extent; if you get all of the costs and all of the benefits that the costs are approximately, or would that be two-thirds higher than the benefits are?

Mr. CARLSON. This is a classic example of the problem you have in estimating benefits. How do you measure the benefits of publicly provided hospitals?

Our approach was to observe private hospitals providing similar services, to find out their bed costs and allocation of hospital bed costs to patients. Then the private hospital billing rate for hospital beds was compared to the costs incurred by the Federal Government in providing hospital beds through the Hill-Burton program. On this basis, the benefit-cost ratio is 0.6.

If you are willing to accept that measure of benefit, then you can make the statement you just said: Benefits are only two-thirds of the cost. That may be why some people have argued that the Hill-Burton program may not be the best way of providing assistance to people that need health care.

Chairman PROXMIRE. Well, I think that can be a very useful conclusion. What you do, I presume, would be to determine what the alternative ways are and take the one that is the best and have hope that No. 1 has at least a better than unity benefit-cost ratio.

What was the discount factor here?

Mr. CARLSON. Ten percent. We have used 10 percent in all Program Overviews.

Chairman PROXMIRE. Will you submit for the record the Program Overview sheet for the entire health area?

Mr. CARLSON. If you would let me review it first and delete any misleading information, I will try to do that, Senator.

(The information follows:)

PRELIMINARY HEALTH OVERVIEW—DISEASE PREVENTION AND CONTROL

Agency and expenditure purpose	Estimated expenses, 1970 (millions)	Number of units fiscal year 1970	Benefit recipient characteristics ¹													Benefits	
			Age			Race			Income			Location				Subsidy value	B/C ²
			—21	21 to 55+		Negro	White	Other	—\$4,000	\$4,000 to \$9,999	\$10,000+	Outside			Rural		
				cc ≥ 250,000	cc ≤ 250,000							Other urban					
BIOMEDICAL RESEARCH																	
HEW:																	
Basic.....	\$479.6	(?)	41	41	18	11	88	1	21	49	30	22	21	27	30	0	.....
Targeted.....	629.2	(?)	14	25	61	14	85	1	27	44	29	19	21	26	33	0	.....
AEC:																	
Basic.....	83.9	(?)	41	41	18	11	88	1	21	49	30	22	21	27	30	0	.....
Targeted.....	16.4	(?)	6	17	78	11	88	1	39	43	17	18	0	0	0	0	.....
NASA:																	
Basic.....	45.6	(?)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.....
Targeted.....	65.0	(?)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.....
VA:																	
Basic.....	4.9	(?)	41	41	18	11	88	1	21	49	30	22	21	27	30	0	.....
Targeted.....	54.8	(?)	0	0	100	15	83	2	43	39	18	15	21	27	37	0	.....
DOD:																	
Basic.....	48.9	(?)	41	41	18	11	88	1	21	49	30	22	21	27	30	0	.....
Targeted.....	55.4	(?)	18	34	48	15	83	2	25	46	29	21	21	26	32	0	.....
Agriculture:																	
Basic.....	24.2	(?)	41	41	18	11	88	1	21	58	18	22	21	27	30	0	.....
Targeted.....	14.6	(?)	38	43	19	11	88	1	30	42	28	17	21	26	35	0	.....
NSF: Basic.....	24.4	(?)	41	41	18	11	88	1	21	58	18	22	21	27	30	0	.....
BIOMEDICAL RESEARCH FACILITIES																	
HEW:																	
Direct.....	15.1	(?)	41	41	18	11	88	1	21	49	30	22	21	27	30	0	.....
Federal share.....	96.3	(?)	41	41	18	11	88	1	21	49	30	22	21	27	30	0	.....
Agriculture: Direct.....	4.0	(?)	38	43	19	11	88	1	30	42	28	17	21	26	35	0	.....
VA: Direct.....	5.8	(?)	0	0	100	15	83	2	43	39	18	15	21	27	37	0	.....
AEC: Direct.....	3.6	(?)	41	41	18	11	88	1	21	49	30	22	21	27	30	0	.....
BIOMEDICAL MANPOWER																	
HEW:																	
Student support.....	118.4	15,000 studs.	11	25	64	16	83	1	28	44	29	19	21	26	34	\$4,813	1.00
Institutional support.....		422 ed. inst.															
National distribution.....			41	41	18	11	88	1	21	49	30	22	21	27	* 30		

HOSPITAL CONSTRUCTION

		Beds added or modernized:															
HEW:																	
Direct	5.2	0	39	44	17	6	34	57	48	43	9	40	0	9	51	\$14.50/pd	.50
Federal share	145.3	16,413	20	46	34	12	87	1	38	48	14	19	7	68	6	\$5.75/pd	.50
VA: Direct	77.7	476	0	29	71	14	84	2	35	60	5	15	17	22	46	\$14.50/pd	.50
DOD: Direct	58.1	600	38	47	15	17	82	1	37	44	19	(*)	(*)	(*)	(*)		

NURSING HOMES CONSTRUCTION

HEW: Federal share	300	0	7	93	4	96	0	60	35	5	15	4	64	17	\$3.00/pd	1.00	
VA:																	
Direct	.9	0	0	7	93	4	94	2	60	35	5	15	17	22	46	\$7.00/pd	1.00
Federal share	3.2	795	0	7	93	4	94	2	60	35	5	15	17	22	46	\$3.00/pd	1.00

CLINICS

		Fac. added:															
HEW:																	
Direct	2.7		39	44	17	6	37	57	48	43	9	40	0	9	51	\$3.75/visit	1.00
Federal share		9,390	41	41	18	12	87	1	34	49	17	22	5	57	16	\$1.25/visit	1.00
DOD: Direct	.1		38	47	15	17	82	1	37	44	19	(*)	(*)	(*)	(*)	\$3.75/visit	1.00

PHYSICIAN MANPOWER

HEW:																	
Student support	116.9	1,586 grad	35	42	23	8	91	1	23	50	27	24	23	27	26	\$265/stud	1.9
Construction	80.7	439 spaces	35	42	23	8	91	1	23	50	27	24	23	27	26	\$82/stud	1.9
DOD: Student support	14.6	1,590 grad	35	42	23	8	91	1	23	50	27	24	23	27	26	\$8,000	1.9

DENTAL MANPOWER

HEW:																	
Student support	30.8	1,743 grad	37	48	15	6	93	1	15	56	29	25	24	29	22	\$265/stud	1.1
Construction	18.6	180 spaces	37	48	15	6	93	1	15	56	29	25	24	29	22	\$60/stud	1.1

NURSE MANPOWER

HEW:																	
Student support	52.6	14,369 grad	40	42	18	11	88	1	21	49	30	26	26	26	22	\$100/stud	1.6
Construction	16.8	570 spaces	40	42	18	11	88	1	21	49	30	26	26	26	22	00/stud	00
DOD: Student support	2.4	1,505 grad	38	47	15	17	82	1	37	44	19	(*)	(*)	(*)	(*)	\$3,000/ stud.	1.6

OTHER HEALTH PROF.

HEW:																	
Student support	74.3	5,862 grad	41	41	18	11	88	1	21	49	30	22	21	27	30		
Construction	3.7	149 spaces															
DOD: Student support	3.6	903 grad															
AEC: Student support	.6	28 grad															

See footnotes at end of table, p. 788.

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Agency and expenditure purpose	Estimated expenses, 1970 (millions)	Number of units fiscal year 1970	Benefit recipient characteristics ¹														Benefits	
			Age			Race			Income			Location						
			—21	21 to 55+	55+	Negro	White	Other	—\$4,000	\$4,000 to \$9,999	\$10,000+	Outside				Subsidy value	B/C _B	
												cc>	cc<	Other urban	Rural			
OTHER HEALTH TRAINING																		
HEW: Student support	130.8	31,020 train	-----															
DOD: Student support	103.4	2,444 train	-----															
VA: Student support	95.4	train	-----															
Labor: Student support	35.4	19,730 train	-----															
PROVISION OF HOSPITAL SERVICES																		
HEW:		Patients:																
Direct	93.4	130,604	39	44	17	6	37	57	48	43	9	40	0	9	51	\$335/pat	1.80	
Finance	6,352.5	6,593,840	10	7	83	11	88	1	60	29	11	16	21	27	36	\$181/pat	.66	
DOD:																		
Direct	791.9	1,354,105	31	69	.4	17	82	1	74	22	4	(*)	(*)	(*)	(*)	\$442/pat	2.60	
Finance	183.4	270,829	38	47	15	17	82	1	74	22	4	(*)	(*)	(*)	(*)	\$348/pat	1.90	
VA:																		
Direct	1,100.9	775,000	0	29	71	14	84	2	35	60	5	10	10	34	46	\$313/pat	.98	
Finance	15.7	24,916	0	57	43	14	84	2	37	44	19	10	10	35	45	\$423/pat	1.50	
OTHER INPATIENT SERVICES																		
HEW: Finance	936.4	20,107,584	10	7	83	11	88	1	60	29	11	16	21	27	36	\$181/pat	.66	
DOD: Finance	.02	806,429	38	47	15	17	82	1	74	22	4	(*)	(*)	(*)	(*)	\$348/pat	1.90	
VA:																		
Direct	62.3		0	29	71	14	84	2	35	60	5	10	10	34	46	\$313/pat	.98	
Finance	33.1	1,382,518	0	57	43	14	84	2	37	44	19	10	10	35	45	\$423/pat	1.50	
OUTPATIENT SERVICES																		
HEW:		Visits:																
Direct	38.2	1,919,091	39	44	17	6	37	57	48	43	9	40	0	9	51	\$20/visit	1.80	
Finance	2,936.8	1,415,920	10	7	83	11	88	1	46	41	13	17	23	27	33	do	.66	
DOD:																		
Direct	670.6	49,382,747	31	69	.4	17	82	1	74	22	4	(*)	(*)	(*)	(*)	do	2.60	
Finance	26.3	67,634	38	47	15	17	82	1	74	22	4	(*)	(*)	(*)	(*)	do	1.90	
VA: Direct	177.4	6,277,328	2	70	28	14	84	2	24	58	18	10	10	35	45	\$25/visit	1.90	
OEO: Direct			60	23	17	65	20	15	95	5	0	45	15	20	20	\$20/visit	1.43	
National distribution			41	41	18	11	88	1	21	49	30	22	21	27	30	do		

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¹ Percent distributions are approximate, not official agency estimates.

² Not applicable.

³ Based on 1960 census data.

Chairman PROXMIRE. Fine. You mention the Program Overview for research and development programs which was provided to a House subcommittee hearing. Would you submit that?

Mr. CARLSON. Yes.

(The information promised and subsequently supplied, follows on p. 740:)

RESEARCH AND DEVELOPMENT OVERVIEW

Program and agency	In millions		Major performers by institutions	(Estimated percent)	Performers by field	(Estimated percent)	Objectives (goods and services) (estimated)	When benefits realized (estimated percent) (years)		
	Obligations, fiscal year 1970	Expenditures, fiscal year 1970						0 to 5	5 to 15	25
SPACE										
Manned flight, NASA	\$2,368	\$2,409	Federal Government	16	Physical science	2	Extend capability for manned space flight. Manned lunar exploration.	50	50	
			Industry	83	Environment	1				
			University	1	Life	97				
			Nonprofit	0	Engineering	97				
Sciences, NASA	455	455	Federal Government	21	Physical science	10	Collection of basic research data on space environment and on bodies of solar system and cosmos.			100
			Industry	57	Environment	1				
			University	21	Life	90				
			Nonprofit	1	Engineering	90				
Space applications, NASA	162	146	Federal Government	17	Physical science	5	Advance technology for application of space vehicle to economic systems such as weather prediction, communications, etc.		50	50
			Industry	77	Environment	5				
			University	6	Life	90				
			Nonprofit	0	Engineering	90				
Space technology, NASA	328	146	Federal Government	56	Physical science	2	Advance technology of designing and developing space vehicle.		50	50
			Industry	34	Environment	2				
			University	9	Life	2				
			Nonprofit	1	Engineering	94				
Aircraft technology, NASA	160	159	Federal Government	55	Physical Science	2	Advance technology of aircraft and engine design and operation.		50	50
			Industry	44	Environmental	1				
			University	0	Life	97				
			Nonprofit	1	Engineering	97				
Supporting operations, NASA	358	373	Federal Government	26	Physical Science	5	Support other programs listed by tracking and data requisition and other general activities.	(1)	(1)	(1)
			Industry	64	Environmental	10				
			University	10	Life	95				
			Nonprofit	0	Engineering	95				

DEFENSE

Research, DOD.....	444	420	{ University.....	40	Life.....	6	} Exploration of phenomena exploitable in designing future weapon system and tactics.	10	80	10	
			{ In-house.....	40	Psychology/Sociology.....	2					
			{ FCRC's.....	10	Physical.....	87					
			{ Industry.....	10	Other.....	5					
Exploratory development, DOD.....	1,012	965	{ University.....	10	Life.....	10	} Solution of military problems through demonstration of feasibility of technology (component and subsystem-oriented).	25	70	5	
			{ In-house.....	60	Psychology/Sociology.....	5					
			{ FFRDC.....	5	Physical.....	80					
			{ Industry.....	25	Other.....	5					
Advanced development, DOD.....	1,271	1,189	{ University.....	2	Physical Science.....	10	} Proof of feasibility of weapon systems and evaluation of their concepts.	25	75	-----	
			{ In-house.....	25	Engineering.....	90					
			{ FFRDC.....	8							
			{ Industry.....	65							
Engineering development, DOD.....	1,083	1,000	{ University.....	0	Physical Science.....	1	} Full-scale development of improved weapon systems.	80	20	-----	
			{ In-house.....	12	Engineering.....	99					
			{ FFRDC.....	1							
			{ Industry.....	87							
Operations systems development, DOD..	3,107	2,975	{ University.....	0	Physical Science.....	1	} Full-scale development of improved weapon systems approved for deployment.	90	10	-----	
			{ In-house.....	9	Engineering.....	99					
			{ FFRDC.....	1							
			{ Industry.....	90							
Management and Spt., DOD.....	1,679	1,706	{ University.....	1	Physical Science.....	3	} Operation and construction of laboratories, test and evaluation of installations, and intermediate headquarters and other overhead which can't be directly allocated.	90	10	-----	
			{ In-house.....	53	Engineering.....	27					
			{ FFRDC.....	6	Other.....	70					
			{ Industry.....	40							
Emergency fund, DOD.....	50	15	{ In-house.....	25	Engineering.....	100	} Exploitation of new technical opportunities.	75	25	-----	
			{ Industry.....	75							
Weapons, AEC.....	582	597	{ Industry.....	43			} Improved nuclear weapons.....	50	50	-----	
			{ FFRDC (industry).....	30	Physical sciences.....	60					
			{ FFRDC (university).....	26	Engineering sciences.....	40					
			{ FFRDC (nonprofit).....	1							

See footnote 1 on p. 743.

Program and agency	In millions		Major performers by institutions	(Estimated percent)	Performers by field	(Estimated percent)	Objectives (goods and services) (estimated)	When benefits realized (estimated percent) (years)		
	Obligations, fiscal year 1970	Expenditures, fiscal year 1970						0 to 5	5 to 15	25
ATOMIC ENERGY										
Special nuclear material, AEC.....	\$39	\$35	{ Industry..... FFRDC (industrial).... FFRDC (university)....	{ 30 67 3	Engineering sciences.....	100	Cheaper production methods....	100	-----	-----
Reactor development, AEC.....	528	544	{ Industry..... FFRDC (industrial).... FFRDC (university).... FFRDC (nonprofit)....	{ 30 42 19 9	Engineering sciences..... Physical sciences..... Environment sciences....	{ 89 10 1	Cheaper electricity (52 percent). Improved naval propulsion reactors (28 percent). Improved space propulsion stage-nuclear rocket (11 percent). Improved space electric power generators (8 percent). Improved terrestrial power generators (1 percent).	10 30	20 70	70 ----- 15 85
Biology and medicine, AEC.....	97	100	{ FFRDC (Industrial).... FFRDC (Nonprofit).... FFRDC (University).... Industry..... Nonprofit..... University..... In-house.....	{ 15 10 28 3 7 35 2	Life..... Environmental Science....	{ 93 7	Basic knowledge and understanding of biological effects of radiation on man and the environment.	33	50	17
Physical research, AEC.....	420	379	{ FFRDC (Industrial).... FFRDC (University).... University.....	{ 10 70 20	Physical Science..... Mathematics..... Engineering.....	{ 92 2 6	Basic knowledge and understanding of physical phenomena related to atomic energy.	20	60	20
Plowshare, AEC.....	14	14	{ FFRDC (University)....	100	Physical Sciences..... Environmental Science.... Engineering.....	{ 50 10 40	Cheaper public works projects and ore recovery techniques.	20	30	50
Isotope development, AEC.....	7	7	{ FFRDC (Industrial).... FFRDC (University).... Industry.....	{ 30 20 30	Engineering..... Physical Science..... Environmental Science....	{ 60 30 10	Variety of peaceful applications of radioisotopes and radiation processing.	50	25	25

R. & D. IN SELECTED CIVILIAN AGENCIES

National Institute of Health, HEW.....	1,092	910	University.....	59	Life.....	90	}	Treatment and cure of disease...	15	40	45
			In-house.....	17	Other.....	10					
			Nonprofit.....	16							
Health Service and Mental Health Administration, HEW.	100	90	University.....	43	Life.....	40	}	Improvement of mental health...	15	40	45
			In-house.....	24	Social science.....	19					
			Nonprofit.....	16	Psychology.....	40					
			Other.....	17	Other.....	1					
Consumer Protection and environmental Health, HEW	117	100	University.....	20	Life.....	50	}	Improve environment (68 percent), protect consumers (32 percent).....	30	45	
			In-house.....	60	Physical science.....	21					
			Nonprofit.....	20	Engineering.....	24					
Office of Education, HEW.....	91	94	University.....	45	Psychology.....	50	}	Improved education.....	15	75	10
			FFRDC.....	36	Social science.....	50					
Office of Economic Opportunity.....	51	41	University.....	45	Psychology.....	50	}	Community development.....	55	35	10
			FFRDC.....	36	Social Science.....	50					
National Science Foundation.....	267	307	University.....	85	Physical Science.....	64	}	Basic scientific knowledge.....	30	70	
			In-house.....	10	Biology.....	20					
			Nonprofit.....	10	Engineering.....	9					
					Social Science.....	7					
Housing and Urban Development.....	31	19	University.....	8	Social Science.....	77	}	Better housing and urban development.	40	60	-----
			In-house.....	10	Engineering.....	22					
			Industry.....	29							
			Nonprofit.....	46							
Department of Transportation.....	234	220	Industry.....	72	Environmental Science...	10	}	Better transportation.....	80	15	5
			In-house.....	18	Engineering.....	80					
Department of Interior.....	206	212	University.....	13	Physical Science.....	15	}	Resource conservation.....	20	50	30
			Industry.....	23	Environmental Science...	25					
			In-house.....	58	Life.....	25					
					Engineering.....	30					
Department of Agriculture.....	275	275	University.....	24	Social Science.....	12	}	Improved agricultural production.	50	40	10
			In-house.....	72	Life.....	65					
					Physical Science.....	15					
					Engineering.....	5					
Department of Commerce.....	85	86	University.....	16	Physical Science.....	25	}	Environmental prediction control improved industrial productivity.	30	40	30
			Industry.....	11	Social Science.....	25					
			In-house.....	62	Environmental Science...	25					
			Other.....	8	Engineering.....	25					

¹ Not available.

Chairman PROXMIRE. You mention that the kind of data included in these overview sheets will be helpful for "broad priority analysis." I agree with you wholeheartedly, recognizing you are far closer to these Program Overview sheets than is Director Mayo.

Let me ask you a question which I also put to Mr. Mayo last week, namely, when do you think the data in these overview sheets will be scrubbed sufficiently clean to enable them to be released to the Congress and to the people?

Mr. CARLSON. Sir, I think it ought to be on an incremental basis. As the analysis is improved to the point that it is not misleading, then it should be shared with the Congress.

Chairman PROXMIRE. My feeling is that whenever you use this analysis, the executive uses this analysis to make a decision, even if they use it only marginally, it ought to be released to the Congress. We ought to know what that decision is or the economic analysis on which the decision is based. You can qualify it any way you want, indicate there are all kinds of questions about this, and it is very questionable, but if it enters into your decision, it seems to me we ought to know about it because we have to make our decision, too, and you are going to have a better public decision, a better decision by the Congress, if it has time to evaluate the executive decision, the Bureau of the Budget decision.

Mr. CARLSON. I would agree that additional information would help.

Chairman PROXMIRE. What is your answer to that?

Mr. CARLSON. I agree 100 percent.

Chairman PROXMIRE. So, when you say you are not giving us this information, I take it then that you will not use it?

Mr. CARLSON. Some of the information we have we are not using for decisionmaking at the present time because it is preliminary.

Chairman PROXMIRE. That is understandable. I do not know that we would very well quarrel with that. If the analysis is weak and inadequate, or for any number of reasons, it has to be rejected, not on the grounds that it disagrees but on the grounds that the data that you have in it is not reliable. Then I think it is perfectly proper to withhold it. But if you use it at all, I hope you disclose it to us.

Mr. CARLSON. I understand.

Chairman PROXMIRE. In your statement, you refer to the 80 or so issues on which the Bureau of the Budget has requested economic analysis. I find this list to be a most comprehensive one and am pleased by your report that analyses of these issues have been forthcoming and have been relevant in the decisionmaking process. I would like to inquire concerning the kinds of questions posed in the Director's issue letter. Do these questions pertain primarily to the efficiency of different alternative policy measures, or is analysis of the distributional impact of program alternatives also explicitly requested?

Mr. CARLSON. Both.

Chairman PROXMIRE. Would you be able to describe for the committee the kinds of basic questions which were asked in the Director's issue letter on any one or two of the specific issues mentioned on your list?

Mr. CARLSON. May I insert that in the record?

Chairman PROXMIRE. All right.

(The information promised is included in the submission beginning on p. 695.)

Chairman PROXMIRE. I would like you to supply for the record a synopsis of the questions which were put to the agency by the Bureau of the Budget for each one of the 70 policy issues listed in attachment 1. Can that be done?

Mr. CARLSON. We can give you more explanatory information, other than the projects themselves, if that would be helpful.

Chairman PROXMIRE. Do you not have a record of the questions that were asked of the agency?

Mr. CARLSON. Yes, sir.

Chairman PROXMIRE. Can we get those?

Mr. CARLSON. It is a fairly sizable stack of papers. I do not think you would want to have all of the correspondence that has taken place on each of these subjects, but we will provide more descriptive information, if you would like, on these issues.

Chairman PROXMIRE. We want at least a couple of pages of specific questions, with respect to each one of these.

Mr. CARLSON. To each one?

Chairman PROXMIRE. Yes, 70.

Mr. CARLSON. That is actually more than the questions we asked the agency.

Chairman PROXMIRE. Give us what you asked, but if it exceeds two pages, in any case, do not give it to us. After all, 70, or 100, 110, or 115 pages, is not too much for our hardworking staff.

Mr. CARLSON. It might be for mine. We will provide a suitable reply. (The following material was later supplied by Mr. Carlson:)

In response to your request for the nature of the questions posed, including redistributive questions, in the initial development of Major Policy Issues for calendar year 1969, I am attaching full statements of selected issues from different program areas. These have been chosen so as to provide a representative sample of the different types of programs, the level of detail involved in the issue statements, and the kinds of questions addressed.

Several general observations should be made about these and other issue statements. First, they are not very long. Almost all of them, and all of those summarized below, run between one and two single-spaced pages. Second, as is also demonstrated by the summaries, the nature, scope, and precision of the questions varies considerably with the subject matter and the current state of knowledge about the area. Third, and perhaps most important, it is an axiom of analysis that the shape of the problem changes as one investigates it. These summaries are of the initial issue statements as set out by the Bureau. As time passes, and the issue is analyzed, the question can and does change, different aspects can assume greater importance, or it may turn out that we asked entirely the wrong question in the first place. Thus, there is no necessary, or even abstractly desirable, relationship between the issue as originally stated and the analysis as finally done.

1. HIGHER EDUCATION STUDENT AID

This issue statement pointed out that the Office of Education administers four major student aid programs: Educational Opportunity Grants, College Work-Study, National Defense Student Loans, and Guaranteed Loans. It then referenced two recent studies that proposed changes in some of the existing programs and the addition of new types of loan programs. These were: *Toward a Long Range Plan for Federal Financial Support for Higher Education*, A Report to the President by the Secretary of HEW; and *Quality and Equality: New Levels of Federal Responsibility for Higher Education*, A Special Report of the Carnegie Commission on Higher Education.

The issue letter requested an analysis of the major proposals advanced in these reports to show the comparative effects of (a) existing programs, (b) the programs if amended as suggested in the reports, and (c) the proposed student loan programs on the number of students aided, the income levels of students aided, and the cost to the Federal Government. The years covered by the study were to be fiscal years 1971-1976.

2. INCREASING THE PRODUCTION PHYSICIANS

The Federal Government, in the Health Manpower Act of 1968, reaffirmed the desire to increase the national supply of physicians. At the present time, four basic methods of supporting physicians exist: student loan scholarship funds; formula grants; project grants; and the construction program. The issue letter pointed out that these programs differ with regard to cost, probability of success, and time lag involved in graduating additional physicians. The letter then raised a series of questions which further analysis should attempt to answer:

1. The least-cost mix of alternatives to gain a given output increase of physicians;
2. Possible program alternatives in addition to those in existence;
3. Probable effectiveness of these programs at the margin;
4. The incremental costs of accelerating the rate of increase in the output of physicians.

The study request pointed out that, if the number of graduates of medical schools were increased by 7 percent per year from 1971 to 1990, the supply of doctors would be 17 percent greater in 1990 than would be the case if the annual rate were 3.5 percent. Thus, a crucial question is whether there are significant economies of scale involved in increasing the output of physicians so that the cost involved in making such an incremental increase (3.5 percent per year to 7 percent) is small.

It was then suggested that a study examining the four questions listed above be undertaken along the following lines: (1) a search of the relevant literature to obtain a description of the medical manpower production function; (2) from this search and from interviews with experts in the area, a list of alternative ways of increasing the supply of physicians. This should include, as possibilities, block grants to schools, loan forgiveness to students who finish medical school in fewer than four years, differential grants for construction of medical schools varying with geographical locations, increased scholarship to schools which increase their output, increased support of short-term grants for summer course work.

It was suggested that these alternatives, and any others, be compared for their effectiveness by simulation a cohort of incoming medical students and cycling them through the various possible production alternatives.

3. CRIME STATISTICS AND INFORMATION SYSTEM

At the present time, there is considerable interest in the development of crime statistics and information, and great concern about the lack of solid data on which Government agencies can base choices of alternative courses of action. In general, experts in the field (including the National Crime Commission in 1967) regard this as one of the top priority problems in the whole area.

The issue as posed to the Department of Justice in the FY71 issue letter was a request for Law Enforcement Assistance Administration (LEAA) to take the lead in developing the framework for a comprehensive crime statistics and information system. The letter did not anticipate that complete analysis could be done, but saw the present requirement as being for an initial analysis that would at least begin to prepare for the design of an adequate system for implementation. For this initial phase, analysis of the following points was requested:

(a) The types of statistics and information required on crime rates, victims, recidivism, criminals, and resources devoted to various elements of the criminal justice system;

(b) The identification of the potential users of the system and the highest priority needs of these users, including Federal agencies, State and local governments, and private researchers; in connection with this, the analysis was to consider a plan for assigning responsibility for collection of needed data and allocation of resources by and among the users;

- (c) The relation of such a system to existing operations information systems, such as the national crime information center;
- (d) The relative utility of different techniques of information collection, particularly of the use of surveys vs. census techniques;
- (e) The possible input of other organizations and an appraisal of their utility;
- (f) The costs and priorities over a five-year period.

4. STATE AND COMMUNITY HIGHWAY SAFETY GRANT PROGRAM PRIORITIES

The issue statement pointed out that preliminary analysis on this issue indicates that public expenditures may not be directed toward the areas that show the highest probabilities for saving lives and preventing injuries. While the two-year-old grant program is still in the formative stage of development, the point has now been reached where a basic policy decision as to future direction and scope of the program should be made.

The need for analysis is especially pressing because the program has the potential of growing to tremendous size; presently there are 16 approved programs, 50 eligible States, and a legislative requirement that 40 percent of the funds be controlled at the local level rather than by the State. States presently spend approximately \$2 billion on these programs; with 50 percent matching, this creates an immediate potential of \$2 billion in Federal funds (State matching is not incremental).

The letter went on to say that even if the additional \$2 billion were spent in these program areas there is no clear indication what effect this would have in reducing deaths and accidents. Good data and analysis are lacking. The basic problem is to develop data and analysis that will indicate the areas of highest returns for funds expended. The immediate problem is to bring the grant program under control quickly before numerous, detailed, expensive standards are promulgated in a number of high-cost areas where the benefits in lives saved, injuries avoided, and property loss averted may be very small.

For these reasons, a study of the program was requested, concentrating on the following alternatives within a time frame of the next five years:

1. Maintenance of the present program direction—limited coverage of all programs in all States;
2. Concentration of all funds in five or six assumed highest payoff programs in all States;
3. Various experimental programs in different States with concurrent data collection and research. Any given State would receive its funds for only one or two programs; most or all of the 16 program areas would be covered by the aggregate of all States. The programs undertaken would be considered experimental and would be time-limited.

The alternatives were to be examined under a series of differing assumptions about funding levels.

5. AVAILABILITY OF MORTGAGE FINANCING FOR VETERANS

This issue statement contained three parts. The first was a general description of the premises and background of the study, and pointed out that the guaranteed mortgages for veterans are not equally available to *all* veterans. Some are excluded because of the areas in which they live (i.e., small towns or rural areas or declining areas in cities) while others are excluded because they are poor credit risks. The premise of the issue was that these exclusions were in large part a function of institutional arrangements, and that programs do exist which can have the effect of counteracting them. In particular, the Direct Loan Program provides mortgage financing to small towns and rural areas, though it has the disadvantage of requiring that the full loan be funded within the Federal budget. This automatically subjects the program to normal budget constraints. Since the guarantee program is not so constrained, this makes it difficult to achieve balance. Several other programs were discussed as possible means of alleviating the problem and achieving greater equality among veterans.

The second section sets forth three explicit questions to be answered:

1. The nature and value of the benefits bestowed on a veteran by virtue of the VA guaranteed mortgage on his home;
2. Possible means by which the same or an equivalent benefit could be provided the veteran who cannot obtain a GI loan on his home;

3. The short- and long-run costs to the Federal Government of each of the alternative means of providing the benefit.

In the third section, the analysis asks for consideration of possible administrative changes, both with and without new legislation, which would expand the availability of GI loans.

6. ASSESSMENT OF APPROPRIATE TEMPO FOR THE LIQUID METAL FAST BREEDER REACTOR PROGRAM

In recent years, AEC has rapidly built up the technical competence and contractor base necessary to pursue an intensive fast breeder reactor development program aimed at the commercial operation of 1,000 MWe plants in the mid-1980's. The very magnitude of the near-term "base" funding and the long-range nature of the potential benefits make the tempo or pacing of this program a major issue. AEC has already designed a computer model for determining the economic benefits of advanced reactors. It was anticipated that the additional study elements listed below could, where appropriate, be readily added to the computer model.

The issue request stated that, because of the substantial cost of the Liquid Metal Fast Breeder Reactor (LMFBR) Program and the long-range nature of its benefits, it is necessary to know the costs and dollar benefits of (1) the program strategy now being pursued and proposed to be pursued by AEC, and (2) the alternative strategies based upon more deliberate pacing (or even upon accelerated pacing). These benefits and costs—both on an annual basis and on a present discounted value basis, using discount rates of 7.5, 10.0, and 12.5 percent—were to be determined for each of the following cases:

(1) *Present program.*—To project the program essentially on its present "trajectory" of an intensive R&D effort.

(2) *Stretched-out program.*—To carry the program forward for the next several years at the minimum level necessary to maintain and exploit the laboratory and contractor base which has already been developed and is now in being, including completion and utilization of presently authorized facilities. One element of this alternative would be a more deliberate approach to construction of prototypes than presumably would be the case in alternative (1).

(3) *Phased-down programs.*—To phase down the annual effort (as measured in operating costs for the mainline R&D program) to annual levels of (a) \$40 million in the FY 1970-77 period, or (b) \$15 million in the FY 1971-77 period, both with comparable stringency in other elements of the LMFBR program costs (see below). Such levels would be expected to advance the technology and maintain the nucleus of an organization until such time as the relationship of benefits to costs would justify the resumption of an intensive R&D effort.

The letter requested the timetables which would result from each of the above strategies, in terms of major "milepost" events and ultimate availability of a commercial design.

In the calculation of the costs, the issue statement stressed the importance of using *total costs*. These should include, in addition to mainline operating R&D and capital costs, applicable costs from the Cooperative Demonstration Program, General Reactor Technology, Advanced Systems, and Safety categories and use charges for the SNM required.

The analysis was also to give attention to the sensitivity of the results to the important uncertainties, such as the costs of uranium concentrates (in relation to the results of exploration efforts), the price of plutonium, the demand for electric power (including consideration of future load factors), and the cost of electricity from alternative power sources (nuclear and non-nuclear).

Finally, the statement requested the likely time frame for foreign LMFBR development with or without a major U.S. program and—given the fact that LMFBR's would be fueled with large quantities of plutonium—the implications of the existence of LMFBR's in foreign countries for U.S. nonproliferation policy.

Chairman PROXMIRE. Furnish for the record a list of those issues and your list of 70 which were explicit analysis of distributional impact as required in the Director's issue letter. Can you do that?

Mr. CARLSON. Yes, sir.

(Mr. Carlson's response is included as part of the submission beginning on p. 695.)

Chairman PROXMIRE. Gentlemen, thank you very, very much. We deeply appreciate the excellent job that you have done here.

The subcommittee will reconvene on Monday, October 6, in this room, at 9:30 a.m., to hear Charles Schultze, Milton Friedman, and an extra added starter, Ralph Nader. So it should be an amusing, interesting, and very constructive meeting, with Schultze, Friedman, and Nader at bat—"Murderer's Row."

You did a fine job today, gentleman.

Thank you.

We will hold the record open until we get this added material.

(Whereupon, at 12:25 p.m., the subcommittee was adjourned until Monday, October 6, 1969, at 9:30 a.m.)

(The following questions asked by Senator Proxmire and answers were subsequently supplied for the record by Jack W. Carlson, who testified as a witness at the hearing of September 30, 1969:)

Question 1. In your prepared statement, you mention a regional expenditure analysis. I would like you to describe in some detail the content of this study for the Subcommittee so that we can understand more clearly what it consists of and the kind of information which it would be able to provide decisionmakers in both the Executive and the Legislature.

Answer: The regional expenditure analysis has been aimed at providing the data base and conceptual framework for evaluating public policies affecting differential geographic development. The data base so far includes past Federal expenditures by several program areas allocated by county, personal income by county, population changes by county, and construction activity by county. This data can be useful for analysis and simple tabulations, such as the following from FY 1968 data:

	Percent of population	Percent of Federal expenditures
Poorest counties.....	10	6
Richest counties.....	10	14
Slowest growing counties.....	10	11
Fastest growing counties.....	10	12
SMSA's more than 1,000,000 (1966).....	37	44
SMSA's less than 1,000,000 (1966).....	30	31
Non-SMSA urban counties.....	11	10
Rural counties.....	22	16
Central cities.....	13	19
Suburbs.....	8	9

Note: Both the data base and analytic approaches need considerable development which we plan to pursue during the next year.

Question 2. In your statement you list 12 functional areas in the Federal Government for which you have developed Program Overview Sheets. Is it not true that these 12 areas form a sort of program structure which could be expanded in the development of a Full Program Budget for the Federal Government?

What progress has been made in the development of a Full Program Budget for the Federal Government? While I recognize that Special Analysis in the 1970 budget document breaks down each agency's expenditures into program categories, this is not a Program Budget for the full Government. Does the Budget Bureau have in process a study to form and display on a regular basis the full Federal Budget by detailed program category?

When, in your judgment, can the Congress expect to have available to it a Full Program Budget for the Federal Government?

Answer. The Budget Bureau's view on this is set forth in the testimony given this Subcommittee by Director Mayo.

Question 3. In your statement you mention the three-day conference to develop improvements in the PPB System. Have the results of that conference been recorded or described in any document? Would you supply it for the record of these hearings?

Answer. A memorandum sent to the participants in the conference follows :

**EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., September 19, 1969.**

Memorandum for: Program Evaluation and Planning Officers.

Subject: Belmont Conference on Planning-Programming-Budgeting, September 7-9, 1969.

The three-day conference for agency program evaluation and planning executives was held at the Smithsonian Belmont Conference Center for the purpose of identifying improvements for program planning and evaluation and, more specifically, improvements for the Planning-Programming-Budgeting System. The conference considered these topics from the perspective of each agency and the executive branch as a whole.

As I recorded the discussion, the generally dominant views of the group were as follows:

1. Major Policy Issues identification and analysis should be strengthened by
 - a. initiating the issue letters in the fall for the forthcoming cycle (September-November 1969 for the FY 1972 planning and budgeting cycle) ;
 - b. initiating Major Policy Issues all year 'round ;
 - c. scheduling completion of analysis on Major Policy Issues by April-June of each year, in time for adequate consideration by policymakers before program plans or annual budgets are molded ;
 - d. seeking more meaningful participation from the White House, Executive Offices (including BOB) and the affected agency heads, although marked improvement in this area occurred this year ;
 - e. assuring better communication and assistance during the entire process of issue identification, analysis, and reporting between agency and Executive Office personnel ;
 - f. providing feedback of the results of major issue analysis to the agency analysts and other participants ;
 - g. developing interagency issues through stronger Executive Office leadership.
2. Program evaluation of existing programs should be greatly expanded by
 - a. using the Program Overview Project (costs, outputs and hopefully impact data) as a point of departure and including the agencies in the project ;
 - b. further experimentation with social achievement indicators in conjunction with program overview data ;
 - c. stressing the importance and review of funds identified for program evaluation and program experimentation both within each agency and across all agencies ;
 - d. developing improvements to techniques for measuring benefits ;
 - e. providing projects at universities and elsewhere to develop capability to analyze resource allocation problems in areas with no tradition for doing so (e.g., mental health) ;
 - f. following through with performance measures during budget execution (e.g., time-cost-performance feedback).
3. Program planning should be improved by
 - a. stressing the importance of BOB Spring Planning Review for current and out-year, Government-wide priority analysis, including further development of tools such as the Public Expenditure Model ;
 - b. tying agency planning to the Budget Bureau Spring Planning Review ;
 - c. including tax expenditures along with program expenditure data ;
 - d. providing agency with general fiscal and other guidance as an aid to program planning early in the planning and budgeting cycle (e.g., March 1970 for the FY 1972 cycle) ;
 - e. providing agency with a set of common assumptions (e.g., discount rates) and extrapolations (GNP, population, etc.) to be used in addition to those selected by the agencies early in the cycle (January 1970 for program planning for 1972-76) ;

- f. encouraging agency to plan, with constraints, for *total funding* as the sum of base projections plus or minus projections for future-year add-ons or deletions (a new definition for PFP), and include in the plan fewer, broader, but more useful output and impact measures in place of detailed output units or work measurement units (which should be reserved for budgeting and execution of the budget).
4. The display of financial and output data by primary program objectives is useful and should be strengthened by
 - a. developing the existing program structure further;
 - b. developing and experimenting with information units so as to ease the data manipulation problem;
 - c. developing an experimental Government-wide program structure to assure comparison of related programs, through the improvement of the Program Overview Project or a similar approach.
 5. In response to the increasing request for analysis from the Congress, consideration should be given to writing results of policy analysis in a form which could be readily available to Congress but not reveal prematurely executive branch priorities by
 - a. keeping policy strategy memoranda (e.g., PM's) separate from reports on analysis (e.g., SAS's);
 - b. providing more program evaluation data routinely in agency and Executive Offices reports (e.g., Special Analysis).
 6. Increase assistance to States and local governments by
 - a. sharing Federal experience with a variety of management techniques and the PPB System, such as the Federal Technical Assistance Teams;
 - b. expanding the Federal Technical Assistance Team (Flying Feds) approach;
 - c. encouraging more flexible use of federally provided evaluation and planning funds in functional areas for use for Government-wide program planning.
 7. Evaluate the capability of agencies to perform program planning and evaluation by
 - a. evaluating the need for education and training programs;
 - b. assessing the utilization of returning personnel from education programs (e.g., EPSA);
 - c. evaluating the content of various training programs (particularly CSC);
 - d. exploring the usefulness of central assistance for creating an interest and recruiting graduates and faculty members (e.g., such as the initial contacts made to university graduate school students and faculty earlier this year by BOB).

The above list may not represent all views expressed at the conference but rather the sum total of all of the strongly presented proposals. Also, it should be understood that these suggestions have different levels of importance.

These views will be considered during the next few weeks when we plan to draft the changes to the PPB System for the FY 1972 planning and budgeting cycle.

Question 4. You may recall that I inserted into the record of the hearings on "Guidelines for Estimating the Benefits of Government Expenditure," Department of Defense, Instruction 7041.3, entitled "Economic Analysis of Proposed Department of Defense Investments." Following that hearing, I wrote Assistant Secretary of Defense, Robert Moot, asking him to describe the progress made in implementing this procedure (letter and response to be included in the record at this point). Do you feel that a document similar to DODI 7041.3 should be proposed by the Bureau of the Budget for comprehensive application of all agencies? Do you have any plans for preparing such a document and requiring adherence to it by all executive departments? Does DODI 7041.3 relate to the BOB circular on discounting? If so could you describe the ways in which it supplements and/or contradicts that circular?

Answer. We have not fully evaluated the usefulness of a document similar to Department of Defense Instruction 7041.3 for application in all departments and agencies. However, early next year, we plan to complete a review of the usefulness of additional guidelines for estimating public expenditure benefits, beyond that required by Circular No. A-94.

In Circular A-94, only a *minimum* discount rate is specified, and this is based on the yield on Government bonds; however, it describes a study of the opportunities foregone in the private sector because of public sector expenditures. That study is now in first draft and should be completed soon. Also, Circular A-94 uses 10 percent in illustrating rates other than the minimum when evaluating Federal investments.

However, there is a difference in that Circular A-94 states that uncertainty should be calculated separately, and should not be included in the discount rate; DODI 7041.3 incorporates risk and/or uncertainty in the discount rate. Beyond these similarities and differences, DODI 7041.3 is more detailed and comprehensive. Application to other departments and agencies will be considered when additional guidelines for estimating benefits are evaluated.

(The following questions submitted by Senator Proxmire and answers were supplied for the record by William W. Kaufmann, who was a witness at the hearing of September 30, 1969:)

Question 1. Would not these policy research centers ultimately have to rely on the Executive Branch for data and information? Does this not from the beginning bias the kinds of results which would be forthcoming in the direction of the conclusions and inclinations of the bureaucracy in the Executive Branch?

Answer. The problem of data is serious, but it need not be insurmountable. In some cases, even on defense issues, reliable information is already in the public domain. In other instances, experiments need to be run, data collected, and sensitivity tests undertaken. The Congress can require that such efforts be made, and their results published. The GAO might be given the function of evaluating programs of data collection and making information available to the policy research centers. Such supervision could reduce the risk of bias in the results and place a buffer between the centers and the Executive Branch.

Question 2. Would you envision that the staffs of these centers would be directly responsive to the requests of individual Congressmen or Senators?

Answer. I do not think that the centers can be responsible in this fashion and at the same time conduct systematic analyses. The problem here is to find ways to make the centers relevant to the issues before the Congress without overburdening them with specific requests. My thought has been that if the centers were required to focus on major programs and budgeting decisions, they would become responsive to Congressional needs even though they might not deal with specific requests. To become operational, the centers should maintain liaison with Congressional staffs, familiarize themselves with ongoing and proposed programs, and anticipate major budgetary issues.

Question 3. Would you envision that these centers would do additional analysis and research beyond that called for explicitly by members of Congress? If so, how would the results of these analyses become known to the Congress and become effectively applied in the Congressional debate on individual policy issues?

Answer. As I have indicated, there is a problem of reconciling the independence of the centers with the needs of the Congress. Independence and protection from a heavy burden of specific questions are necessary in order to attract and retain good people at the centers. At the same time, the work of the centers must relate closely to the concerns of the Congress. I believe this reconciliation can be achieved by requiring the centers to be genuinely policy-oriented as a condition of their continued funding. It should be feasible for the centers, within their areas of competence, to follow the budgetary cycle and have their analyses and reports available at a time when the Congress must proceed with the authorization and appropriations process. The centers could then develop their programs of research and analysis within this constraint, and the Congress could judge the utility of the results.

Question 4. For analysis to be pertinent to decision making in the legislature it must be of a kind that can be translated into speeches and floor debate material. Would you agree with this? How do you envision the outputs of these centers to contribute to this objective?

Answer. I agree with this statement, and would go further. The analyses should be of such a character that they can assist the Congress in its hearings. This means laying the basis for questioning witnesses as well as providing other mate-

rials. Since I have been strongly influenced by experiences in the Department of Defense, I tend to think of the outputs of these centers as being akin to Presidential Memoranda, Posture Statements, and Program Budgets. Although it will take some time for such documents to develop the necessary depth and sophistication, they should provide ample material for questions, speeches, and debates. Congressional staffs would presumably be the principal consumers and translators of these analyses.

Question 5. Is there any evidence that the Universities would respond favorably to initiatives made by the Congress for the establishment of such policy research centers?

Answer. If funding were to be available, the Universities would probably become interested. Moreover, there is a growing if belated recognition on the part of the Universities that there is a fairly disciplined way of looking at issues of public policy, and that students who have become concerned about these issues can be profitably exposed to the discipline. In the circumstances, many Universities would probably welcome the opportunity to establish such centers. However, I do not wish to minimize the problem of making and keeping these centers focused operationally on the concerns of the Congress.

Question 6. Do you have confidence that these research centers could staff themselves with people sufficiently competent in the details and intricacies of Federal programs so as to produce meaningful and relevant analyses of them?

Answer. I believe that competent staff would be in short supply at the outset of such an effort. That is why, in my introductory statement to the Subcommittee, I laid such stress on the need for a parallel, educational effort. In addition, I suspect that the centers will have to go through three stages of research in their evolution to maturity. At first, they will probably have to engage in rather straight forward program analysis, simply in order to understand in detail how the programs work, what are the main variables, and how effectiveness is measured (if at all). Actual program evaluation in light of alternatives would be a natural second stage. From there, it would be logical to move to program design and more complex analyses of substitution and tradeoff possibilities. To the extent that the centers could pay consulting fees, they might also be able to compete with the Executive Branch for the time of some of the more experienced policy analysis.

Question 7. Is it not likely that if a particular policy research center were closely related to a specific program area, it would develop a vested interest in the programs that it was instrumental in evaluating? Do you see this as a potential danger in your proposal?

Answer. I suppose there is always some danger of such a development. However, strong incentives toward objectivity could be built into the research effort. Presumably, the centers would not be beholden to the Executive Branch or the administrators of the programs under examination. While their primary responsibility would be to the Congress and the public, they would be designed to be independent of day-to-day supervision and control by the Congress. To strengthen that independence, they might be provided with something on the order of five-year funding. Finally, if a reasonably large number of such centers were created and given overlapping responsibilities in specific program areas, a degree of competition might result and the Congress might have the opportunity to judge the merits of the various analyses.

Question 8. Would you supply for the record the pertinent sections of the National Science Board Report which you mention in your statement?

Answer. The report in question is entitled *Knowledge Into Action: Improving the Nation's Use of the Social Sciences*. It was transmitted to Dr. Philip Handler, Chairman, National Science Board, by Orville G. Brim, Jr., Chairman, Special Commission on the Social Sciences, on May 15, 1969. Chapter VIII, on "Social Problem Research Institutes," contains the discussion most pertinent to the Subcommittee's interest in policy research centers. A copy of the chapter follows:

VIII. SOCIAL PROBLEM RESEARCH INSTITUTES

The Commission believes that engaging the best of our social science resources to meet contemporary social problems requires the establishment of a new kind of institute with the clearly defined purpose of carrying on applied social science research on problems of public significance. The Commission proposes the formation of special social problem research institutes where social problems will be analyzed by teams of specialists from the social sciences and other sciences and

professions. Engineers and other professionals must join with social scientists in these efforts. Their technical knowledge is indispensable to any analysis of causes of and solutions to various social problems. Furthermore, each institute must establish close relationships with the agencies or organizations faced with the problem and responsible for its solution at the policy and action level, so that the implication of the institute's studies can be carried forward to the development of policy alternatives and action programs.

In proposing the formation of social problem research institutes, the Commission seeks to change the management of applied social science. The present organization of social science research is not well oriented to attacks on national social issues. The Commission believes that the proposed institutes offer a reasonable hope for more rapid progress in the utilization of social science knowledge. New social problem research institutes will provide a means for implementing many of the recommendations made previously in the report, namely, increased collaboration between the social sciences and the professions, provision of social science knowledge to community organizations, liaisons with business and labor, and more effective transmission of social science information to government.

There have been a number of important attempts to develop this type of institute, and these have had an important influence on social science research and have led the way for the social problem research institutes recommended by the Commission. One can mention specifically the problem-oriented centers established by the Department of Health, Education, and Welfare, and by the Office of Education; and certain nongovernment centers focusing on violence and on manpower problems. Nevertheless, mobilization of social science for solutions to social problems customarily has been ineffective because the problems themselves do not fall solely within the traditional areas of a given social science. Instead, they require for their solution the collaborative focused efforts of the several social sciences, the professions, and other resource groups. The fact is that research conducted separately by members of one or another social science usually does not provide the necessary broad insights into the nature and resolution of a major social problem. With a few notable exceptions, the social research institutes in the nation have not been able to broaden their research programs to perform the duties the Commission assigns to the proposed social problem research institutes. The objectives of existing research centers frequently are the development of basic research in a discipline; that is, they are guided by the theoretical interests of the developing science rather than by the need for a solution of current social problems. Even those research centers with an applied social problem orientation customarily emphasize a single scientific discipline; or, their research clientele is business and the subject matter fundamentally related to a specific firm's concerns; or, when governmental, they tend to be either short-range in outlook or focused closed upon a specific agency's mission. Such research is valuable to its clients, and there is undoubtedly a genuine need to increase it, but it does not possess the interdisciplinary scope needed for the study of complex social problems. The proposed social problem research institutes will provide an essential missing element in the process of bringing social science research to fuller utilization at the policy-making and action level.

Pluralism is viewed as highly desirable. The Commission believes that many problem research institutes are needed so that each then can deal with a specific social problem and be organized more effectively than would be the case if a single institute were spread thinly over a wide variety of social concerns. Moreover, pluralism gives the opportunity for having several institutes whose subject matters and research projects overlap and thus provide the benefits of diversity and competition that are not likely to emerge from a single national institute. And, a larger number of sharply focused institutes means they can be established throughout the country—at universities and in urban centers as well as in the Washington area—which will add to the diversity of analyses, perspectives, and insights.

The Commission is convinced that an intensive research effort is necessary before sustained, effective approaches can be developed for meeting social problems. We would be remiss in our duty, however, if we failed to warn at the same time that the process may be long and expensive. Social problems that have persisted for generations will not yield easily. The costs of restructuring, restoring, or bypassing old social institutions or establishing new ones is especially costly. Interdisciplinary social research is a relatively new procedure, and many valuable methodologies remain to be discovered. But it is a necessary approach,

and its utilization must be insisted upon. Significant sums of money must be appropriated for the institutes to assure that the program of research on social problems will be given sufficient initial momentum to keep it going despite the many disappointments and failures that will inevitably be encountered in the first few years.

ACTIVITIES, STAFF, AND LOCATION

Activities. A wide variety of social problems exists for study, but each social problem research institute should be established to concentrate on reasonably distinct subjects. Many problems are so highly interrelated that they require the attention of more than one institute. Some duplication of attention is inevitable as the problem areas defined by the institutes overlap. A partial list of social problem areas includes: urban transportation systems; violence delivery of medical services; welfare and income-maintenance programs; urban government organization; crime, especially the problems of first offenders and juvenile courts; judicial systems and the provision of legal services; addiction (drugs, alcohol, and so on); urban housing; prevention of pollution of water and air.

Our intent is that only problems which are obvious candidates for interdisciplinary research—by social scientists and by individuals trained in other relevant sciences and professions—should be selected for study by the institute. Specific operational tactics and research strategies are not at issue here, because institute directors and project leaders are the appropriate persons to decide these issues fit the talents of their staffs to them. The project leader must, however, control his project and keep the staff members who are working on it in good communication with each other as work progresses.

Staff. Consider the various skills that would belong in an urban housing institute. They might include sociology, social psychology, anthropology, economics, finance, political science, management sciences and public administration, law, architecture, civil engineering, sanitary engineering, electrical engineering, medicine and public health, transportation, city planning, systems analysis, and statistics.

Each one of this multidisciplinary array of professional and technical skills obviously does not need to be represented by a fulltime staff associate. Some skills may be satisfactory supplied through consultant or other part-time employment arrangements; more than one skill may be provided satisfactorily by a single staff member. The essential requirements are (1) the availability of practitioners who are competent in the needed mix of skills, and (2) the full-time affiliation of those with the skills most important for the institute's research program.

The studies undertaken should range from the analytical stage through policy formulation to development of administratively operational programs. Specific research contracts may not require reports covering the whole gamut from analysis to programs, but each institute's research program will be incomplete to the extent it fails to generate continuing analyses and evaluations of the problem it has chosen and the policies and programs relevant to it. Similarly, the institutes must find successful ways—transferable in substance to other problems and other research staffs—to breach the disciplinary barriers presently obstructing collaborative interdisciplinary research in the social sciences. Such success is fundamental to genuine progress in the treatment or cure of social problems. The conceptual problems that are certain to emerge should stimulate important new developments in basic research.

Social problems have been subjected to analysis by scientists from one or more disciplines before, and few problems have escaped public or private efforts to solve them or at least ameliorate their impact upon society. It is essential that these institutes collect and scrutinize reports of such past and continuing efforts. This is not merely a question of maintaining a record of the past; valuable past contributions to knowledge must be utilized, and new efforts to solve problems must recognize why previous analyses and suggestions were passed over. Equally careful scrutiny should be directed to assessing past and current policy programs. In some respects, this will amount to maintaining a continuous program evaluation by an independent source, for feedback into the continuing process of problem analysis and policy development.

Considerable empirical research will be required for testing hypotheses, gathering data, building models and conducting experiments and pilot models of suggested policies. Statistical sampling and control techniques have been devel-

oped that permit scientifically valid social experiments, and institutes should be prepared to engage in such experiments as a constituent element of their research programs. Such sophisticated statistical and other empirical methodologies can be available to the institutes either by recruiting properly trained staff or by acquiring access to the skills through regular consultants. Resident staff trained in many of these skills must be recruited and the remainder made available on a supplementary basis by developing reliable consulting relationships. Subcontracting data collection should be encouraged, however, when existing organizations possess specialized capability for expensive work; for example, large-scale sample survey research. Similar considerations will lead the federal government to assume some of the statistical workload of the institutes after research has identified (and defined the concepts for) activities that should be monitored statistically on a continuing basis.

Location. The best locations for these problem research institutes would obviously combine the intellectual stimulation of universities, the contacts with policy-makers and administrators of Washington, state capitals, or major cities, and immersion in the locale of the problem. Equally obviously, such optimal locations are quite rare; most institutes will have to seek the best available mix of these characteristics in consideration of each institute's research perspective.

If the decision is made to locate an institute at a university, the question must be raised as to whether the institute should be an independent organization in the university locality, or part of the university structure (and, if the latter, how related to it). This is not an easily resolved choice. Past experience of interdisciplinary research institutes at universities is quite varied and sometimes discouraging; conversely, however, the universities are the major source of research personnel, and staffing of an institute outside a university structure presents its own range of problems.

The organization of universities into departments based on academic disciplines foster a limited focus—directed toward building their disciplines through the research of their faculty, and training students in the discipline's analytical procedures and techniques. University administrative structures and financial responsibilities are designed to foster disciplinary and departmental objectives. Departmental rewards—promotions and salary increases—can, therefore, be expected to be determined by the faculty members' contributions to these objectives.

If an interdisciplinary social problem research institute is to be introduced into the university structure, there must be some modification of present administrative arrangements. Research associates at institutes would use their original disciplinary training and keep abreast of theoretical and empirical developments in their fields; but the objectives of research at the interdisciplinary institutes would be the analysis of social problems and development of policy and program alternatives that can be implemented at the policy level. Thus, analytical contributions to knowledge within disciplines cannot be expected from such an institute's research activities; and if they do materialize, their importance to any one discipline may well be only secondary.

Accordingly, unless these institutes can be established by the top university administrators and boards of trustees as financially and administratively independent of the departmental structure, the Commission considers that the advantages to be hoped for from association with universities are not likely to develop. Research institutes would be able to attract the quality of people essential to their own difficult research objectives only when they could offer comparable financial rewards, security, and academic recognition to their staffs. The balance of skills needed in interdisciplinary research directed at solutions to social problems will not always coincide with the skills needed in academic departments; independent status would assure the institute's proper development. Academic titles, salary, and tenure structures should probably be extended to the institute's staff to assure that it has been given a *bona fide* place in the university—coupled with possible joint appointments in departments when mutual interests are recognized.

Development of this independence will eliminate conflicts of interest between departments and research institutes with respect to hiring policies. Departments seek a distribution of interests within each discipline that spans all its major subfields. Research institutes seek a balance that achieves a complementarity of research skills that will lead to progress toward research objectives.

Several universities are in the process of establishing graduate schools with programs that will lead to advanced degrees in the applied social sciences. Such

developments will be instrumental in creating a hospitable environment for social problem research at universities. They are also encouraging from the standpoint of an implication embodied in these recommendations—that existence of the institutes will encourage universities to develop graduate programs training new generations of graduate students for careers in applied social research. Continued interest on the part of graduate students and their faculties in applied social science research is, of course, vital for the viability of the institutes and their research objectives.

TRANSFER OF KNOWLEDGE—THE "CLIENT-SPONSORS"

The research and development activities at the institutes will be of value only to the extent that they lead to action. Consequently, there must be close ties between the institutes and those with the power and responsibility to act upon their findings. Each institute, therefore, will have its "clients"—the individuals and organizations who use the institute's findings. These same individuals and organizations should also assist the institutes both in defining the problems (since the problems are theirs), and in obtaining the resources with which to search for solutions—they should also be "sponsors." The "client-sponsor" can be defined, therefore, as that individual or organization which both uses the findings of an institute and also helps it to define its problems and obtain the resources to tackle them.

A variety of user relationships is clearly indicated: the best center of action for meeting certain problems is in the federal government; for other problems action must come from state and local governments; still others are the concerns of community groups, the professions, individuals, and private organizations. Moreover, some problem solutions will require new organizations to carry them forward. Therefore, the institutes will, in many cases, have to act as a catalyst for the creation of their own client-sponsors. Air pollution provides a good example. Pollution control will require innovations in social, economic, and physical technologies; and it will also require the creation of organizations with the proper scope and authority to implement the technological breakthroughs. Again, solutions to problems of crime may well require new organizational arrangements in addition to new research and development activities.

Certain problems are nationwide. Effective research and development work upon them would best be done by one or two centers working at a fundamental level. Yet the implementation of solutions might require action by many widely dispersed agencies. New relationships might be developed through professionals within the agencies, special "traveling" seminars, demonstrations, and through publications. In any event, a flow of trained manpower back and forth is essential to effective relationships between the institutes and their client-sponsors. Institutes must, therefore, devote resources to broad training activities—short courses, seminars, visiting professionals, and the training of students. This has the further value of producing, over time, greater numbers of qualified and experienced people to work on national social problems.

FUNDING

Current estimates of the costs of operating research institutes indicate a need for at least \$50,000 per year in direct and other costs for each senior research associate. This estimate calls for a median expenditure of \$750,000 per year for institutes with a senior staff of from twelve to eighteen, and possibly as much as \$5 million for institutes with a staff of one hundred professionals. If we assume a median annual expenditure requirement of \$2 million per institute, and a population of twenty-five institutes, the aggregate annual requirement reaches \$50 million. Increasing operating costs and salary levels will undoubtedly produce higher annual requirements in the future; any growth in the total research effort will require even greater financial support.

Institutes should be funded through a mixture of endowments, research contracts, and grants. The major source of funds will inevitably be the federal government—because of the magnitude of the funds needed, because of the prior commitments of other sources, and also because the federal government is now the chief focus for action on social problems. Additional sources of financing are state and local governments, private foundations, and private wealth (both individual and corporate). These sources cannot be expected to furnish more than

supplementary support to the level of the federal government's commitment; nevertheless, such supplemental support is crucial.

The federal government in general avoids establishing endowments for research institutes. Its support takes the form of research grants or research contracts for specific projects that are important to the contracting agency's mission. The National Science Foundation, the Office of Economic Opportunity, and the Office of Education, among others, have set up research institutes to which they have committed specified levels of annual support. Commitments can be extended through the device of an annually renewable five-year commitment—although these commitments are always subject to the condition of "funds available." Commitments for full support are vital during an institute's first several years of organization and recruiting.

In establishing social problem research institutes, the National Science Foundation and all other sponsoring agencies should be prepared to provide an institute with full support until it has established itself as a viable organization. After that time, NSF and the other agencies may consider a reduction in the level of general financial support in the belief that the institutes can compete in the market for research contracts from mission-oriented agencies (at all governmental levels) and from private sources of support. The objective of reducing the level of support is to provide some assurance that the activities of the institutes will be relevant to current social problems. A continued level of general, nonproject support will enable the institutes to continue various lines of historical evaluative, and exploratory research that are not susceptible to funding by government agencies, and it will strengthen the position of institutes when negotiating about a prospective research contract with a mission-oriented agency. The fact that the institutes are not entirely dependent upon contracts nor entirely independent, will become a form of guarantee that the research contracts finally awarded reflect the best judgment of the mission-oriented agencies that must deal with the social problems and the respected evaluation of independent research specialists in that subject.

The Commission, therefore, recommends the following:

1. \$10 million should be appropriated in fiscal year 1970 to the National Science Foundation for the establishment of social problem research institutes; this budget should increase in subsequent years as the institutes mature and to allow for increasing numbers, with an objective of about twenty-five institutes.

2. Firm commitments should be made to underwrite the full costs of the social problem research institutes during the first years of each institute's life; as soon as the institutes can compete for research support, firm commitments for funds should be reduced to 20 or 25 per cent of probable expenses.

3. In establishing these institutes by competition among interested universities and other organizations, the following criteria should be operative:

- (a) a capable interdisciplinary professional staff that will concentrate its efforts on the chosen subject;

- (b) the identification of appropriate client-sponsors, either within or outside the federal government, and a proposed way to communicate with and respond to the client-sponsor;

- (c) the establishment of appropriate mechanisms to insure a flow of qualified and experienced people through the institute into the user agencies.

If it is apparent from the quality of the proposals for attack on a given social problem that effective resources cannot yet be mobilized in an institute form, the National Science Foundation should not feel constrained to establish an untimely institute. It should, however, explore each such field to learn the difficulties and obstacles, in the expectation that these may be removed.

A PRELIMINARY EVALUATION OF PPB*

(By David S. Mundel and John D. Steinbruner)

SECTION I: THE GENESIS OF PPB

Planning, Programing and Budgeting Systems (PPBS), systems analysis, and cost-benefit or cost-effectiveness analysis are the major symbols of the current efforts to alter decision-making at the many levels of American Government.

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These efforts are the result of an evolutionary pattern which has occurred within both government and industry throughout the twentieth century. Since comprehensive movements aimed at the reform of the federal decision and budgetary process have taken place in previous decades, it is necessary to discuss them briefly in order to describe the legacy on which the current attempts are based. Although efforts to reform the government have been directed at most, if not every, facet of its actions, this review will concentrate on those directed at the budget and budgetary process. These previous efforts provide the background from which the current reforms have evolved.

The previous budget reform movements can be divided into basically two categories. The first category of reform took place during the first three decades of the twentieth century. During this period an executive budget was established within the federal government and great emphasis was placed on the control and monitoring of the funds distributed among the executive agencies. "Although planning and management considerations were not altogether absent . . . , they were pushed to the side by what was regarded as the first priority, a reliable system of expenditure accounts."¹ These priorities were enunciated in the report of the 1912 Taft Commission on Economy and Efficiency which recommended:

- the establishment of a comprehensive executive budget,
- a classification of the budget in terms of programs or functions and in terms of capital and currently used goods and services, and
- a thorough and systematic review of the budget after the fact.

In 1921, the Budgeting and Accounting Act was passed. This Act established the Bureau of the Budget to assist the President with the aggregation of an executive budget and the General Accounting Office to conduct post-expenditure audits. Thus, this period of comprehensive budget reform resulted in the establishment of operational and financial control mechanisms within the executive and financial control and accountability mechanisms for the Congress.

The second period of budget reform was marked by the appearance of functional activities in federal agency budgets. During the 1930's, the Tennessee Valley Authority and the Department of Agriculture began using "Program Budgets" as had been recommended in the 1912 Taft Commission report. The "programs" of these initial program budgets focused on legislative-directed agency activities rather than on objectives, but they still illustrated the agency's operations and activities in a more useful form than the traditional resource- or input-oriented budgets of other agencies. An equally, if not more, important event during this stage of budget reform was the increasing breadth and strength of the national government's interactions with the private society and economy. In its efforts to stimulate economic recovery during the 1930's, the federal government became involved with a range of activities and considerations which were to tax increasingly the capabilities of the established decision-making processes.

In order to increase the management capabilities of the decision process, the Hoover Commission recommended in 1949 that the entire federal budget adopt the reforms initiated by the TVA and the Department of Agriculture.² The Commission recommended that executive agency budgets should be based upon functions, activities and projects. These reformulated budgets were labeled "performance" or "program" budgets. The Commission's recommendations were enacted into law in the 1949 National Security Act which required a performance budget for defense expenditures (this established a segregation between capital and operating costs in the defense budget), and the 1959 Budgeting and Accounting Act which required an executive budget based on activities and functions. Following the enactment of this law, most agencies submitted budgets in which the activity or program divisions closely paralleled the legislation on which the agency's activities were based. Thus, although several of an agency's programs might be directed at the same objective, they would appear in separate budget categories if they were the result of separate legislative acts. Some agencies divided their budgets according to their organizational structures.

The third (and current) stage of budget reform is dominated by a choice or decision focus within the budget and within the budget- and policy-making pro-

¹ Allen Schick, "The Road to PPB: The Stages of Budget Reform," *Public Administration Review*, December 1966.

² U.S. Commission on Organization of the Executive Branch of the Government, "Budgeting and Accounting," 1949.

cedures. The choices toward which PPB and its constituent reforms are directed include decisions about programs to achieve agreed-upon objectives and decisions about objectives themselves. This stage of reform has been affected, as have the previous ones, by both the problems which confront the government and the society and the decision-aiding techniques which have become available to assist with the solution of these problems. The emphasis on conscious and explicit choice within the reformed budget and decision-making procedures has resulted from a number of realizations and events which occurred almost simultaneously in the 1950s and 1960s.

The first major realization is that the processes of government decision-making and budget-making have great impact on the substance of the resulting decisions. Students of government have often described the incremental style of its budget preparation process. The major determinants of a given year's budget are the figures of the former year's budget. Numerous case studies of specific government decisions have amply illustrated the complex bargaining process by which alternatives are developed by and filtered through the government's bureaucracies and political decision makers.

Political theorists have repeatedly described the benefits of the existing bargaining process to be its ability to develop decisions which are the desirable compromises of the conflicting individual and group values which exist within a democratic society. Others have praised the incremental decision process, claiming that considering the decision makers' limited potential for rationality, it makes optimal use of available policy making and information resources. These reviews and theories are undoubtedly correct descriptions of a vast majority of the decision making procedures which actually occur within the government, but as normative views of the desirable modes of decision making they leave something to be desired. Students of the substance of government decisions have repeatedly shown the eccentric impact of these decision making styles on the resulting decisions.

Annual agency budgets are often simply marginal changes of former budgets even when elected and appointed officials proclaim "major new changes in focus." Existing programs are rarely altered or replaced even when extensive evidence exists which shows them not to be serving their stated objectives. The enactment and funding of new programs demand the time consuming process of coalition establishment while the programs, once enacted, are continued even after most of their originally-intended constituents no longer exist.

Great national problems tend to be attacked only when their size has increased to such an extent that solutions are both complex and costly. Information which can aid the decision makers' attempts to find solutions is rarely developed prior to a massive buildup of a particular program. In many cases this information is never developed. When one observes the compromises reached in the democratic process, a less than optimal distribution of resources and efforts seems to have taken place.

Agricultural subsidies are paid to large, wealthy farms in order to encourage them not to plant crops while the impoverished rural and urban residents of America suffer the pains of malnutrition. Federal aid to impacted areas continues to subsidize public elementary and secondary education in many upper and middle class suburban communities, while programs aimed at improving the education of the urban disadvantaged face continuous fights for their very existence, let alone expansion. Programs of rent subsidies to assist the poor repeatedly remain unfunded, or underfunded, while "tax expenditures" (which make income used to cover interest and tax payments by home owners non-taxable) continue unabated. The needs of small, powerful interest groups continue to be well served by the legislative, budgetary, and appointment processes while the public-at-large (each member of which has but a small individual interest and voice in a specific public action) seems relatively poorly served by the current democratic process.

In brief, although the processes of government decision making are described as ideal by many viewers, the output of these processes is often far from ideal. Because the decisions are in large part a result of the decision-making process, the efforts of the current stage of budget and decision-making reform have been, in large part, directed at altering the processes of governments and thus, in turn, altering its decisions. PPBS is but one of a multitude of the reform methods undertaken within the American system of government in its search for this improvement.

PPBS was not launched solely as a result of the poor performance of a vast number of the existing public programs. A number of new issues concerning government action were already in existence or visible on the horizon and methods were sought to assist in dealing with them. The first of these was the increased awareness of constraints on government resources. Although the progressive income tax assured the federal government an increased share of the national income as wages and the economy grew, the rates of growth built into existing programs of government service and new demands for government action were even greater than that of government revenue. Thus assistance was sought in establishing priorities and making choices among alternative government activities. Resource constraints and the increasing number of alternative forms of government action in individual program areas also demanded that ways be found to calculate the relative costs and effectiveness of the alternative ways of achieving comparable objectives. Another stimulant to reform was the new styles of problems in which the government was increasingly becoming involved.

Traditionally the government has been active or advised to be active in policies directed toward:

1. The provision of pure public goods

Goods or services which can be consumed or used by more than one person at the same time without additional expense. (A normal exchange market place is not thought appropriate for the generation of demand for these goods or services.)

2. The control of externalities

Activities in which the actions by one individual or organization affect the welfare of another.

3. The redistribution of income

Actions in the first arena would include defense and regulation of the economy; the interaction problems of congestion and pollution would be included in the second. Although the American government has a long history of providing the public good of national defense and is increasingly active in the provision or support of other public goods, its performance can be viewed somewhat critically. All too often interest groups, who have large stakes in producing or consuming a specific "pure public good," influence the style and size of the public good/service provided in order that their own interests may be better met. These personal interests are often served at the expense of the welfare of the general public. An example of this behavior is often seen in the activity of the military services.

Although the services are individually and jointly charged with the task of providing national security, the particular form of national security provided by the services is often one which serves the particular interest of the service itself more than the national security interest of the society. Another problem is increasingly occurring as the publics which are interested in a specific public good are located within government jurisdictions which are not well designed for the supply or generation of demand for the particular public good.

For example, a small neighborhood park is of little use or interest to people who live any distance from it, but, in fact, in many American cities these uninterested individuals will be found within the same local jurisdiction as those whose property directly abuts or is close to the proposed park. Thus a park for which a small group of a jurisdiction's population would be willing to pay, is not provided because the only existing level of government which provides services must also be responsive to those taxpayers who would make no use of the facility. Accordingly, at a time of general demand for better provision of public goods and services, we find the American political economy to be both inadequately controlled and organized for the articulation and support of the public interest.

The second arena of government activity—control of externalities—is one in which the rapidly increasing demands of the twentieth century confront a government with a history of neither extensive action nor apparent success in those few areas in which it has been active. Increasingly the government is called upon to regulate the interactions of individuals and organizations within the society. The failure of government attempts to deal with pollution and urban land and transportation congestion alone provide ample evidence to support the view that new techniques are necessary for governmental inter-

vention to be effective. As in the area of providing public goods, the failures in intervention are due, in part, to limitations and defects of the current system of government and social decision-making.

The redistribution of income and the equalization of economic opportunity is also an arena in which existing government activity can be viewed critically. All too often, the benefits of programs which are designed to redistribute income accrue to individuals from upper income groups. In many cases, no evaluation of the distributional impacts of existing or proposed policies is conducted or entered into the political decision process.

An analysis of the defects of the current systems of decision-making and the purposes of PPBS and its constituent reforms in correcting these defects are the focus of the subsequent sections of this report. Following these sections is an analysis of the performance of the instituted PPBS reforms and a discussion of several alternative recommendations which might serve to improve the government decision-making process.

Section II : SPECIFIC DEFECTS IN THE CURRENT POLITICAL ECONOMY

The diagnosis of defects in the current political economy begins with the proposition that when compared with intuitive standards of good performance the product of government activity is not satisfactory. As argued above, programs in defense, in agriculture, in housing, in welfare, and in many other areas of public activity, simply do not accomplish what one reasonably demands of them. Men concerned with the situation have come to realize that problems presented for alleviation by government action involve hard issues poorly understood and that these issues seem to become increasingly more difficult as a function of on-going change within the society. Though this fact unquestionably contributes to the inefficiency of government; it is not in itself a fruitful diagnosis leading to improved performance. Far more, the question is how performance can be improved given the complexities of social problems and the current limits of human knowledge. Thus, we look to the decision-making process within the government for a set of considerations which at once affect the quality of performance and are susceptible to improvement.

There are two very general flaws which appear upon examination of current government operations. The first of these becomes apparent upon comparing the generally established functions of the executive branch of government with the actual decision processes within the executive bureaucracy. The executive is charged in traditional theory with organizing the production of public goods, with achieving an equitable distribution of resources within the society, and with playing some role in the production of those private goods which involve important external effects. In fact, the operations of government also produce many elements of private value; procurement contracts, government installations, jobs at varying levels of salary and prestige, regulations beneficial or inimical to private purposes, etc. The decision-making process and the policy choices within the executive often seem aimed at emphasizing the private benefits of government operations, and the evidence is rather strong that the capacity of the executive to perform the theoretically mandated functions is accordingly diminished.

Current subsidy programs in agriculture, for example, deliver the greatest benefits to those people in agriculture enjoying the highest incomes and the least benefits to the poorest of those engaged in agricultural occupations. Inequities within the agricultural sector are not alleviated but rather exacerbated by this fact. Moreover, the overall efficiency of this sector is not particularly well-served by these programs. However, established interests perpetuate the subsidy programs.

A similar malady affects the legislative process and the Congress as its prime institution. In both administrative and legislative processes of government, a prime function theoretically prescribed for Congress is the articulation of the demands of citizens for government action. However, the demands which are most powerfully articulated and are given the most decisive political force are frequently demands responsive to the private interest of a relatively narrow segment of the public. Though widespread public moods have substantial impact on Congress, the demands of the general public are not systematically translated into appropriate, effective legislation as is the case with more specific private demands. The preponderant public interest in most specific issues is

dilute, confused, and mute, whereas the affected private interest is clearer, more readily conceived, and more effectively organized. The general interest in automobile safety or in non-pollutant fuels for automobiles, for example, is more diffuse than the competing interests of automobile manufacturers and fuel producers. The demands of the latter are more readily given political effect in the legislative process and the performance of government in relation to increasingly difficult problems of safety and pollution suffers accordingly.

In part the discrepancy between fact and theory observed in the operations of both the executive agencies and Congress must be taken as a challenge to the theory and to intuitive standards of performance deriving from that theory. However, it is fairly clear that whatever accommodation to private values is established as appropriate there must be some adjustment of current governmental procedures to allow better performance in terms of general public interest.

There are a number of specific characteristics of the situation which seem particularly important for a diagnosis proceeding along the lines indicated. In the first place, for complex problems the causal relationships between the policies which are pursued and outcomes which occur are difficult to understand and are subject to constant change. Thus it is very difficult to link demands for government action to specific proposals known to be effective. Though in recent years there has come to be general agreement that the United States faces very serious problems at home and abroad, there is no general agreement and/or understanding on the effect of any given course of action on the perceived difficulties. Under these conditions it is difficult to give effective, appropriate political force to broad public needs.

Second, also as a consequence of complexity and limited understanding, there are many different programs all with some imperfectly substantiated claim to relevance for the central problems. Programs have been created on hopes, hunches and hypotheses that they would contribute to solving general problems. Once created, they give rise to a number of special interests in and out of the government. Careers within the bureaucracy are staked upon their continuation. They come to contribute to the budgets of local governments; jobs in the private sector become dependent upon them; business interests are affected; and Congressmen and Executive leaders become committed. The constellation of political forces generated by these entanglements shape the programs to their purposes and then immunize them from any substantial changes, save increases in funding. So much more immediate and so much better understood are the effects of programs upon private interests than are the stakes of the public as a whole, it becomes difficult to discipline the programs to conform to the broader purposes. Especially it becomes extremely difficult to handle several programs dealing with the same area of public concern in an integrated, coherent function.

Government programs, for example, build hospitals and medical schools; they license doctors; they pay directly for medical care for low-income citizens; they control drugs, food processing and working conditions. All of these activities affect private interests and create special constituencies, and the existence and conduct of these programs are powerfully conditioned by the affected interests. The programs also presumably affect the general health of the population, but no one knows in what proportion. Nor is it known what general level of health the overall activity produces as compared with alternative allocations of the same resources. The mechanisms of government are defective in handling these latter questions.

Third, partly as a function of the intrinsic recalcitrance of the problems, partly as a result of the distortions created by private benefits conferred, government programs are not systematically evaluated in terms of how they produce for their broad public purposes. This function of evaluation which market mechanisms perform in the private sector is not performed at all or only very weakly and sporadically for the policies of the public sector. The product of program experience in the current political system tends to be the accumulation of political capital invested in the *status quo*; it tends not to be the knowledge of effects or greater appreciation of how the public interest is being served.

In summarizing and extending the discussion of defects in the current political economy, we can identify several generic flaws in the operations of government which jeopardize its substantive performance and which future reforms ought to seek to correct:

1. At no place in the current system is a systematic, iterative policy overview being performed. Policy is generally made on a program by program basis. Procedures for considering program decisions in relation to one another are very weak and to the extent that they exist at all at truly authoritative levels of the bureaucracy they are intuitive and inexplicit.

2. For programs which have different target populations or otherwise serve special interests (as is the case with most domestic programs) the mechanisms in the political bargaining process for enabling appropriate exchanges to take place are weak or non-existent. Hence programs which are designed for important but limited purposes are regularly diluted (with great danger to their effectiveness) by being extended as a result of the Congressional bargaining process to provide for general coverage—e.g., the Model Cities Program—or they are captured for completely different purposes.

3. As a consequence of the great uncertainty about an existing or proposed program's performance and of the elaborate constellation of political forces behind existing programs, the dominant process for making critical budgetary decisions is overwhelmingly an incremental one which deals largely in small to moderate percentage changes in previous budget levels and focuses largely on new programs. This process leaves the existing structure of the budget unexamined and in generally unable to introduce any penetrating consideration of the impact of various budget choices on the large base of on-going programs. It is generally believed that major, qualitative changes can be achieved within existing political realities if such changes are spread out over more than one fiscal year and appear in successive budgets as a series of incremental changes directed toward some goal of reallocation. However, since the current system doth not allow for serious decisions beyond a single fiscal year in most areas, and since overview and forecasting mechanisms are weak, the government has little capacity to make major, beneficial reallocations in this way.

4. Learning mechanisms in the current policy process are very weak. Experiments are not conducted to test the underlying causal assumptions which are built into policy programs. Programs are not operated in such a way as to yield systematic evaluative information. A feedback cycle from program experience to program modification and improvement is either non-existent, overly extended in time or very limited in scope. The current welfare system, for example, was created by legislation originating over thirty years ago, and it has distributed many billions of dollars of welfare funds since that time. However, it has not generated systematic, reliable data on the recipients of welfare in terms of their income, education, race, religion, or sex. Nor has the experience with welfare provided any substantial, scientific knowledge as to the effects of welfare benefits on the recipients and the society at large. Such data and knowledge are critical if government performance is to improve. Many people now feel that the welfare system has created some very perverse incentives in positively discouraging work and family cohesion. It required a long time for these problems to be perceived. Even now with strong suspicions firmly in the public consciousness, such suspicions cannot be definitively tested against cumulative experience with the system.

5. The process of formulating new legislation is not regularly and systematically related to the resource allocation process. Though the major analytic effort in the current system is directed toward the creation of new legislation, it is conducted to a large extent *ad hoc* with only accidental relationship to the existing structure of programs. The widespread use of special task forces which are disbanded after they report means that, at most, only one analytic cycle is completed.

6. The incremental, relatively unanalytic, and unintegrated process of decision-making, which now obtains, has a systematic tendency to set inappropriate values for two categories of demand:

(a) the demand for the provision of public goods and for the control of external effects.

(b) the private needs of important but less powerful and less privileged segments of the population—notably low to moderate income citizens. Methods for establishing and forecasting this sort of demand are exceedingly weak, inexplicit, and unsystematic. The mechanisms for organizing and for giving effect to demands for the private benefits of government operations are very strong by contrast.

To say all this is not to argue—as some social critics now do—that the democratic process of our current institutions must be abolished. The question, rather,

is how to make the system operate more effectively and efficiently. Furthermore, given the complexity and heterogeneity of current social needs, it also becomes necessary to re-examine the role of government in meeting those needs. Massive Federal programs which provide goods and services to designated groups within the nation represent one way to proceed, and have been characteristic of the past 36 years. But there are other possibilities, and these too must be explored.

SECTION III: THE FUNCTIONS OF PPB

The movement for improving public performance, briefly reviewed in the first section, has been directed against the often-observed tendencies of government to proceed simply on the inertia of past programs, to be driven by poorly comprehended and distorted political forces, and to learn only by very slow cycles of trial and error. Analysts of government activities have come to recognize that these are natural tendencies which derive in part from the very imperfect state of human knowledge and from the clash of highly diverse and often conflicting social goals. The industrial entrepreneur, the suburban worker, and the ghetto-dweller impinge upon one another in ways that are not fully understood, and their individual values do not admit to perfect reconciliation either in intellectual or in political terms. These facts are stable features of the human condition which are not likely ever to disappear. Still, reasonable men have aspired to better governmental performance. While admitting the inevitability and the great consequence of human limitations, many knowledgeable men in the past 60 years have sought reforms in the government process which upgrade overall performance by mitigating the effects of these natural human tendencies.

The prescriptions of the reformers constitute in essence a description of the analysis which ought to guide the choices of government officials. The reformers have recognized the tendency of government to lose sight of purposes, and they have demanded as a basis for action explicit, precise measurements of how the needs of society will be affected. They have recognized the tendency to proceed by momentum of the past, and they have demanded that any course of action prove itself in competition with alternative paths to the same goal. They have recognized the limitations of scarce resources and they have demanded efficiency—that program should be chosen which delivers a given amount of benefit for the least cost or, alternatively, which gives the greatest benefit for a given cost. They have recognized uncertainty, and they have demanded a continuous examination and reexamination of assumptions and a continuous search for new and better information. They have recognized a tendency to be short-sighted, and they have demanded five year planning horizons.

Though major decisions of government cannot be completely determined by any set of prescriptions of this sort, the demands of the reformers require that the men responsible for making these decisions have available to them that information and structured argument which attempts to answer the questions raised. The argument and the process of producing it we call, simply, analysis.

Analysis is the core of the system which most recently has carried the cause of reform. Labeled Planning, Programming, Budgeting, (PPB), this system is a set of organizational procedures designed to enable high quality analysis to be done on issues where the government must choose a course of action. Budget expenditures are categorized by the valuable output to which they contribute (Program Budgeting). Budget expenditures for a given program are projected out over five years or more to give a realistic picture of both costs and benefits (Programming). This process also permits the policy-maker to judge the longer run commitments involved in the budgetary decisions of a given year as well as the discretionary resources likely to be available in the future. These procedures provide input into a continuous, cyclical process of analysis (Planning) which sets objectives, defines alternatives, gathers pertinent data, measures costs and benefits and then reexamines each step again.

In considering the matter more specifically we can see that the PPB system in attempting to introduce more systematic analysis into the government decision process, was designed to perform five important functions. *In the first place analysis is designed to substitute in part for the free market as a mechanism for evaluating the worth of government activity.* In many areas of government policy there is no market mechanism by which to test the efficiency and effectiveness of the programs that are being devised. National defense is generally felt to be the prime example. Law enforcement is another, as

are many measures taken to preserve public safety. In other areas, the use of market mechanisms are possible in principle but such mechanisms are not in fact operating properly. The provision of medical care is a prime example of such a problem. In these situations some discipline must be imposed to help define demand, to reward and expand productive activity and to cease inefficient, undemanded activity. Analysis is intended to provide such discipline.

This is not to say that analysis is in competition with market mechanisms or in any way incompatible with them. Far from that, analysis when properly pursued should drive our highest officials to evaluate the relative wisdom of direct provision of goods and services by the government on one hand and decentralized, incentive mechanisms for achieving the same result on the other. If good grounds for using the latter mechanisms appear, then analysis must service government officials in implementing those mechanisms, in monitoring their performance, and in regulating and/or changing them where this is required.

Second, in areas where the government does act directly, analysis is designed to provide the decision-maker with some overview of the highly fragmented activity of government agencies. With many different agencies producing highly complementary and in some cases competing products, the problem of achieving a managerial overview has been severe and is becoming worse. The last three decades have seen a very sharp expansion in the scale of government activity. One need only return to the late 1930's to find federal budgets under \$5 Billion—in budgetary terms, something around 3% of current operations. This expansion has severely strained the managerial capacity of government and there is a presumptive case that the old techniques cannot survive. In default of an organizational structure in which there is no overlap in function across agencies, no need for trade-offs among superficially dissimilar programs, no questions of marginal utility, the high-level decision-maker needs mechanisms for integrating his decisions. These mechanisms are very weak in the traditional system. The PPB system was designed to provide better ones.

Third, in situations where resources are scarce (and these situations are ubiquitous if not universal) the decision to engage in one beneficial activity denies the resources which would be required for another. For example, very expensive irrigation programs which encourage inefficient agriculture in a time of crop surpluses soak up resources sorely needed for other social problems. Even more directly, programs regularly produce effects which are desirable for one set of values but detrimental to another. Building major highways within urban areas may ease traffic congestion, but it also has some serious negative effects on the integrity of the neighborhood adjacent to the roadway. Urban renewal programs have exacerbated housing problems for low-income citizens. The construction and expansion of airports causes serious problems for neighboring communities. Circumstances of this sort provide, of course, the central stuff of politics, and legitimately so. However, many of the problems the government has had in this area have arisen not because of a political decision to procure the benefits and accept the negative consequences. Rather they have come about because the negative effects were not seriously considered and alternatives were not designed or compared systematically with the original proposal. The analytic overview which the PPB system has meant to provide seeks to service the political process with the information and choices required to minimize serious imbalances in the allocation of resources and in the direction of government effort.

Fourth, analysis is designed to provide a time framework for policy decision which utilizes whatever forward view basic knowledge will allow. The traditional system tends to confine severely the time framework of analysis—generally to within the annual budgetary cycle. This precludes many interesting alternatives which must be conceived well in advance if they are to be utilized at all. It also precludes coordinating policy purposes over an extended series of decision points. As noted above, sharp changes in allocation away from existing programs within a single year are very often rendered impossible both by the constellation of political forces gathered around the *status quo*, and by the lack of discretionary resources. Hence, decision-makers are placed under very serious constraints if they lack a capacity to make a series of small changes with a medium range (4-6 years) goal of reallocation in mind. Analysis is designed to confer that capacity; the traditional system tends to deny it.

Finally, systematic analysis is designed to enable government programs to grow with experience. It is a direct result of complexity and uncertainty that the initial conceptions of a social need and of a means (a program) for meeting

it are seldom the most appropriate or beneficial ones. The capacity of the government to perform well is limited by its understanding of the need it is addressing, of the proper governmental objective in relation to that need, of the underlying causal relationships determining program effects, etc. The procedures of analysis are designed constantly to upgrade the government's grasp of a policy area in which it is operating and to adjust its programs accordingly. The traditional system with its tendency to solidify the *status quo* compromises that capacity.

Although no one piece of analysis can reflect adequately all the functions that the analytic system is designed to perform, it is useful to provide a simple analysis of a government program in order to illustrate the kind of argument which the PPB system was designed to produce. Let us focus on the area of higher education and consider the particular government programs for expanding federal aid to higher education in order to achieve equality of opportunity.

SECTION IV: FEDERAL AID TO HIGHER EDUCATION AND EQUALITY OF OPPORTUNITY

[An example of analysis]

One of the principal objectives of the expansion of federal aid to higher education is to improve the equality of opportunity of the Nation's youth to acquire college education. In other sectors of the economy improving the equality of opportunity generally means the removal of discriminatory barriers to the market but in higher education the meaning is somewhat different. The objective in this sector is the lowering of economic barriers (i.e. price levels) which limit the enrollment of students from low income families in the Nation's colleges and universities. Although the major response to this objective has been an increased level of funding for federal student aid programs—grants, subsidized loans, and work-study activities—institutional aid programs have also been supported because of their impact on the main objective. This support is based on the assumption that institutional subsidies either lower the cost or improve the quality of the higher education acquired by low income students. This assumption remains largely untested. Little evidence has been developed to show the enrollment patterns of low income students among the various institutions or types of institutions which receive federal support. This section will present some preliminary views of what such an inquiry into enrollment patterns and subsidy flows might look like. (The reader should be fully aware of the preliminary state of this effort because inconsistent data from various years and sources have been used.)

The first question might be: what is the current flow of federal support into higher education institutions? The answers might appear as follows:

TABLE 1.—FEDERAL FUNDS TO HIGHER EDUCATION INSTITUTIONS¹ (CURRENT FUND REVENUES), 1965-66

[In millions of dollars]

	All institutions	Private				Public	
		Universities	4-yr.	2-yr.	Universities	4-yr.	2-yr.
Organized research.....	2,037.8	678.6	463.1	1.3	856.6	37.9	0.3
Other educational and general support (including auxiliary services).....	634.1	114.1	37.4	2.2	303.3	148.7	28.3
Total.....	2,671.9	792.7	500.5	3.5	1,159.9	186.6	28.6

¹ From "Financial Statistics of Institutions of Higher Education—Current Funds Revenues and Expenditures, 1965-66," OE-52010-66.

It is not clear whether research expenditures should be viewed as education subsidies or simply as payments for outputs purchased by the government. They do support non-instructional activities in addition to subsidizing faculty salaries. These non-instructional activities have varying degrees of connection to the instructional process. In the remainder of this analysis we will examine the distribution of both "Other Educational" and "total" federal subsidies. If

general institutional support programs differ from student aid activities in their impact on low income students it is necessary to view them separately in an analysis of their impact on equality of opportunity. Table 2 reports the distribution of Federal student aid funds in fiscal year 1965-66.

TABLE 2.—FEDERAL STUDENT AID FUNDS DISBURSED BY HIGHER EDUCATION INSTITUTIONS,¹ 1965-66
(In millions of dollars)

	All institutions	Private			Public		
		University	4-yr.	2-yr.	University	4-yr.	2-yr
Federal funds.....	413.3	92.2	93.4	5.3	140.6	70	11.8

¹ "Financial Statistics of Institutions of Higher Education—Student Financial Aid, 1965-66," OE-52011-66.

Knowing roughly the distribution of federal subsidies which may affect our effort to achieve "equality of opportunity" we will now want to ask about the student enrollment patterns among the various types of institutions. We will want to pay particular attention to the enrollment of low income students because the "equality of opportunity" objective is specifically aimed at these individuals. Table 3 shows the total enrollment for each type of institution in the Fall of 1965.

TABLE 3.—ENROLLMENT IN HIGHER EDUCATION INSTITUTIONS,¹ FALL 1965

All institutions	Private			Public		
	University	4 year	2 year	University	4 year	2 year
5,570,271.....	669,907	1,140,460	105,236	1,633,870	1,280,790	739,918

¹ "Digest of Educational Statistics," 1968.

Figure 1 shows the cumulative income distributions of freshmen students in the different types of institutions in the Fall 1968. Using this figure to locate the concentrations of students from low-income families we find the following:

TABLE 4.—CONCENTRATIONS OF LOW INCOME FRESHMEN, FALL 1968
(In percent)

Percent of students from families with income annually of less than	Private			Public		
	University	4-year	2-year	University	4-year	2-year
\$6,000	7.9	13.2	15.9	12.4	20.4	22.0
\$8,000	17.2	23.0	33.8	25.5	38.1	41.5
\$10,000.....	29.7	34.8	50.8	41.8	56.3	60.4

This table shows that, in general, public institutions tend to have higher densities of low income students and universities tend to have lower densities than four year colleges which, in turn, have lower densities than two-year institutions. If these students are the ones whom we are interested in subsidizing, our next question must be—what are the subsidy levels which low income students receive?

Because Federal support to colleges and universities provides funds for a variety of purposes and frees institutional resources for practically any use, it is probably inaccurate to assume that all the institutional support acts as a subsidy for low income students. It is probably more accurate to assume that all students in a particular institution receive the same subsidy from these essentially fungible resources. Because we lack data for individual institutions, it will be necessary to evaluate the average subsidy for students in a particular type of institution. Table 5 reports these per student subsidies and its figures are simply the Federal funds reported in Table 1 plus the capital fund subsidies described in Appendix B, divided by the appropriate institutional enrollments reported in Table 3.

FAMILY INCOME DISTRIBUTIONS OF
FRESHMEN IN FALL 1968
(American Council on Education
"National Norms for Entering
Freshmen - Fall 1968" P. 39)

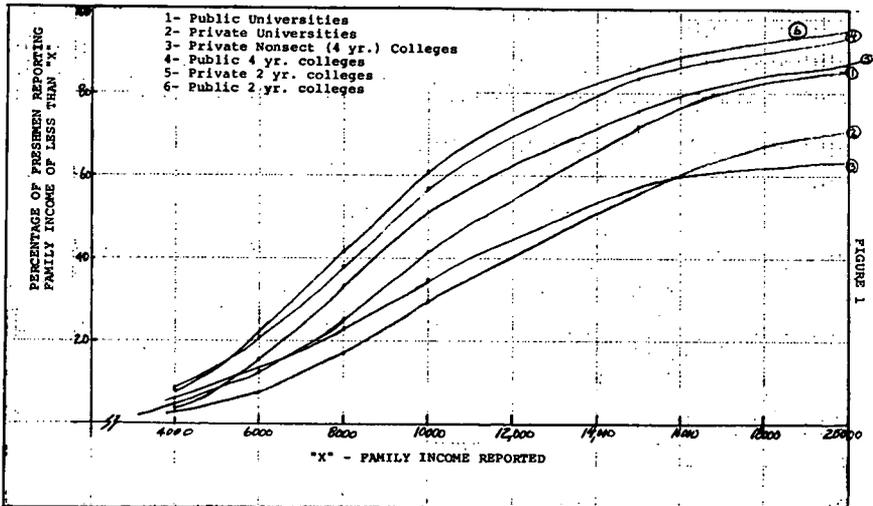


TABLE 5.—AVERAGE FEDERAL SUBSIDY PER STUDENT 1965-66

Federal funds	All institutions	Private students			Public students		
		University	4-year	2-year	University	4-year	2-year
Other educational and general support.....	\$114	170	33	21	186	116	38
Capital subsidies (see appendix B).....	7	7	6	1	6	13	3
Total (excluding research).....	121	177	39	22	192	129	41
Total (including research).....	487	1,190	495	34	716	159	42

Comparing Table 5 with Table 4 shows an interesting and somewhat discouraging result if one is interested in the objective of "equality of opportunity." We find that in general, as the concentration of low income students increases, the general federal subsidy per student declines. This observation holds whether or not research funds are included in the subsidy amounts. It is also striking to observe that in 2-year public institutions which have 41.5% of their student body reporting annual family incomes of under \$8,000, the subsidy per student is approximately 1/30 the subsidy given to private universities, in which only 17.2% of the students report comparable levels of income. Even when all research support is excluded, the ratio of subsidies exceeds 1:4.

It is possible however that the distribution of federal student aid funds supplements the institutional aid funds in such a way as to further the equity of opportunity objective. Table 6 (see following page) shows the average federal student aid subsidy if we assume that all student aid subsidies go to the students with family incomes of less than \$8,000-\$10,000. The number of students in these classes is found by multiplying the freshmen percentages in Table 4 by the enrollment levels in Table 3.

Adding the federal student aid subsidies to the average subsidy resulting from federal institutional support will result in the average total federal subsidy received by low income students in various types of institutions. This addition is shown in Table 7.

TABLE 6.—AVERAGE FEDERAL STUDENT AID PER RECIPIENT STUDENT
[Dollars per student]

Interpretation ¹	If recipients are student with family income	Private			Public		
		Universi- ties	4-year	2-year	Universi- ties	4-year	2-year
If all Federal funds are counted as subsidies.	Less than \$8,000.....	800	356	149	337	143	38
If only real subsidies are counted.	Less than \$10,000.....	463	235	99	206	97	26
	Less than \$8,000.....	436	113	30	163	40	5
	Less than \$10,000.....	253	75	20	99	27	4

¹ Appendix A describes these interpretations more fully and includes the subsidy calculations.

TABLE 7.—AVERAGE FEDERAL SUBSIDY RECEIVED BY LOW-INCOME STUDENTS—TOTAL OF
INSTITUTIONAL AND STUDENT AID PROGRAMS (AMOUNT PER STUDENT), 1965-66

Student aid interpretation	Institutional aid included—	If all student aid recipients have family income of less than—	Private			Public		
			University	4-yr.	2-yr.	University	4-yr.	2-yr.
All Federal funds counted as subsidies.	All except for or- ganized research.	\$8, 000	\$977	\$395	\$171	\$529	\$272	\$79
		10, 000	640	274	112	398	226	67
		8, 000	1, 990	801	183	1, 053	302	80
Only real subsidies are counted.	All including or- ganized research.	10, 000	1, 425	680	133	922	256	68
		8, 000	613	152	52	355	169	46
		10, 000	430	114	44	291	156	45
	All including or- ganized research	8, 000	1, 626	608	64	879	199	47
		10, 000	1, 443	570	54	815	186	46

One possible way to evaluate the impact of the total federal subsidy flow is to compare the per student subsidies received by low income students (Table 7) with the per student subsidies received by other students (Table 5). The range of subsidy ratios is now lower—given the assumption that only lower income students receive federal students aid funds—so that the total federal subsidy to low income students in two-year public institutions is now approximately 4-7% (depending on the choice of assumptions regarding subsidy definition) of the subsidy given to other students in private universities. This comparison is even more discouraging to one interested in "equality of opportunity" when the concentration of low income students in institutions in which low income students receive lower subsidies is analyzed. These data are presented in Table 8 below:

TABLE 8.—DISTRIBUTION OF LOW INCOME STUDENTS

Institution type	Number of students with family income less than \$8, 000	Number of students with <8,000 found within this institution type	Number of students with family income less than \$10, 000	Number of students with <10,000 found within this institution type
Private:				
University.....	115, 224	7.1	198, 962	8.0
4-year.....	262, 305	16.1	396, 880	15.9
2-year.....	35, 600	2.2	53, 505	2.1
Public:				
University.....	416, 636	25.6	682, 957	27.3
4-year.....	487, 980	30.0	721, 084	28.8
2-year.....	307, 065	18.9	446, 910	17.9
Total.....	1, 624, 810		2, 500, 298	

Observing the flow of federal subsidies and the enrollment pattern of low income students a policy maker who is interested in equality of opportunity might decide to develop or expand those federal programs which are directed at four and two-year public colleges. This is so because:

These institutions have large concentrations of low income students,
Students in these institutions generally receive low federal subsidies, and

A large percentage of the total currently enrolled low-income students are found within these institutions.

But as shown in Figure 1, there are also a large number of students from non-low income families who also attend these institutions. Thus, a policy maker would want to direct the federal subsidies into those particular institutions which either have large densities of low income students, or large numbers if he wants to have as large an impact as possible. Alternatively, the policy maker might want to direct the subsidies even more discriminately to low income students as opposed to institutions in which they are heavily enrolled. In this regard he might favor a program of direct transfer payments or distribution of education vouchers to low income students.

Table 9 shows the wide range of enrollment patterns which exist within a single type of institution and illustrates the need for carefully choosing the institutions to receive federal subsidies even when a program is directed at a type of institution in which low income students are heavily enrolled.

(See Table 9 below :)

TABLE 9.—DENSITIES OF LOW INCOME STUDENTS IN 4-YEAR PUBLIC COLLEGES (NUMBER OF INSTITUTIONS)

Percent of freshmen reporting family income of less than \$6,000 (percent within a specific institution)	Size of institution			
	500	500 to 2,499	2,500 to 5,000	5,000
67.....		5.4	5.4	
50 to 67.....		10.8	5.4	
33 to 50.....		10.8	15.4	
20 to 33.....	15.4	30.8	30.2	22.8
15 to 20.....		12.6		25.2
10 to 15.....	15.4		40.6	10.4
5 to 10.....		10.7	25.7	25.9
0 to 5.....				15.4

NOTES

These data are derived from a sample survey of institutions conducted by the American Council on Education. The fractions of institutions in table 9 result from the multiplication of the sample's distribution by the council's weighting scheme. Preliminary work also indicates that similar distributions of densities of low-income students occur within other categories of institutions as well.

APPENDIX A

ALTERNATIVE VIEWS OF STUDENT AID SUBSIDIES

The student aid subsidies which appear in Table 6 of the text result from two interpretations of the subsidy effect of programs. The interpretations, and others, are described in this appendix. As noted in Table 2, higher education institutions disbursed \$413.3 Million of Federal student aid funds in 1965-66. These funds included federal monies for outright student grants, subsidized student loans, and student work assignments. The different subsidy values for a dollar in each of these activities account for the alternative views of federal student aid subsidies.

Grants

Student aid grants, or scholarships, do not have to be repaid by the recipient student and do not require him to work in order to receive them. Thus the entire grant should be counted as a subsidy. In 1965-66, higher education institutions disbursed the following quantities of federal student scholarships:

TABLE A-1.—FEDERAL STUDENT AID FUNDS DISBURSED BY HIGHER EDUCATION INSTITUTIONS¹

GRANTS, 1965-66

[Dollars in millions]

Universities	Private		Public		
	4-year	2-year	Universities	4-year	2-year
38,066.....	6.874	0.156	49.211	4.968	0.402

¹ Financial statistics of institutions of higher education—Student financial aid, OE-52011-66.

Loans

Because the student who receives a loan is required to repay it—in part or in full—it is inappropriate to treat the entire loan principal as a subsidy. In 1965-66, most federal student loan programs did not require the student to pay interest while he was enrolled in school; and, after he commenced paying it was at a below-market, subsidized interest rate. The student could also write off some of the loan principal if he was employed in certain occupations—e.g., teaching—following college graduation. Because of the multiplicity of subsidies which result from alternative student enrollment and employment options, the calculation of the subsidy resulting from federal student loan activities is difficult. Rather than evaluate all the alternatives, we will look at the following representative case.

Assume that the average delay between the issuance of a loan and the commencement of the repayment is three years. During this period the student makes no interest or principal payments and when he commences repayment, the interest rate he pays is 3% rather than the "market rate". Calculating the present value (using a 7% discount rate) of the student's repayment stream at the time at which the loan was granted results in a present value of 67% of the original loan principal. Thus the student received a 33% subsidy. Continuing to delay repayment by enrollment in school, military service or other "non-repayment activity" or writing off the principal through teaching (or other "principal cancelling activities") would tend to raise the subsidy percentage above 33%. Thus the subsidy value of federal loan funds is probably between 33% and 100% of the loan principal.¹

Table A-2 below shows the subsidy levels of the 1965-1966 Federal student loan funds.

TABLE A-2.—SUBSIDY EFFECT OF FEDERAL STUDENT LOAN FUNDS DISBURSED BY HIGHER EDUCATION INSTITUTIONS, 1965-66

[In millions of dollars]

Percent of Federal loan funds counted as subsidy	Private			Public		
	University	4-yr.	2-yr.	University	4-yr.	2-yr.
100 ¹	37,029	49,002	2,709	56,381	44,322	3,609
33.....	12,220	22,771	.894	18,606	14,626	1,183

¹ OE-52011-66 above.

Work-study

The calculation of the subsidy resulting from Work-Study funds is much less clear. In order to receive the funds the student must work and thus much of the subsidy probably flows to his employer who pays only a small share of his salary. In large part, the employer is his education institution itself and thus work-study funds may be viewed as an institutional- or general-subsidy. Another view should see the student receiving a higher wage for work as a result of the federal funds and thus this wage differential may be viewed as a subsidy. If the student job would not have existed without the federal funds and the work is not detrimental to the student's educational or other activities, the subsidy effect may approach the full wage level and thus the federal subsidy to the student would approach the entire federal contribution. Because of the lack of a clear definition of subsidy, we will assume that the range of subsidy value is between 0 and 100% of the federal contribution. Table A-3, below, reports this contribution:

TABLE A-3.—FEDERAL STUDENT AID FUNDS DISBURSED BY HIGHER EDUCATION INSTITUTIONS¹ WORK-STUDY FUNDS, 1965-66

[Dollars in millions]

Universities	Private		Universities	Public	
	4-year	2-year		4-year	2-year
17,061.....	16,586	2,440	34,959.....	20,850	7,793

¹ OE-52011-66 above.

¹The calculations for this section were done by Robert Hartman of The Brookings Institution.

Alternative total subsidies

The following table shows the results of adding alternative interpretations of federal fund subsidy effects. In all cases the subsidy levels are per student and result from the division of alternative summaries of Tables A-1, A-2, and A-3 by the enrollments of low income students in various type institutions.

(See Table A-4 below :)

TABLE A-4.—ALTERNATIVE DEFINITIONS OF AVERAGE FEDERAL STUDENT AID PER "RECIPIENT" STUDENT, 1965-66

[Dollars per student]

Interpretations	Private			Public		
	Universities	4-year	2-year	Universities	4-year	2-year
I. "RECIPIENT" STUDENTS HAVE FAMILY INCOME BELOW \$8,000						
(a) All grant funds plus 33 percent of loan funds.....	\$436	\$113	\$30	\$163	\$40	\$5
(b) All grants and 100 percent of loans.....	652	289	81	253	101	13
(c) All grants and 33 percent of loans and all work study.....	584	176	98	247	83	31
(d) All Federal funds.....	800	356	149	337	143	38
II. "RECIPIENT" STUDENTS HAVE FAMILY INCOME BELOW \$10,000						
(a) All grant funds plus 33 percent of loan funds.....	253	75	20	99	27	4
(b) All grants and 100 percent of loans.....	377	191	54	155	68	9
(c) All grants and 33 percent of loans and all work study.....	338	116	65	150	56	21
(d) All Federal funds.....	463	235	99	206	97	26

Note: Interpretations (a) and (d) are those found in table 6 of the text.

APPENDIX B

SUBSIDY EFFECTS OF FEDERAL CAPITAL GRANTS AND LOANS TO HIGHER EDUCATION INSTITUTIONS

[Non-student aid]

In 1965-66 there were several federal programs which gave grants or subsidized loans to higher education institutions for capital facilities. Table B-1 below shows the distribution of these funds:

TABLE B-1.—CAPITAL FUND AND LOAN RECEIPTS OF HIGHER EDUCATION INSTITUTIONS¹ (EXCLUDING STUDENT LOAN FUNDS), 1965-66

	Private			Public		
	Universities	4-year	2-year	Universities	4-year	2-year
Federal capital funds.....	\$36,120,000	\$35,721,000	\$805,000	\$71,002,000	\$165,283,000	\$25,233,000
Federal capital fund loans.....	49,551,000	172,359,000	3,645,000	109,848,000	87,638,000	5,045,000

¹ "Financial Statistics of Institutions of Higher Education—Property, 1965-66, OE-52012-66."

Because capital fund subsidies allow an institution to charge lower fees for an extended period of time—approximately the lifetime of the capital facility or subsidized loan—rather than the single year in which they are received, it is inaccurate to add them, in total, to current fund subsidies. An approximation of the annual subsidy value is the cost difference between the annual cost of the facility with and without the federal contributions.

Subsidies from grants

If we assume that a college facility has a forty-year lifetime and that the market interest rate (or institutional opportunity cost for its own funds) is 6%

on forty-year commitments, the following annual subsidy results from a federal capital grant of \$1:

Institution saving on depreciation cost.....	\$0. 025
Institution saving on 6% capital repayment of loan*.....	. 066
Total annual subsidy.....	. 091

*Annual cost to repay a \$1 note at 6% over 40 years.

Subsidies from loans

The annual subsidy from a federal subsidized loan is the difference between the annual repayment cost of the federal loan and the repayment cost of a commercial loan. If both loans are for forty years and the federal interest rate is 3%, while the commercial rate is 6%, the following subsidy results from a Federal loan of \$1:

Annual cost to repay a 40-year, 6% loan.....	\$0. 066
Annual cost to repay a 40-year, 3% loan.....	. 043
Annual subsidy.....	. 023

Table B-2 shows the annual subsidy values of the federal capital fund programs shown in Table B-1. The amounts in Table B-2 result from a multiplication of the total funds by the appropriate annual subsidy levels per \$1 of federal funds and the subsequent division of the annual subsidy by the number of students enrolled in the various type institutions (Table 3).

TABLE B-2.—ANNUAL SUBSIDIES RESULTING FROM CAPITAL FUND AND LOAN RECEIPTS OF HIGHER EDUCATION INSTITUTIONS

	Private			Public		
	Universities	4-year	2-year	Universities	4-year	2-year
Federal capital funds.....	\$3,287,000	\$3,251,000	\$73,000	\$6,461,000	\$15,041,000	\$2,296,000
Federal capital fund loans.....	1,140,000	3,964,000	84,000	2,526,000	2,016,000	116,000
Annual subsidy per student.....	7	6	1	6	13	3

SECTION V: INSTITUTIONALIZATION AND PERFORMANCE OF THE PPB SYSTEM

It is clear that a conclusive evaluation of the impact of the Planning, Programming and Budgeting systems on government policymaking cannot be attempted without the collection of extensive data on the system's actual operations. Because the principal measure of the impact of PPBS should be the effectiveness of the policies which it has helped to develop and because these consequences are difficult if not impossible to observe in the short run, a thorough evaluation is impossible at this time. Nevertheless, the initial experiences with PPBS have produced some tentative impressions among those who have operated within the systems on a full or part time basis, and as observers. Many of these impressions result from the nature of the reforms introduced, and thus an attempt to present them must be paralleled by a description of the defense and non-defense analytical systems. Because the timing of this review coincides with the beginning of a new administration, we have confined our study to the practices which were in existence prior to January 1969. Thus this review is based on the evidence and impressions of approximately eight years of "analytical decision making" in the Department of Defense and three and one-half years in the remainder of the federal agencies.

PPB IN DEFENSE POLICY

Within the Department of Defense, the use of program budgeting and systems analysis for high level decision-making began with the appointments of Robert S. McNamara and Charles J. Hitch to the offices of Secretary of Defense and Assistant Secretary of Defense (Comptroller). Although similar techniques had been used within various lower levels of the military services for two decades, the new secretary and his assistant brought them to bear upon major national

security policy decisions. This new level of usage became apparent in McNamara's initial attempts to familiarize himself with national security issues. These efforts took the form of a series of questions directed toward both the civilian and service personnel of his department. These questions related to the major policy and budget decisions the Secretary expected the new administration to confront in its initial years in office. He requested that the answers include discussions of alternative policies and their relative merits and demerits. A few of these responses were analytical in content and attempted to develop policy models for the new Secretary, but this analysis was largely limited to those issues on which analysts in the defense research community had been working prior to 1961. The new Secretary soon became convinced that a continuing and institutionalized system of inquiry and analysis would be necessary if he and the President were to have more than a marginal impact on the nation's defense posture. This realization combined with previous experiments with program budgets, led him to direct Hitch to develop the program budget and to establish a team of systems analysts within the office of the comptroller. Initially, Hitch recommended a limited program budget which included only strategic nuclear offensive and defensive forces, but McNamara requested that the budget categories include the entire Department's budget.

The program budget was designed to provide a framework within which the Secretary could structure his review of service requests and his recommendation to the President¹ and the Congress.² The budget was expanded to cover a five year planning horizon instead of the traditional single budget year presentation. This served to emphasize program costs rather than single year costs within the defense decision process. The analysts were brought into the Comptroller's Office in order to provide the Secretary with an independent view of Joint Chiefs of Staff and service recommendations, and thus allow him to structure his inquiries within the department.

Although the analysts had initially recommended a limited program budget and had limited experience in non-strategic policy areas, early analytical efforts were not limited to strategic nuclear policy issues alone. The Secretary actively sought the analysts' assistance in making other major force posture decisions, and early analyses of military manpower needs and mobility requirements were the basis of the development of the new administration's defense policy recommendations. Although the issues in the non-strategic policy areas and the analysts' limited knowledge of them tended to inhibit the early development of analytical models like those which had been developed for strategic policy analysis, the active "analytic style of debate" proved useful to the new defense policy-makers.

Gradually as the Secretary's analytical staff expanded in size and increased in its knowledge of non-nuclear policy issues, it became increasingly active in other areas of defense policy. The breadth of involvement increased to the extent that nineteen (19) Draft Presidential Memoranda and Defense Memoranda were prepared in 1968. (A listing of these can be found in Appendix A to this section.) These memoranda were the result of analytical efforts which ranged from detailed computer based models to "logical reviews" of service and civilian recommendations. As the civilian analysts moved into areas into which their knowledge was undeveloped, detailed interaction between the civilians and service personnel occurred. In some areas, the knowledge and judgment of experienced service personnel provided little insight for the analysts' policy studies while in others it provided both data and analytical frameworks useful to the analysts. Increasingly, civilian analysts found it useful to become involved in the early and detailed stages of policy development in order to insure the availability of viable alternatives for the Secretary. Military personnel with both analytical skills and operational experience were assigned to tours of duty within the Secretary's analytical staff in order to complement and supplement the resources of the civilian analysts.

The relationships between the Secretary, his analytical staff, and the services have not been uniform. They have depended on individuals, policies, political climates, and other variables which are involved in the defense policy making

¹ Draft Presidential Memoranda (DPMs).

² The Posture Statement given in testimony before the House and Senate Armed Services Committees.

process. Before describing the DOD analytical process in a few specific policy areas, it is useful to describe the overall framework within which it takes place.

The general foci of defense policy are the interactions between actual and potential American interests, commitments and international behaviors. The decision-making cycle in DOD begins, at least in a logical sense, with an input from the intelligence community which estimates the evolving capabilities and intentions of potentially active nations. These estimates are combined with above-noted interactions to define a potential "threat" which serves as a planning figure or demand quantity for which national security services are designed. After the "threat" is defined, the Joint Chiefs of Staff conduct a comprehensive review of possible "threat" levels, objectives, strategies, and force structures. This review results in the Joint Strategic Objectives Plan (JSOP). The JSOP thus represents an integration of the service-desired programs over a five to eight year planning horizon. Because budget guidelines or ceilings did not enter the JSOP process during the 1960's, the budget levels implicit in the JSOP-recommended force structures were usually significantly in excess of the level which the President was willing to allocate to national security.

In the 1960's OSD provided early guidance following the JSOP in the form of Tentative Force Guidance (TFG) and Major Force Oriented Issues (MFOI). The role of this guidance was particularly important since the JSOP process continued to involve solely the services and the JCS rather than the entire Department of Defense. The TFG and MFOI were intended to provide a structured framework within which post-JSOP debate would continue.

The exclusion of the Secretary and his representatives from the JSOP process had important effects. The services attempted to limit the information flowing to the Secretary and thus limit his ability to become an active participant in the substance of defense making. This also made the JSOP less useful to the Secretary in his attempts to constrain the military budget to executive-developed budget ceilings. The limited utility of the JSOP became increasingly critical as the Vietnam war expenditures expanded, and as the President attempted to minimize the adverse economic affects of these expenditures. In an environment of budgetary stringency for non-Vietnam-related defense expenditures, the Secretary was forced to rely on his civilian analysts for budget-cutting advice. In several policy areas, the information limitations imposed by the JCS-JSOP process caused the analysts in the Secretary's office to substitute analytical styles of argument for analysis combined with data in order to perform traditional budget-cutting exercise.

In an attempt to overcome the various deficiencies in the decision-making process the Secretary commissioned a number of Special Studies to be performed within the Office of the Chairman of the Joint Chiefs of Staff each year. These studies were directed at developing policy areas and were designed to provide the Secretary with guidance with which to review JSOP and other service recommendations.

These studies were among the key analytical inputs into the DOD planning process throughout the 1960's. They were followed by the initial Draft Presidential Memoranda (DPMs) which outlined potential Department of Defense recommendations for force and program levels. The DPMs were circulated to the JCS and the military services for comment, and then revised for submission to the Secretary for decision. The DPMs then represented the Department's recommendations to the President and became the established planning documents of the Department.

Defense programing proceeded on the basis of an official OSD publication entitled the *Five Year Defense Program* (FYDP). This summarized the approved defense plans and programs as generated by the DPM process. Guided by the DPM's and Presidential decisions, military and civilian officials would then submit program change requests (PCR's) to update the FYDP to be in accord with the executive decisions.

The budgeting process, itself, began with the preparation of budgets by all DOD components. These budgets were then submitted to the Assistant Secretary of Defense (Comptroller). These submissions were in accord with the approved DPMs and Program Change Decisions (PCD's) as represented in the updated FYDP. These budgets collectively became the DOD budget recommendation for the coming fiscal year. The budget then went through the executive budget review process within the Bureau of the Budget and was subsequently submitted to the Congress—along with the Posture Statement—as the President's defense program.

The three phases of the defense decision-making process—planning, programing, and budgeting—interacted in substantive terms and overlapped in time. It was approximately 18 months between initiation of the special studies and the JSOP planning efforts to the presentation of the fiscal year budget to the Congress. The detail with which the sequence was followed with respect to particular policy issues varied according to political and budgetary pressures, and the availability of analytical outputs. This decision sequence and the documentation which was developed to support it may appear at first glance to have been too formal to have been useful in the highly political arena in which defense policy was made throughout the 1960's. But it was designed and used to encourage the movement of the political debate to a more substantive plane. It was felt that a formal decision system was needed for the Secretary (and through him the President) to gain some continuing influence over the substance of military policy.

The performance of the system was varied. The theoretical model of the decision process was closely followed in the strategic nuclear policy arena. This was so for several reasons. Analysts at the Rand Corporation and elsewhere had been concerned with strategic policy for over a decade preceding McNamara's appointment. Thus the new DOD analysts were familiar with the issues of strategic policy and had already developed analytical models with which to evaluate alternative force postures and threats.

The influence of analysis was aided by competition among (and within) the three services in the strategic nuclear offensive and defensive arena. The Air Force backed the manned bomber, the land based ICBMs and the continental air defense systems; the Navy both backed and fought the Submarine Launched Ballistic Missile (SLBM) systems; and the Army continually supported its ABM programs. This competition brought extensive information to the Secretary about the performance attributes of the competing systems and even stimulated service-supported research intended to discredit other services' competitive systems. For example, the Air Force's "Project Defender" was largely directed at the development of decoys to enable ICBMs to penetrate potential Soviet ABMs, but in the process of decoy development and testing it found penetration of an ABM system so easily accomplished that the Army's ABM program recommendations were significantly discredited for several years.

These factors were almost entirely responsible for the increased impact of analysis on strategic nuclear affairs during the 1960's. As the civilian and service staffs became more familiar with one another, cooperation and information flow increased. Eventually the services came to use the strategic force models and calculations which had been developed in OSD and the debate increasingly shifted to disagreements over assumptions which entered the threat calculations, strategic objectives, the performance of operating and proposed weapons systems, and the damage levels which would be "unacceptable" to both the Soviet Union and the USA. This shift in the debate also occurred in the Executive-Congressional interaction process as illustrated in the analytical presentations of the sections of the Secretary's posture statement dealing with strategic nuclear issues and the subsequent congressional debate regarding strategic policy. Thus in the area of strategic nuclear policy, the debate was shifted in some part, into an analytical mode.

In other policy areas, the role of analysis in structuring the decision process was less extensive and somewhat more questionable.

In the area of airlift and sealift forces, the decision process closely followed the form of the reformulated strategic nuclear debate. The existence of an understood analytical model coupled with disputes among the armed services allowed the analytical mode of the Office of Systems Analysis to play a major role in shaping policy regarding strategic mobility during the 1960's. After McNamara decided on the importance of mobility and after the analytical effort had progressed enough to begin making recommendations on force levels, the analysts within OSD became extremely influential in the design of the military's lift requirements and the forces to meet these requirements.

In the land or conventional war arena the impact of analysis was lower. The lack of any accepted analytical model of land force interactions, problems of data, and the essential lack of disputes among the services, lessened the potential impact of system analysis. The lack of an accepted model of land force interactions is due in large part to the complexity of ground warfare, uncertainties about weapons performance, and difficulties in formulating measures of

effectiveness. The most productive involvement of analysis occurred after simple numerical matching models of land forces were developed. The results of these models played some role in establishing approximate manpower requirements with which the Secretary could examine critically the Army manpower recommendations. Analytical inputs were also important in improving the Secretary's understanding of the conventional war capabilities of potential adversaries. These efforts were essentially attempts to compare U.S. and allied ground force parameters—costs, levels of effectiveness (e.g. "firepower scores"), equipment and manpower—with similar parameters for the forces of potential opponents. These studies were in large part responsible for the declining estimates of the force levels which the East Europeans and Russians could bring into a European encounter. These lower estimates also allowed the U.S. and its NATO allies to plan conventional, rather than nuclear, responses to potential European crises. The existence of these extremely simplified models also highlighted the limitations on the information with which the Army designed its manpower requests. The Army (as had other services in the past) was quick to note the relative simplicity and lack of refinement in the OSD calculations, but it was hard pressed to provide alternative calculations and arguments which supported its recommendations.

In other policy areas, formal analysis played an even smaller role. In many Navy problems no models were developed and thus the civilian analysts could not evaluate the Naval proposals on any performance criteria. This lack of formal analytical models was caused by several factors. In some areas, it was relatively easy to develop force interaction models but no data existed to provide parameters for the models. In other areas, the range of uncertainty in the force interaction results was too great to allow models to be developed from the available data observations. Often the level of uncertainty was so great that even though models could be developed the results were not understandable. In some policy areas, the objectives were too poorly defined or non-operational to allow analytical efforts to be productive. In many cases offices within the Navy simply refused to give civilian analysts any information with which they could begin to develop such evaluative techniques. Thus the role of the Office of Systems Analysis in many naval decisions was limited to either the enforcement or prescription of budget ceilings or the development of small analytical efforts in which alternatives to naval recommendations could be easily developed and costed.

For reasons of both classification and time, it is impossible to describe fully the myriad of styles and levels of impact of analysis in military decisions, but it must be noted strongly that the role of analysis varied across program and service and that the style of analysis also varied along a wide continuum.

PPBS IN THE NON-DEFENSE SECTOR

In response to President Johnson's directive of August, 1965, the analytical reforms first utilized in the defense decision process were applied to the non-defense sectors of the Federal Government. The impact and style of the PPB reforms in the domestic agencies varied in much the same ways as did those of the Office of Systems Analysis within the Pentagon.

Although this review takes place only three and one half years after President Johnson's original PPB message, it is already possible to observe the performance of analysis in the domestic agencies and to provide a preliminary evaluation of its impacts. Before attempting this evaluation it is necessary to describe both the formal nature of the system and the informal nature of the processes that have evolved in the domestic PPB system.

President Johnson's initial memorandum directing all executive agencies to implement and use the DOD-demonstrated decision techniques was based on his understanding that the PPB system would serve to increase the Federal Government's ability to:

1. identify national goals with greater precision
2. determine the relative urgency of those goals
3. develop and analyze alternative means of reaching those goals more effectively
4. inform itself directly of the probable costs and impacts of the programs design to aim at these goals

In response to his message, all agencies were directed to develop integrated PPB systems and the Bureau of the Budget was given the central role of fostering, monitoring, and supervising the development of the agencies' PPB systems. This central role of the Budget Bureau assured that the formal PPB system of each department would concentrate extensively on the budget making process. This concentration has led to a major criticism of PPB—that it focused analytical effort on budget decisions to the exclusion of other major on-going political and legislative activities within the executive departments. The budget concentration in the initial PPB directives and supervisory efforts was explicit and in large part based on the BOB analysts' experience within the Pentagon where the major decision points in strategic and policy issues were large scale systems procurements. This focus was also the result of the extensive involvement of economists within the domestic PPB staffs and their concentration on resource allocation problems.

In response to the Presidential directive, the Bureau and the agencies initially affected began to develop procedures, documents and staffs with which to implement PPB. Although the directive called for the establishment of PPB throughout the executive departments and establishments, a time phased plan of implementation was developed for three groups of agencies. There was, however, no apparent effort on the part of the Bureau of the Budget to concentrate its scarce analytical resources upon a few agencies or issues of prime importance in the major domestic or non-defense sectors. This lack of concentration may be a prime factor in determining the performance of the non-defense PPB efforts. Without this concentration, critical masses of analytical personnel and talent could not be focused on any single agency or agency program. Because of the essentially unanalytic nature of most agency policy making processes and the large inertia of most existing programs, one cannot expect small analytical efforts to have large policy impacts.

Because of the movement of several key individuals from the Pentagon into both the Bureau of the Budget and several key domestic agencies and because of the apparent success of the McNamara style reforms within the Pentagon, many of the non-defense PPB procedures and organizational changes were modeled after the procedures developed within the Department of Defense.

Initially, emphasis was placed on the development of the program budget within which agency programs could be assigned to objective or goal-oriented categories. This development process was thought to be one by which agency decision makers and analysts could become aware of the objectives of their agencies and their general resource allocations. These budgets also included future year cost projections of agency programs in order that decision makers could become informed about the future year cost implications of their current program and resource allocation decisions. It was thought that the presentation of resource allocations in a program or objective-oriented framework (as opposed to the more traditional budget formerly used by the agencies in their decisions and appropriations processes) would be an aid to decision makers even without the analysis which evaluated alternative allocations. This did not generally prove to be the case. An extensive amount of time—by both high level decision makers and highly trained analysts—was spent on the development and modification of detailed, formalized program structures and their presentation to the Bureau of the Budget. Little, if any, effort was spent in the presentation of alternative budget formats or program allocations to the Congress, and the Executive budget presentations to Congress remained essentially unchanged. These early program budget attempts were in large part unproductive because the agency decision makers and analysts remained generally unaware of what the new reformulated budgets meant in output terms. Subsequent to the initial development of the program budgets, the guiding principle for the program structure became increasingly its utility as a framework for analytical purposes.

In many cases the formalization of the program budget which preceded the initiation of analytical efforts in an agency actually precluded or inhibited the use of the program budget in the analytical processes. This occurred because the initial categorizations often did not effectively divide the objectives into those relevant to decisions. Alternatively, the programs which were aimed at an objective considered important by the policy maker or analyst were found in separate categories within the budget. This latter failure of the program budget often occurred when the objective of the policy maker was to aid a specific target group within the society. Consequently in agencies in which analysis

was attempted, the program budget became a reporting system for policy decisions rather than an aid to the structuring and development of analysis.

It should be noted that the concentration on the formal program budget in the non-defense PPB efforts was modeled, in part, after the analytical modes developed within the Department of Defense. This was the result of an inadequate assessment of what actually went on in the development of the defense analysis process. Although there was extensive attention directed toward development of a detailed program budget within DOD in the early months of the new administration, there were also a number of analytical efforts going on simultaneously. In DOD, analysis was a prime input into the evolving program structure, particularly at the sub-program level of the budget. This was due in some measure to the fact that the alternative and choices in defense policy were clearer than were those in the domestic sector. This clarity resulted, in part, from the large procurement decisions which historically have made major defense policy choices explicit. It should be remembered, however, that in direct contrast to the extensive background of the initial DOD analysts, most of the analysts in domestic agencies had neither experience in their particular agency programs, nor extensive, if any, experience in the analysis of government policies. Thus, although Hitch could concentrate his staff's efforts initially on analysis, the domestic agency analysts might well have been unable to proceed in any analytical efforts before they had become more generally informed about their agency's activities. The extensive program budgeting efforts may thus be viewed as largely a learning effort prior to subsequent efforts to do analysis.

Personally, however, we do not think that this was the most productive or informative exercise which could have been undertaken. A better way to become informed about agency programs and alternative resource allocations would be to attempt to analyze particular agency programs. In some agencies—notably the Department of Health, Education and Welfare—analytical studies were initiated early in the PPB implementation process. In general, agencies which attempted to conduct analytical studies in conjunction with the development of their program budget found PB to be more useful in the policy making process and were more successful in fostering analytical decision making modes.

Again following the model of the DOD analytical process, BOB directed the domestic agencies to submit annual program memoranda (PMs—modeled after the Draft Presidential Memoranda) with their executive budget submissions. Initially the PMs were to be devoted to reviews of agency objectives but they too often proved unrelated to decisions and to be of little, if any, use in the departmental or Budget Bureau decision making processes. This limited utility may have been due to several factors. It is possible that the agencies did not want to explain, or could not explain, why they had made one allocation choice rather than another. Because of the traditional adversary relationships between the agencies and BOB, and the increasing attempts of the BOB to limit expansion of domestic agency budgets during the Vietnam war, agencies might have been extremely hesitant to provide the Bureau with detailed information on their programs' performance. This would be especially true if the agency felt its programs' performance could be more highly rated in an unanalytical mode of presentation. Another possible reason is the initial concentration on the program budget as opposed to a concentration on analytical studies. In DOD the Draft Presidential Memoranda were the results of analytical studies done within the Office of Systems Analysis and/or within the services.

They were consequently decision-oriented documents resulting from analysis of alternative policies. In the domestic sector the general absence of analysis made the reporting of policy alternatives and the reasons for choice among them impossible. Consequently the early domestic PM's were virtually ignored throughout the budget process. Subsequently, the program memoranda were increasingly focused on "major program issues" requiring current decisions. It is through this focus that the Bureau and agency directors hope the program memoranda can increasingly become decision directed documents. Special analytical studies (SAS) were developed by the agencies to provide analytical backup for the PMs as they became increasingly focused on major program issues. These studies have been directed at issues identified by both BOB and the respective agencies in a coordinated issue-development process. Initially, however, the special analytical studies were generally unrelated to major upcoming budget decisions. They have become increasingly decision-oriented as Bureau and agency personnel have come to realize the utility of having analytical studies available when major executive decisions have to be made. Recently the number of issues upon

which the agency was directed to develop analysis has been significantly lowered so that both the agencies and the Bureau can better concentrate their available analytical manpower.

Another set of documents that has been developed in the domestic PPB systems are the program and financial plans (PFP's). The PFP's designed to provide an accounting system for the overall PPB system. The PFP's show the costs and, wherever possible, expected outputs of each program over a five year period beginning with the current budget year. As with the early program budgets, some agencies initially spent a great deal of time on the detailed development of finely divided program and financial plans. These documents have proved useful as a reporting system but not as decision-oriented or decision directing documents. Under Bureau of the Budget directives the PFP's have declined in importance and have increasingly been used to illustrate the future cost implications of current budget year decisions. It is hoped that in this role the PFP's can provide an integrated form for projecting the long-range impact of the myriad of executive decisions made within any single budget cycle. They also help to insure that agencies explicitly consider future cost implications of current decisions. It should be noted, however, that the standard of a five year cost projection has encouraged certain detrimental behaviors on the part of agencies having preferred solutions which do not necessarily result from strong analytical reviews of arguments. These behaviors include the design of programs which become increasingly costly after the fifth year of their operation, but which are least cost alternatives during the first five years.

In addition to the development of procedures and formats for the reporting of PPB related efforts, analytical staffs were established at both the agency and Bureau level in order to further the implementation of the PPB system. Within the Bureau of the Budget the Program Evaluation Staff (PES) and the Resource Planning Staff were formed under an assistant director. The program evaluation staff was charged with the supervision of and assistance with the PPB development process within the agencies. It also played a role in the incorporation of PPBS and analytic decision making styles within the BOB itself and its budget procedures. Each PES staff member was assigned a set of substantive or agency areas with which he was to become familiar and for which he was to provide PPB recommendations and review to the assistant director as well as to the agencies. Because of the wide assignments of the analysts in the PES staff, little, if any, time was spent on specific and detailed analysis of agency or cross-agency activities. In many cases the PES staff members became spokesmen or salesmen for PPB and analysis. Some attempt was made within the Program Evaluation Staff to develop analysis of BOB level decision alternatives which are essentially aggregate level budget decisions. The general impact of the PES staff on substantive decisions (as opposed to the PPB system itself) was low. The Resource Planning Staff was charged with the development of projections of distributions and impacts of federal resource allocations in future years. PPB, program evaluation, and other analytical staffs were also formed at various levels within executive departments and agencies. Some department secretaries established a staff within their offices. Others located their staffs within agency bureaus or fiscal affairs departments. The Bureau of the Budget and the agency analytical staffs cooperated in the development and implementation of analysis and PPB's activities.

Department PPB staffs generally had little impact on substantive policies within their agencies for a number of reasons.

1. Few department secretaries were able to shape issues in order to direct analytical efforts or knew how to use analytical arguments in their department policy making processes.

2. Many of the operating agencies and bureaus within departments kept information from secretarial and bureau level PPB staffs in order to continue their dominance in the departmental budget and policy making processes.

3. Few departments were able to attract significant numbers of qualified analysts and thus they lacked the critical mass necessary for impact in the complex bureaucratic decision making process of most of the departments.

4. Some department secretaries felt that the PPB system was an attempt to centralize budget and policy making within the executive. Consequently they limited their participation in the implementation of the PPB system in order to prevent Bureau of the Budget and White House from encroaching on their private policy domains.

5. Many of the analysts brought into the PPB staffs in the domestic agencies were technically qualified but lacked the personality characteristics necessary for cooperative involvement with the more traditional members of the federal bureaucracy. This lack, in addition to their encroachment into previously private policy domains, was in large part responsible for a breakdown of communications between the operational parts of the bureaucracy and the analytical offices at the bureau chief or secretary level. (In fact in some cases analysis offices at different levels within the same department were unable to communicate or cooperate with one another).

One of the recurring problems faced by domestic agencies in their efforts to implement PPB was the lack of skilled analytical personnel. New staff positions were established for agency and bureau analytical staffs and for analysis in other offices within the bureaucracy, but the supply of individuals skilled in the analysis of public programs was (and remains) limited. The supply of existing agency personnel who could conduct or utilize analytical studies was also limited.

In an effort to recruit analysts, departments and agencies began to search out new types of personnel for Civil Service appointments. Graduates of business schools and recently graduated Ph.D's were actively sought out for and recruited into the civil service. Although the increases in the Civil Service pay structure and the relatively high pay grades assigned to analytical positions were of some help in these recruitment efforts, other attributes of Civil Service employment and the limited supply of potential analysts left many of the positions unfilled. In order to meet the PPB system's demands for analytical output, several agencies contracted with outside consulting and research organizations for analytic studies and advice.

The government also initiated a series of PPB training programs in order to upgrade existing Civil Service personnel. These programs ranged from short intensive seminars (of up to three weeks) which were designed to acquaint government personnel with PPB procedures and concepts to nine months, academic training programs designed to train analysts. The Educational Program in Systems Analysis (EPSA) was initiated in 1966 in order to enable existing civil servants to fill many of the new PPB analyst positions. In the first three years of the EPSA program, approximately 225 middle level civil servants participated in academic year programs at a small number of universities. These programs concentrated on economics and other analytical decision-aiding skills. At the end of the academic year, the EPSA participants returned to their agencies. Although the nine month program was not generally sufficient to equip the trainees to conduct independent analytical studies, agencies which had recruited senior level analysts were generally able to use the EPSA graduates productively in supervised analytical efforts. Agencies which assigned the EPSA trainees to independent studies were less successful in utilizing their newly-acquired skills. The major determinant of the productivity of the EPSA-trained analysts is the position into which they were placed and the supervision or on-the-job training they receive after the training period. A recent survey of EPSA graduates found that over half of them found the skills learned in the program to be of little, if any, use in their jobs and that less than half of the graduates had been assigned to agency analytical staffs.

It is difficult for one who is committed to the improvement of government decision making through analysis or analytical modes of policy formulation to look disinterestedly at the success and failure of the PPB stimulated reforms. All has not gone well either inside or outside of the Defense Department and the general impact of PPB on substantive policy has been slight outside of Defense. But there are cases in which important decisions were different as a result of analysis, in spite of all the inadequacies and failures mentioned in the previous paragraphs. There are also cases in which the policy debate has changed as a result of analysis but has not changed enough to generate different decisions. Thus, this critical review of the PPB systems as they operated during the 1960's should not be viewed as a reason for not doing analysis at all or for not developing a policy making process (or system) which supports and calls for analytical inputs. Rather it should be taken as an evaluation which can assist in the improvement and advancement of the role of analysis in these difficult areas of public policy choice.

The progress of PPB implementation following the President's initial directive regrettably appears slow and erratic. In late 1966, President Johnson commented that, "Some agencies have put it (PPB) into effect even more rapidly than we

anticipated. Too many agencies, however, have been slow in establishing effective Planning, Programming, and Budgeting systems and when established they have often not been used in making top management decisions."

Over two years later, this review finds the Presidential comments unfortunately appropriate. Why this is so and how the President's comments can be made less appropriate is a major focus of our current report and examination into the role of PPB and analysis in the policy processes.

APPENDIX A

DRAFT PRESIDENTIAL MEMORANDA AND DEFENSE GUIDANCE MEMORANDA FOR 1968

1. Logistics Guidance
2. NATO Forces and Strategy
3. Asia
4. General Purpose Forces
5. Escort Ship Forces
6. Amphibious Forces
7. Land Forces
8. Airlift and Sealift Forces
9. Total Manpower
10. Tactical Air Forces
11. Indirect Support
12. Pilot Requirement and Training Program
13. Anti-Submarine Warfare Forces
14. Naval Replenishment and Support Forces
15. Shipbuilding Practices
16. Theater Nuclear Forces
17. Strategic Nuclear Forces
18. Nuclear Weapons and Materials
19. Research and Development

SECTION VI: RECOMMENDATIONS

We have argued that the current policy making procedures of the government tend to produce results which are inadequate to the demands of a complicated and rapidly changing society and economy. That is the core of the case for change. The basis for recommending change is provided by the diagnosis of difficulties in the prevailing system of decision and by the experience to date with PPB systems.

WIDENING CONSTRAINTS

It is rather clear that if we are to achieve higher standards of government performance some of the conditions which imposed severe limitations on the PPB system must be alleviated. The major constraints which limited the PPB effort pertained to information and analysis, manpower, the political environment, and the existing organizational machinery. It is well to discuss these in succession.

1. *Information and analysis*

We have stressed the role of uncertainty and of sheer ignorance of society as a whole in inhibiting successful analysis and more effective performance. The fact of the matter is that in many very critical areas of policy, systematic data are not being kept and critical research is not being conducted. Even the simplest information—the identity of the unemployed, the number of people on welfare and their distinguishing characteristics—cannot be reliably obtained. Programs are not being operated to provide systematic information, and as a result, the learning process of the government is not cumulative. Even more critically, research support for large questions of public policy is weak to non-existent. For example, that large conglomerate of problems now known as the urban crisis has been afflicting the nation for quite some time with scant attention from centers of research. When the political shocks of the mid-sixties stimulated interest, the research which was generated has been only haphazardly connected to critical questions of policy.

In most areas of domestic policy (manpower, power resources, poverty, management of agricultural production) and in many critical areas of defense policy

(conventional land and sea power) there has been virtually no systematic attempt to understand the underlying crucial factors which affect the outcome of policy, at least outside the Pentagon and its research centers. Though many are now deeply concerned that the contracts between academia and the government have been extensive and improper, we should also face the fact that such interactions have hardly been consciously and coherently designed for any useful purpose outside of some science and engineering programs. The universities have not seriously confronted the question as to their proper relationship to policy questions, and the government has not paused to consider its desperate need for research. If undesirable research practices have emerged, they have done so in a void of conscious policy, or because the producers of research have largely dictated the programs. By far the more serious problem is that the legitimate and pressing needs of the society as a whole have not been met. Our society must be more intelligent about its actions and this requires a carefully designed program to develop a partnership between those who are responsible for policy action and those institutions which have the assets necessary for sustained, penetrating policy research. We need competitive sources of systematically grounded advice in both the public and private sectors, as well as a freer flow of data than is currently the case.

In the concrete this means that the government must invest heavily in information systems. Reliable, useful data on program impact must be gathered, and properly organized. Systematic experiments must be conducted to test the actual effects of proposed (or existing) programs. Government must learn to use universities and outside research institutions to provide requisite knowledge, and it must learn to avoid misuses such as demands for unquestioning endorsement of programs which jeopardize the relationships and pollute the product. Universities on their part should establish public policy laboratories which integrate research across established disciplines and which commit themselves to developing a thorough understanding of substantive policy problems, as has been recommended to the National Science Foundation. They must enable students to participate and provide apprenticeships. They must restructure the incentives presented to faculty members so as to reduce current inhibitions against research of this type.

2. *Manpower*

A problem closely related to the scarcity of information and pertinent research is the scarcity of trained analysts knowledgeable in substantive areas of policy. It is now beginning to be recognized that the habit and ability to take an analytic approach toward evaluating public policy is an art acquired only through training and carefully supervised experience. Incentives to analysis such as administrative directive and program budgeting appear rather weak by comparison with training and experience.

The problem of increasing the supply of good analysts has several dimensions. Promising people need to be recruited to this line of work on a systematic basis and this means that they must be given some exposure while in their undergraduate years. This requires some courses on analytic approaches to policy problems which will allow students pursuing studies in a variety of "hard" disciplines to learn or observe enough to stimulate their interest. There is also a need for degree programs at the graduate level which provide a thorough knowledge of the roots and technique of analysis. Happily some universities are responding to this need, as new programs have started at Berkeley, Harvard, Michigan and Stanford. However, the full problem cannot be met within the current scope of academic disciplines. Understanding of the analytic perspectives must be blended with substantive knowledge and experience with particular areas of policy. For even the most competent of analysts it takes substantial time to work into a proper understanding of policy issues. Analytical understanding of the problems of deterring the use of strategic nuclear weapons, and controlling the arms competition, for example, was over a decade in development before it began to have substantial systematic impact on policy and even today there is room for a great deal of improvement in this area. The United States is in great need of public policy research institutions in which analysts can build the substantive knowledge and experience required to apply their trade successfully. Policy research organizations such as the RAND Corporation and the Urban Institute could be given this function.

Again universities and the government must act in concert. If the government is to attract good analysts it must give them scope for their talents and salaries

approximating market values. This probably will require adjustment of current civil service procedures and personnel practices. The government must also provide a responsive environment for analysis—one in which the decision process demands and *utilizes* analytical studies and debates. Critical also is the need for research removed from the pressures of government business yet strongly related to policy problems. This need, which may require new institutions, is a manpower, as well as an organizational, problem.

3. *Political environment*

The political constraints imposed upon analysis seem, at the level of consideration at which we must remain, to be the most difficult to loosen. One cannot realistically counsel a sudden and massive mutation in human nature. We recognize that public policy programs involve jobs, status, careers, and that men seem to protect their jobs and their established privileges, at the expense of public good. They enjoy discretion and protect it. When faced with these clashes of interest they bargain, cajole, and seek to compromise between bureaucratic needs and public purposes. These compromises are frequently a poor third by everyone's preference, and exist by virtue of the fact that *some* action is required. The current welfare system, derided for a number of years by all concerned, seems to be an example.

There are some principles, however, which can operate to soften the effect of these conditions. Some grossly unfair results cannot stand the true light of day, and are eliminated by being made explicit. The darker, recalcitrant forces in men are seldom unopposed by more enlightened spirits. Few Americans, for example, want to tolerate avoidable starvation of poor citizens; and, when such conditions were made known recently, there was some improvement in government performance. The results of analysis once achieved and propagated dissolve some political constraints.

Even terribly jealous and self-protective bureaucrats rarely have the will to withstand Presidential authority once it is applied unmistakably. If the results of analysis are made available to high level authority and if they relate to problems actionable by high executive authority, the bureaucratic machinery will respond. Many men in agencies whose programs were affected were not enthusiastic about the limited Test Ban Treaty signed in 1963. However, they acceded to the wishes of the President and his diplomatic advisers in seeking the Treaty.

Moreover, the policy machinery throughout the executive is enormously sensitive to the will of Congress, and especially to the will of the particular committees with which the agencies must deal. The fact that Congress was not a major participant in the PPB system (and tended to be suspicious of it) stiffened the resistance of the policy machinery to the discipline that PPB sought to impose. However, there is no intrinsic reason why an analytical style of debate and policy evaluation and development cannot serve the purposes of Congress. In recent months members of the Senate have utilized the principles of analysis in demanding better justification for defense expenditures than it has customarily received from the Department of Defense and the Armed Services Committee. This technique should be applied to other program areas as well. In requiring proof according to analytic rules of those who are proposing the expenditure, Congress is assuming a stance representative of the general public. This is quite an appropriate and potentially effective role to play. If Congress does begin to demand analytic justification of programs then the incentives within the executive to do good analysis will be enormously improved.

Beyond this when Congress and the rest of government becomes embroiled in issues which pit one constituency against another, it would be helpful if the classic mechanisms of trade were better developed to allow for more flexible and fairer policy outcomes. All too often issues become isolated and everyone feels constrained to fight for a proportionate share of every program. The result is a dilution of otherwise promising ideas to a point of ineffectiveness. The Model Cities program appears to be a prime example. Since over a hundred cities demanded a part in it as a condition for around 70 getting it, the program has been stretched so thin that it is virtually certain that its original purpose will not be achieved. If Model Cities had been considered along with other subsidies for the urban areas a much fairer and perhaps more beneficial result might have been achieved by trading one type of program for the other. Better mechanisms of political trade are one hope for defeating the gloomy assertion that conflicts between constituencies will subvert reasoned outcomes for most areas of domestic policy.

4. Organizational machinery

The experience with PPB has served to underscore the importance of on-going organizational procedures in determining policy outcomes. Large organizations operate perforce through established routines and are deeply affected by patterns of career advancement and by associated incentives. Changing government performance usually means changing organizational procedure and the evidence is impressive that such changes are much more expensive in time, money, and political capital than has generally been recognized.

The M-16 rifle and the F-111 are fabled weapon systems whose careers have been deeply affected in unforeseen ways by the fact that they did not mesh with existing organizational procedures of the services for which they were procured. The current problems of Medicare seem to reflect the fact that inadequate attention was paid to the organization which was to administer it and the market structure within which it was implemented. At the very least the scope of analytic concern ought to be broadened to encompass this dimension of policy problems.

In addition it should be recognized that large organizations acting in an area of great uncertainty and complexity even in the best of feasible worlds are likely to have difficulty. Their patterns of action are not likely to be flexible enough to allow for rapid learning—at least it promises to be very expensive to create such capabilities. In many areas of domestic policy they act at considerable distance—as in education, welfare, and health where services are ultimately rendered on the local level. This compounds the problem of uncertainty and data collection. There is in such considerations a *prima facie* case for minimizing reliance on direct action through large organizations and for finding ways to rely more on market mechanisms, which are in essence means of decentralizing decisions to the level of the individual consumer. Charles Schultze* has suggested setting up decentralized incentive systems for flood control, hospital operations, and manpower training which reflect this idea. Such mechanisms do not remove the burden from government of doing careful analysis and of intervening, where necessary, to adjust the decentralized mechanisms where they are producing inadequate outcomes. It does, however, avoid the attempt to find solutions where the techniques of analysis and underlying knowledge are inadequate to the task, or where bureaucratic delivery of goods and services is more costly than income transfers, market mechanisms, and regulatory practices. These latter techniques, it should be added, may be substantially more effective and efficient than decentralization of programs or resources to state and local bureaucracies. Currently, there is no basis for believing that state and local bureaucracies would be more effective and efficient in managing these programs than the Federal Government.

Introducing considerations of this sort serves to underscore the fact that there are different types of analysis. When the government is in the business of producing goods and services for common benefit, there is a need for analysis to establish the proper levels of supply and for considering alternative means of production. At a more specific level there is a need to provide evaluation of specific programs which are already operating so as to gain estimates of their efficiency and the nature of their impact. Beyond that, as a quite distinct problem, the government should conduct analysis of income distribution within society and should probe the effects both of existing market mechanisms and of government programs on this basic social attribute. Finally, in areas where market mechanisms are being used to provide the goods and services society demands, the government must conduct analysis to evaluate the performance of the market and to guide its inevitable role as market regulator so that the public interest is served.

OPERATING WITHIN CONSTRAINTS

Though improved performances seem to require some loosening of the constraints which have bound government decision-making, these constraints are not likely to disappear altogether. Hence it is important to identify strategies of procedure at various levels of constraint. Ideally, of course, one would like to have analysis conducted at all levels of government and at each level on all of the issues. Thus, the program evaluator in the Federal Highway Authority, while accepting the validity of the highway construction program, would seek greater efficiency in carrying it out. At higher levels decision-makers would con-

*Charles L. Schultze, *The Politics and Economics of Public Spending*, Washington, Brookings 1968.

sider the merits of further highway construction in relation to air and rail travel and to mass transit. At still higher levels the merits of spending on transportation would be considered in relation to other pressing needs such as housing and medical care. It seems clear that within existing constraints of available manpower, knowledge and political will, such an ideal is beyond reach. The problem is to identify what seems achievable in the current context, and there appear to be two schools of thought on the issue.

One approach focuses on the process of budget-making as the point in the operations of government where the critical issues of resource allocation are decided (whether explicitly or not). It attempts to introduce explicit analysis as the basis for budget decisions throughout the entire system and it does so by attempting to restructure the organizational procedures whereby budgets are made. This is a comprehensive approach to the problem. Given constraints it cannot be expected that the comprehensive approach would be everywhere successful. The argument is that, by forcing the organizational machinery into an analytic mold in a formal sense, gradually over time the men who run the government will learn to make decisions in the prescribed manner. The current PPB system roughly reflects this approach, and the thrust of the argument for the comprehensive approach would be that its limited success to date is not proof against it since favorable evolution over time is expected.

The second approach counsels a concentration of resources in the light of constraints and argues that analysis should be attempted for only a few decisions of special concern. Elsewhere the system should be allowed to run on its natural track. This approach points to the difficulties experienced with the PPB system—high officials ignored its product (did not demand improvements); lower officials were uncooperative (conducted old arguments in the new terms); the data were poor and there were too many unknowns etc. The argument for concentrated resources holds that all elements of successful analysis—good data, utilization by top officials, etc.—must be present if any useful result is to occur. The approach implicitly expects that comprehensive but superficial reform of the current system will not lead to improvement over time. If all the other elements are not present in a given area, the argument runs, the formally prescribed analytic procedures will never produce good analysis.

The conflict between the two approaches concerns the wisdom of limiting, under constraint (particularly of analytical manpower), the areas of application (concentrated resources approach) or the initial quality of the analysis (the comprehensive approach). This issue is not readily resolved and this is an area where some hard analysis of analysis is required. It is clear however that the issue should be much more explicitly confronted than has been the case so far.

A concentration of resources will presumably deliver a better analytic product within a shorter time period. However, it may not outlive the particular incumbents to whose interests it is tailored; and, leaving so much of the system unchanged, it may not challenge existing constraints. If so, the analytic effort may be too transient to fulfill its purpose. If a comprehensive approach is taken, it seems clear that the initial effort will go primarily to redirecting the habits and energies of the policy machinery and that a useful analytic product will be slow in emerging. There is a danger that this initial investment could not be sustained without some useful return to provide the justification. The effort may become discredited before it has had time to develop any real analytic capacity. If a mixed strategy is suggested by such considerations, there is a real problem in identifying what the mix should be and in specifying what mixes are appropriate for what levels of constraint. It seems clear, in short, that some further work in designing the system needs to be undertaken.

There are a number of specific proposals for improving the performance of government which depend in large part upon the resolution of the issues of system design.

The timing and form of the planning cycle need adjustment. The time pressure involved in putting a budget into final form for submission to Congress sharply limits the amount of substantive analysis which can be applied at that stage. To have impact the analytic work should precede final decisions on budget submissions but it must still relate meaningfully and specifically to them. To date the results of the planning and analysis cycles have been late and consequently have been ignored in the pressures of budget season. Moreover, the planning projections carried in the five year financial plans have not been constrained enough to give meaningful guidance. There has been a tendency to include everything

desirable in the plans and to let the hard issues of choice under limited budget resources slip until the final stages of preparing a fiscal year budget when thorough analytic review is not possible. Making a somewhat analogous point, many have complained that the process of analysis is too identified with the budget cycle and that its true purposes are frustrated when the burdens of last minute budget-cutting are forced upon it.

A multitiered planning system has been suggested to constrain planning submissions by forcing separate projections of 1) the resource commitments of current programs, 2) the resource implications of future decisions required to implement already approved plans, 3) overall agency budget levels. It has also been suggested by various observers that steps be taken to involve the highest officials—the President, the cabinet officers, and the budget director—in the analytic process. Such involvement, especially outside the Department of Defense, has been weak and sporadic and the planning system has consequently suffered from a lack of realism and sense of direction. The system seems to function most effectively when the highest officials are actually engaged in the process of analysis themselves.

It has also been suggested that the planning system be extended to incorporate the process of developing new legislation. There has been a heavy reliance on special task forces for the development of legislation. Their outputs and operations have not been systematically related to the planning system.

Many suggestions have also been made for expanding Congressional staffs so as to increase the capacity of Congress to participate actively in the planning and analysis processes. It is true in general that effective participation in the process of analysis cannot be achieved unless one is actually conducting some form of analysis. This does not mean that Congress should engage in elaborate data-gathering efforts or in the development of program alternatives. It does mean that Congress should exercise its functions of overview to pose analytic questions and to demand good analytic justifications and good presentation of data for programs to which it proposes to grant funds. The operations of the Congress can enormously facilitate or impede the process of analytic decision-making in the government depending upon whether it does or does not respond to the quality of analysis which is done in the executive branch. The funds which Congress distributes are the major incentives throughout the government bureaucracy. If the receipt of the funds is made contingent upon analytic justification, the bureaucracy will very rapidly learn to conform to these congressional requisites. If Congress considers analysis to be irrelevant, then it will be all the more difficult to make bureaucracy provide or utilize it.

The principle of rewarding good analytic justification with expanded funding and punishing poor analytic performances with contracted funding should also be adopted by the Budget Bureau and department secretaries in conducting their reviews of agency submissions.

SUMMARY

The recommendations to improve government performance can be briefly summarized. In the first place, the constraints upon analytic decisions need to be loosened—better data must be gathered; more policy research needs to be done; more analysts must be trained; more incentives must be provided to do analysis; and better mechanisms for avoiding piecemeal analysis of and bargaining for benefits among regions and income levels of the society must be established. Second, estimates must be made of the degree of severity of these constraints at the current time—the availability of manpower and the cost of training, the availability of data and the cost of procuring more data and relevant research; the nature of the current incentives within the policy machinery and the costs of change. Third, designs of the planning system must be worked out with explicit references to these constraints. Fourth, efforts should be made to expand the task of analysis by requiring it to consider the advantages of decentralizing those decisions which do not have to be made by government, and of acting through market-like incentive systems to the extent possible rather than through direct action of government machinery.

The process of improving government performance by introducing analytic decision-making is one which is long underway and which will require sustained effort for a long time to come. In a society which is rapidly increasing in complexity and scale of operations that effort cannot be avoided or neglected without extreme costs.

ECONOMIC ANALYSIS AND THE EFFICIENCY OF GOVERNMENT

TUESDAY, OCTOBER 6, 1969

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON ECONOMY IN GOVERNMENT
OF THE JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The Subcommittee on Economy in Government met, pursuant to recess, at 9:30 a.m., in room 318, Old Senate Office Building, Hon. William E. Proxmire (chairman of the subcommittee) presiding.

Present: Senators Proxmire and Percy; and Representatives Griffiths, Conable, and Brown.

Also present: Robert H. Haveman and Richard F. Kaufman, economists; and George D. Krumbhaar, minority economist.

Chairman PROXMIRE. The subcommittee will come to order.

Today's hearing concludes the inquiry of the Subcommittee on Economy in Government into "Economic Analysis and the Efficiency of Government."

In session after session of these hearings, the subcommittee has confronted disturbing evidence of the waste, inefficiency, resource misallocation, and inequity of public expenditures and rulemaking decisions.

We have seen how many of the Nation's largest and most renowned corporations and their stockholders receive, free of charge, publicly supported and publicly produced goods and services—subsidies which are neither economically efficient nor available to middle-income citizens and the poor. We have been told that Federal rulemaking and regulatory policy is similarly dominated by the very economic interests which are supposed to be the object of regulation in the public interest.

We have seen how enormous spending programs with little economic justification are established and supported for decades with no challenge to their existence or increased funding. The SST is only the latest example.

We have seen how some public programs incorporate reverse incentives for private efficiency and thereby foster inflation. The structure of incentives in medicare reimbursement is an example.

We have been told that other public programs designed to achieve social objectives in fact impose higher costs on low-income citizens, which costs are neither compensated nor considered in program decisions.

Economic experts have told this subcommittee that many Federal programs generate serious overproduction and resource misallocation because they distribute public outputs free of charge or at a price substantially below cost.

We have seen how public policy subsidizes those who generate pollution and congestion, rather than making them bear the costs which they impose on society. Through this strategy, the Government fails to induce altered private behavior which would eliminate enormous pollution and congestion costs.

While the subcommittee has been told that open and explicit economic analysis applied to public decisions can increase the efficiency, equity, and responsiveness of Government, little such analysis has been forthcoming. The Congress itself actually prohibits much economic analysis by the Department of Transportation and the executive branch expects the Congress to ratify the precooked decisions, with little economic justification or open consideration of alternatives. In many cases, the instrument of executive privilege is wielded to justify executive unresponsiveness.

Although the Nation's needs and priorities have changed, the Federal budget seems incapable of response. While the social demands which justify the creation of many public programs have been met or have evaporated, the tax dollars poured into these outmoded, outdated, inefficient, and inequitable programs expands as though driven by an "invisible hand." New concerns, new responsibilities, and new commitments requiring new programs or lower taxes are no match for old subsidies supporting entrenched interests. This new invisible hand does not have the properties which were attributable to its predecessor. It neither serves the public interest nor guides the economic system to respond to new demands and new needs.

In this morning's session, we are privileged to have as witnesses three of the most articulate and brilliant observers of the public sector and its performance. I wish to welcome Dr. Charles Schultze, Dr. Milton Friedman, and Mr. Ralph Nader.

Our first witness will be Dr. Charles Schultze. Dr. Schultze is a former Director of the Bureau of the Budget and an outstanding economist. Dr. Schultze received his A.B. degree from Georgetown University and his Ph. D. in economics at the University of Maryland. From 1952 to 1958 he was on the staff of the President's Council of Economic Advisers. Following this he served as a professor of economics at Indiana University and the University of Maryland. From 1962 through 1965 he was an Assistant Director of the Bureau of the Budget and from 1965 to 1968 he was Director of the Bureau. Since 1968, he has been a senior fellow at the Brookings Institution and a professor of economics at the University of Maryland. He has authored a number of important economic studies. His most recent book is entitled "The Politics and Economics of Public Spending."

Dr. Schultze, we are very happy to have you here and you may proceed in your own way.

STATEMENT OF DR. CHARLES L. SCHULTZE, THE BROOKINGS INSTITUTION, AND PROFESSOR OF ECONOMICS, UNIVERSITY OF MARYLAND

Mr. SCHULTZE. Thank you, Mr. Chairman, and Mr. Conable.

You have asked me today to discuss with you how the concept of incentives so familiar in the private sector of the economy, might be

applied in the public sector to increase its efficiency. I will try to keep my statement brief. Essentially it summarizes, and to some extent modifies, a longer treatment of this subject which appeared in the Compendium of Papers on the Analysis and Evaluation of Public Expenditures, recently published by this subcommittee. I should like to submit that paper for the record of these hearings.

Chairman PROXMIRE. Yes, we would like to have that paper. Without objection, it will be included in the record.

Mr. SCHULTZE. Thank you, Mr. Chairman.

(The paper referred to appears on p. 850.)

INTRODUCTION

Mr. SCHULTZE. Efficiency in public spending has two aspects. Under the more usual definition, we judge public programs to be efficient if they achieve their objectives with the minimum possible costs. But, in a more fundamental sense, efficiency also requires that the particular objectives which public programs pursue are themselves a meaningful reflection of public needs and goals. A program may be well run, and highly efficient under the first definition, but still waste national resources if it pursues the wrong objectives. We might, for example, be highly efficient in building waste treatment plants to handle industrial water pollution, but still have a very inefficient program if building waste treatment plants is not the best way to deal with industrial pollution. Or we might be quite efficient in constructing flood control public works, but still have an inefficient program if those public works protect investments which should never have been made on the flood plains in the first place. The efficiency of our maritime subsidy program must be judged not only on whether it uses the minimum possible budgetary funds to create a U.S.-flag fleet and a U.S. shipbuilding capacity of a particular size, but it must also be judged on whether or not a fleet and a shipbuilding capacity of that size are truly needed in the interests of U.S. national security.

In short, questions of efficiency relate not only to the carrying out of public programs once they have been created, but also to the design of programs and the specification of their objectives. As a consequence incentives must be considered not merely in the context of efficient program execution, but also in the process of specifying public objectives.

There are two major areas for the application of incentives in the formation of public policy: First, the creation of incentives for private decisionmakers to pursue public goals; and, second, the creation of incentives for public officials to execute public programs effectively and efficiently.

PROVIDING PUBLIC INCENTIVES FOR PRIVATE DECISIONMAKERS

Many public programs seek to modify, in quality or quantity, the outcome of private production and investment decisions. Urban development programs, air and water pollution controls, and flood protection are examples. Yet too often, by concentrating solely on the

public sector side of a joint public-private problem, public programs produce distinctly inefficient results.

Flood protection is a case in point. Since 1936, the Federal Government has spent some \$7 billion on flood protection projects. Expenditures on such projects currently run about \$500 million per year, with another \$100 to \$150 million per year spent on disaster relief to flood victims. Flood losses, nevertheless, are high and rising, and recently have averaged in excess of \$1 billion per year.

National policy toward flood protection is straightforward: build flood protection works primarily at public expense and assist States, localities, and private citizens to recoup against flood losses. Where it can be shown that potential projects would prevent losses whose value exceeds the cost of the project, then these projects become eligible for public financing, subject always to the availability of funds in the Corps of Engineers' budget and the normal vicissitudes of pork barrel politics.

Once the flood plain is developed, the standard benefit-cost calculation well often shows that the construction of flood prevention works is worthwhile in terms of expected damage avoided. But in many instances, the optimum policy would have been not to have invested so heavily in the flood plain to begin with. The differential advantage of flood plain location over the next best alternative location is often worth less than either the cost of flood protection works or the expected value of flood damages. Since States, local communities, and individual beneficiaries typically contribute only a fraction of the cost of Federal flood protection works (ranging from 5 to 60 percent and averaging 25 percent), there has developed a set of incentives for uneconomic use of flood plain lands. Development occurs in flood plains. Either in response to or in anticipation of floods, strong and often successful pressure is brought to bear for Federal flood protection. In many cases, floodproofing of individual buildings would be much cheaper than building flood control public works. But the costs of floodproofing are borne by the individual owner; the cost of public works is not. Once Federal works are constructed, further development occurs, beyond the protected areas. The resulting encroachment on the flood plain itself raises expected flood heights, increases the expected flood damage to prior investments and leads to still further pressure for flood protection works.

Public policy toward flood damage protection ought not to be expressed solely—or even primarily—in terms of criteria for the construction of flood protection public works. Rather, it should be formulated in terms of encouraging rational use of the flood plains. We should be seeking a policy which induces public and private investment in the flood plains only if the advantages of locating there are greater than those of alternative sites by an amount which exceeds the expected value of flood damages or the cost of preventing those damages. The present policy, which concerns itself almost solely with public projects, not only fails to consider the establishment of incentives for economic private investment in flood plain lands, it sets up a series of monetary and political incentives which induce distinctly uneconomic investment decisions.

If, on the other hand, the Government adapted a policy of requiring that flood plain investments be covered by mandatory flood insurance, whose premiums were actuarially scaled to the danger of flood damage, such rational location would be encouraged. Investors would have to weight the potential advantages of the site against the insurance costs. The economic benefits of proposed flood protection works could be measured by the reduction in premiums thereby made possible. Moreover, since the reduction in premiums would be larger than the costs of the project—in order to pass the benefit-cost test—the beneficiaries could more easily be charged a larger proportion of the project than is now the case. If Federal flood control works were required to pay more of their own way than is now the case, flood plain investors would also be induced to compare flood protection works with floodproofing of individual buildings on their true merits. Right now, the Federal Government pays the cost of flood protection works; the individual investor pays the cost of floodproofing. Small wonder that the former is more favored than the latter. Finally, were beneficiaries to pay the cost of flood protection, there would be less pressure for the construction of uneconomic projects.

In brief, consideration of flood control suggests a fundamental restructuring of public policy objectives and the creation of a set of incentives—through mandatory insurance premiums and user charges—which will provide incentives to private investors for rational investment policy in flood plain lands.

I have spelled this example out in some detail. Time does not permit me to develop further illustrations in such detail, but let me mention a few other instances where public policy needs to concentrate on the development of private incentives:

1. In the case of water pollution control, public policy concentrates on building waste treatment plants and using the police powers to stipulate water quality standards. Yet, many studies have shown that the most effective way of reducing industrial pollution is not by clean-up pollution once it has been created, but by changing internal production processes to reduce the amount of pollution created in the first place. The amount of water used and returned to the stream per tons of steel produced, for example, varies tremendously depending on the production process used. The volume of pollution created in paper production also varies sharply from one process to the other. Charging industrial polluters an "effluent charge," whose size depended upon the amount of pollutants discharged, would provide powerful incentives to reduce pollution and at a lower cost than a program which concentrated solely on constructing waste treatment plants.

2. Hospital costs have been rising at a very sharp rate—over 15 percent per year for the past 3 years. The Federal Government itself, through medicare and medicaid, pays a substantial fraction of total hospital costs. And it does so by reimbursing hospitals for the care of patients on a full-cost basis, hospital by hospital. Every incentive is created to escalate hospital costs, since the higher costs are passed directly to the Government, and efforts to achieve lower costs do not benefit the hospital. Moreover, hospitals are, in effect, free workshops for doctors, and like any professional group, doctors are

anxious to add every conceivable device, gadget, and convenience to their workshop, particularly when the costs are borne by third parties. It seems to me imperative that we develop "incentive reimbursement formulas" which provide incentives to hospitals to reduce costs, and which do not guarantee a passthrough of any and all cost increases. Developing such formulas will not be easy, since we must insure that hospitals are not rewarded simply for cutting back the quality of medical care, but only for true increases in efficiency. But I am convinced that such formulas can be developed. Experiments with such incentive reimbursement schemes have been authorized by the Congress, and a few are now underway.

3. Our current maritime subsidies, which directly and indirectly cost some \$500 million per year, seem to have been designed to insure the minimum possible efficiency in our merchant marine. While, in my own view, the case for the subsidy is dubious at best, at least if we must have it, it should be structured to create an efficient merchant marine. The basic operating subsidy that we now pay essentially makes up the difference between American and foreign operating costs. Any productivity gains result in lower subsidies—inefficiency leads to higher subsidies. Not only does the overall subsidy remove any incentives for efficiency, its detailed composition discourages the kind of merchant fleet which is most appropriate for the American economy. The subsidy brings each element of American costs into line with foreign costs—labor, repairs, and maintenance, et cetera. But the comparative advantage of American ships lies in higher speed—that is, American ships; fuel costs are no higher than foreign costs, but labor costs are much higher. Consequently, American ships should be designed for high speed, quick turnaround time, catering to high-value cargo. But the subsidy system removes any incentives for pursuing this comparative advantage. To make matters worse, while the subsidy is partly justified as a means of providing a competitive weapon against potential discrimination, our cargo preference laws have resulted in the fact that almost half of the value of export cargoes carried by U.S. ships are noncompetitive preference cargoes, leaving only half of our capacity to compete in the competitive world market. Even accepting the need for a subsidy program, we have designed one which is guaranteed to produce decreasing relative efficiency in the American merchant marine compared to its foreign competitors.

INCENTIVES FOR PUBLIC OFFICIALS

The use of incentives to increase the efficiency of public programs need not be confined to the provision of incentives for private producers or investors. Even where programs are carried out solely within the public sector, it is vital to try to create incentives for efficient and effective performance.

Several general means for providing incentives are available:

First, we can sometimes provide the spur of private competition to stimulate the performance of public officials. In providing public support to higher education, for example, we must choose between giving direct aid to institutions of higher learning and giving aid directly to

students. The choice between the two will depend upon many considerations. But one of them should surely be the impact of the form of support upon incentives for performance. If assistance is given to students, then colleges and universities must, in effect, "earn" the subsidy to higher education by attracting students. Surely this provides greater incentives for performance than if the bulk of the assistance were directly provided to them by the Government.

In a similar vein, we should experiment with providing parents of children eligible for Headstart programs with Headstart vouchers and let them choose the particular Headstart program to which they wish to send their child. Again, this would require operators of various Headstart programs to compete for the customer, rather than having a monopoly position as a chosen instrument in each locality. More generally, in our concern over the quality of education for the disadvantaged of the central city, we should at least experiment with providing some educational assistance directly to parents and let them choose among competing enrichment or remedial education programs. Alternatively, we might also experiment with letting private—profit or nonprofit—educational enterprises compete with each other and with the public school systems in providing educational enrichment programs under title I of the Elementary and Secondary Education Act.

More generally, it would be worth while, I believe, to confront monopoly public enterprises with the threat of competition where this is possible, even though the number of cases where this is applicable may be relatively limited. There is nothing like a bit of competition to stimulate new ideas, to shake up encrusted bureaucracies, and to produce more effective programs. Because this is a relatively novel and untried approach, we might start not with full-scale programs, but rather with a number of small-scale experiments.

In the great majority of cases, it is probably true that we cannot provide competition as a means of introducing incentives for effective and efficient performance into public enterprises. But there are other means of achieving the same end.

In some cases we can improve performance by developing better measures of performance, so that the success or failure of Federal agencies and public officials can at least be judged on relevant criteria. As one example, consider some of the loan programs of the Federal Government. Many of these programs, rightly or wrongly, have the supposed objective of providing loan capital to small enterprises which are too risky for investment by commercial lenders. The Small Business Administration is a case in point. Measures have not been developed, however, which can be used to judge the performance of various regional loan offices in terms of overall program objectives. Defaulted loans, on the other hand, are easily identified, and a significant default rate is sure to invite congressional questions. Loan officials, therefore, tend to avoid risky loans. As a consequence, far from meeting their original objectives, the programs end up, in many cases, simply in making loans of commercial quality at less than commercial rates. It is difficult to expect public officials to pursue the basic objectives of a program unless they are judged on the basis of performance measures which have some relevance to those objectives.

Another means of promoting efficiency in public enterprises is to make sure that the budgets of those enterprises are charged with all the costs which they incur. Until recently, for example, military installation commanders were not charged in their budgets for the use of military personnel. They were charged for other items of cost or at least many other items of cost. Quite naturally, they tended to use as much as possible of the "free" resource—that is, military personnel—while economizing on civilian personnel, equipment, and the like.

In a similar vein, the Defense Department is not charged with the cost of the atomic warheads for its nuclear weapons. The Defense Department levies requirements upon the AEC, which then has no option but to request the necessary funds from Congress. Given a limited budget, and I would hope it would be limited, any set of rational planners will tend to overuse the free resource. If the Defense Department were forced to "buy" its nuclear warheads from AEC, then one could be more confident that the mix between nuclear and nonnuclear forces reflected considerations of relative effectiveness, rather than simply the fact that nuclear warheads are "free" to military planners.

To pursue the same thought further, our \$500 million a year maritime subsidy is justified primarily on grounds of national security. But its costs are not reflected in the defense budget. If its costs were charged to defense, so that military planners had to judge whether that \$500 million could or could not produce more for the national security if used elsewhere, we might get a more objective assessment of the worth of the program. One might be even more radical by suggesting that the cost to consumers of the oil import quota program—justified on national security grounds—also be included in the defense budget.

In short, providing proper incentives for efficiency requires that those who make decisions about the use of resources get charged for the cost of those resources. Unless we do this, the supposedly "free" resources—which are not really free to the economy—will inevitably be overutilized.

CONCLUSION

I have tried to give representative illustrations of the various ways in which incentives can be used to increase the efficiency and effectiveness of public programs. As these illustrations have indicated, there are a number of quite different aspects to the incentive problem. In some cases a consideration of incentives suggests major revisions in the objectives of particular public programs. In other cases, incentive considerations call for changes in budgetary procedures. In still others, incentives for improved performance can be increased by a better measurement of program performance.

More generally, we need to give more attention to how we can induce both public and private decisionmakers to pursue voluntarily courses of action which effectively and efficiently bring about the attainment of public goals. This is the meaning of the term "incentives" as applied to public programs. There is no single way in which the idea can be applied. Rather, it is an aspect of social behavior which should be taken into account at every stage of public policy formulation.

(Supplemental information, subsequently supplied by Mr. Schultze, appears on p. 871 at the conclusion of today's hearing.)

Chairman PROXMIRE. Dr. Schultze, thank you for one of the finest papers I have heard delivered since I have been in the Congress. It is such a remarkable paper and the recommendations seem to me to be so sensible that I would like to send this up to your successor, Mr. Mayo, for his comment and his response to us on what he intends to do about implementing these to the extent that they can be implemented.

(The comment and response referred to above, subsequently supplied by Mr. Mayo, appears on p. 867 at the conclusion of today's proceedings.)

Chairman PROXMIRE. I would like to ask you directly, why has not the Bureau of the Budget made this what seems like a perfectly logical shifting of the charge for nuclear warheads from the AEC to the Defense Department?

Mr. SCHULTZE. I am not sure I know the answer to that. It has been discussed but never kind of pushed to the point of a major issue. As you are aware yourself, Senator, one of the facts of public life is that there are only so many issues one can push at any one time. I agree it is important. I probably think it is more important now from hindsight than I did from foresight. As I say, it was discussed but has never been pushed.

Chairman PROXMIRE. During the course of these hearings, the subcommittee has heard testimony from economic experts who presented economic critiques of a number of public programs. A common theme seemed to run through these case studies; namely, that many of the domestic programs which most of us think of as benefitting all people in fact bestow the vast bulk of the benefits upon either the rich and well-to-do, or the large corporations, or some specific and limited sector of the society. This adverse distribution impact was attributed to—you might note these because I want to ask you to comment on each one—Federal water policy, aviation policy, pollution control policy, navigation policy, maritime policy, and urban highway and renewal policy. How do you appraise the distributional impact of these programs and Federal spending in general?

Mr. SCHULTZE. Well, first, having just over the weekend read through the papers which had been submitted to the subcommittee, I also noted that there was a fairly common theme running through—the theme which you have just stated. Let me preface my comments by pointing out two interesting things: First, that very often, we undertake programs which admittedly reduce the efficiency of the economy, presumably for purposes of welfare or income distribution. And that is a perfectly legitimate objective at times. But the programs you have indicated, and some others, as a matter of fact many of them, tend to reduce efficiency but not even redirect income in a way which most of us would think proper—namely, toward the poor. They tend to redirect income upward.

Let me try to give you a few numbers to illustrate what you are talking about, what kind of redistribution we have. If I may start with one you did not mention, which is the farm program. It turns out that first, if we measure the budgetary cost plus the cost of the consumer of the higher prices involved in the farm program, interestingly enough, it comes to about the same number as the annual cost

of our strategic nuclear weapons program, if you take both the direct consumer cost, the higher prices, and the budgetary cost. That is something like \$8 to \$9 billion a year.

Second, those subsidies tend to be distributed to farmers on the basis of production. As you produce more, the larger the farm, the larger the production, in general, the higher the subsidy. Now, it turns out that the largest 16 percent of American farmers produce about two-thirds of all farm output and get about 60 percent of the subsidies. So, 60 percent of the subsidies, roughly, goes to the upper 16 percent.

Now, in turn, that upper 16 percent is a group of farmers whose average income is about \$19,000 to \$20,000 a year.

Chairman PROXMIRE. You are talking about net income?

Mr. SCHULTZE. Net income.

Chairman PROXMIRE. Net taxable income?

Mr. SCHULTZE. Theoretically. There is a substantial difference apparently between what is statistically calculable and what is reported on tax forms. But two-thirds, therefore, of this \$8 billion to \$9 billion subsidy, direct and indirect, goes to 16 percent of the largest farmers, making something in the neighborhood of \$19,000 to \$20,000 a year. This amounts to something in the neighborhood of \$7,000 to \$8,000 per farmer. I at least would not call that basically redistributing income toward lower income groups.

Chairman PROXMIRE. Let me just interrupt on that point. I do not want to detain you on it, because it is not completely relevant. But here is something that is very, very hard for me to accept. We have a lot of farmers in Wisconsin. Let us be frank about it.

I have talked to the dairy farmers in my State, talked to the biggest farmer in one of our northern counties. He was a big farmer because he had five sons who could milk the cows. Obviously, in Wisconsin, we have very few corporate farms. He and his family were able to milk 75 cows a day. He had over a 100, but they were milking 75. That is a terrific operation.

Representative CONABLE. Not by New York standards.

Chairman PROXMIRE. By New York standards, too. He had an enormous investment in that farm, tractors and so on. But his taxable net income last year was only \$4,000.

I do not ascribe to this notion that farmers do not pay their taxes. There may be some farmers who do not, just as there are some businessmen who do not. But by and large, they are no less honest in terms of handling taxes than anybody else is. It is hard for me to get at this in my State, at least on statistics; I just wonder if they are as precise and accurate as we are led to believe.

Mr. SCHULTZE. First, I cannot comment knowledgeably on the tax side. The statistics one sees do indicate that the proportion of farm income as we normally define income, which also shows up as taxable income, is quite small.

Chairman PROXMIRE. My point is here is a farmer who will get most, much of the benefit, a big share of the benefit of the subsidy for dairy production. Yet he is not getting rich from it.

Mr. SCHULTZE. If his net income is \$4,000 a year from farming, he is not a typical farmer in the sense of the farmer who produces the bulk

of the American farm output. Most of the farm output is produced by farmers with net farm income much higher than that.

Chairman PROXMIRE. You go into these farmer's homes and see how they live. They live very, very simply. They and their wives and kids do most of the work. They have very little outside help, work the longest hours, they have only the simplest kind of conveniences in their homes. It is just not an easy, affluent kind of life at all. But these are the big farmers in our State.

Mr. SCHULTZE. I think one can get a feel for some of that by noting that the 16 percent I talk about constitutes about 500,000 farms. As I said, they produce about two-thirds of the output. But there are 2½ million other farms which produce only one-third of the output, with much lower net incomes.

I might look at maybe two or three other cases, just illustrations on this distribution business.

Irrigation is another case in point. Very often, we tend to think of irrigation as a technique by which one brings the benefits of water and better farming to a group of relatively small, impoverished farmers. Well, it turns out that at one time in the Bureau we did a quick check of a good cross section of all the irrigation projects started in the mid-1960's. The total cost of those projects allocable to irrigation was about \$570 million, so it was not a small thing. The average irrigation cost per farm was \$132,000. The present value of what the irrigators would repay the Government was \$10,000, leaving an average per farm subsidy of \$122,000 a farm, which, to put in other terms, is the same thing as giving a man \$6,700 a year for 50 years.

It seems to me, again, and this is typical of irrigation, that here is a program which generally leads to a very inefficient use of water.

Interestingly enough, by the way, one of the favorite crops in areas where irrigation water is provided cheaply, in the dry Southwest areas, one of the favorite crops is watermelons, which is some indication of the efficiency with which we are using water.

Another case in point would be general aviation. The 115,000 private—not commercial, but private planes—incur about \$250 million a year of Federal cost which can reasonably be allocated to the expense on behalf of general aviation for terminal air traffic control facilities, navigation facilities, supporting these planes. It is something in the neighborhood of \$2,000 a year per plane. I would hardly think that in most States, owners of private planes could qualify for welfare benefits.

More importantly, perhaps, is what this free provision of service does to our airways. From FAA data, one can calculate very roughly the following kind of estimates:

If you take an airport where the private general aviation plane uses the same runways as the commercial planes, and you take a 2-hour congestion period, like 4 to 6 in the afternoon, and you intersperse just 10 private aviation planes in that pattern, each one of them in terms of delay, costs the airlines and passengers \$500 of direct operating costs and 500 hours of passenger time. If you value passenger time simply at the minimum wage, you have about a \$1,200 cost to take one private plane up carrying two to three passengers. So, both the Federal direct costs and the costs to other passengers of a free use of the airways policy can be very severe.

The maritime program. If you take into account the cabotage provision—which keeps foreign ships from our coastal trades—the cost to the Government and to the shipper is about \$700 million a year. That protects about 100,000 jobs a year. That is \$7,000 a job per year to protect the jobs, which seems to me, again, hardly a welfare program, transferring income to those in need.

As Mr. Down's paper pointed out before this hearing, if you look at highways, a large part of the cost of highways is levied, in the urban areas particularly, precisely on those least able to pay, primarily to bring benefits to those most able to pay.

Another one that, I do not know whether it was mentioned in these hearings, but it seems to me terribly important, is the fact that in many cases, the Federal Government, National Government, and State, too, have a policy of giving away very valuable resources—TV and radio air rights; airline routes; pipeline rights. I do not quite know why the public, instead of auctioning off those, simply gives them away free. Clearly, if you look at the price which people pay when they turn these over, they are worth a lot.

One other interesting thing that comes out of the study of agriculture, which I suspect would be true in other cases, if you provide a subsidy as we do in agriculture, very often that tends to get embedded in the price of land. For example, in the last 15 years, net farm income per acre has gone up about 17 percent. In those same 15 years, net returns to farmland, just that part of it which flows in effect to the landlord, has gone up about 135 percent and farmland prices have gone up about 100 percent. So, you get an anomalous situation in many of these cases where you provide such subsidies; first, they tend to go toward the relatively well off segment of the group you have provided them to; second, they get capitalized into the price of assets—in this example, land—and therefore the second generation of farmers get little from the subsidies. That is why returns to land have gone up so much more than net farm income, because farmers are now paying the carrying charges and rents to landlords reflecting in many cases simply the farm program itself.

Cab medallions in New York are another case in point, where regulation of the number of cabs has been such that you pay about \$25,000 to get a cab medallion in New York and you get yourself in the position that you can never take the subsidy away, because then you wreck the equity value of people who have invested their life savings in farm value or cab medallion.

I do not think we have paid nearly enough attention to equity, the distribution costs of these programs, which in turn gets us into this efficiency problem. All of which you mentioned.

Chairman PROXMIRE. My time is up.

Mr. Conable?

Representative CONABLE. I would like to associate myself with the chairman's remarks about what a stimulating discussion you have given us here, Mr. Schultze. I understand your efforts in trying to make some sense out of the farm program. I think I would rather stay away from that one. I cannot understand our incentives there at all.

I would like to talk a little about the problem of medical expense, however. That is something that we are going to be concerning our-

selves with on Ways and Means shortly, I hope. Do you have any idea why, during the past 2 years since the passage of the Social Security Act of 1967, there has not been more in the way of pilot projects on increasing the efficiency of medical services? You are quite correct that people are very much concerned about whether this can be done without hurting the quality of medical services. Yet, the rise in the cost of hospital expense, particularly, is such an aggravated part of rising costs that we certainly should be doing some substantial experimental work in this area. I wonder why the Social Security Administration and HEW have not done more of this sort of thing which we authorized? Do you know?

Mr. SCHULTZE. Well, I can maybe do a little bit more than speculate. I think I know part of the answer, but only part.

In the Social Security Amendments of 1967, the Congress gave the Social Security Administration the authority to undertake experiments which could be set up regardless of other aspects of the law. So in other words, you could, even though the law requires full cost reimbursement, the Social Security Administration could experiment with other types of reimbursement.

Nevertheless, the way the law is written, the experiments had to be voluntary, so the Secretary has no authority to require a given area, a given region, to get together and undertake a new reimbursement policy, say for hospitals. It probably will be necessary to give the Secretary mandatory authority. And I have a vague recollection that the Secretary of HEW may have submitted legislation on this point, to give him more than voluntary power. He may have to have the power to make experiments mandatory.

Representative CONABLE. I suspect there is a good deal of interest among those who furnish medical service in having such studies made. I used to serve on a hospital board and we always griped that there was no incentive to try to keep costs down. The sky was the limit as far as both the public programs and Blue Cross were concerned. We always felt, of course, that we could compete much better than some of the other hospitals in the area, and we wanted to be able to prove it by taking advantage of incentives that might be available. So, on a voluntary pilot program I think you would find quite a bit of interest if this were a possibility.

Mr. SCHULTZE. In my own relatively uninformed view on this, I feel we would be able to conceive and carry out good experiments in this area as and when we begin to get some idea of how to monitor the quality of output. What you might want to do, as one example, is to have a regionwide payment schedule for various services in the hospital, and allow those hospitals who can provide it more efficiently to keep some of the savings and conversely, some of those who are more expensive to be penalized. But somehow, you have to be sure that hospitals are not reducing the quality of service drastically as a means of reducing accounting costs. It is that key problem that is one of the hangups. But I think it can be done.

I think the President's Commission on Health Manpower, I think it was, 2 or 3 years ago made some of what I thought were excellent suggestions along this line.

Representative CONABLE. You have made some very excellent suggestions, too, about how to stimulate competition in the public sector,

I am a great believer in competition, whether for business or the bureaucracy or even the politicians. I think this is a very helpful statement and I compliment you on it.

That is all, Mr. Chairman.

Chairman PROXMIRE. Senator Percy?

Senator PERCY. Dr. Schultze, in looking ahead we must project tremendous costs and expenditures in the public sector for such things as education, health, population control, and so forth. Yet, at the same time, action is being taken before the Senate Finance Committee which could have the effect of imposing restrictions and you might say penalties on individual or corporate giving to foundations, educational institutions, and so forth. Could you comment on what you believe incentives are that should be continued to the maximum extent possible to enable as many of our private agencies as possible to continue dealing with these private sector problems?

Mr. SCHULTZE. Senator, you are catching me at two disadvantages.

One, I get my salary from an institution which is, under the law, called a foundation, so anything I say might be labeled as pleading in self-interest.

Second, with respect to some of the technical provisions of that bill, I do not warrant myself enough of an expert to comment.

As a general proposition, however it seems to me there is tremendous value in diversity, and that foundations are one of the important means of providing that diversity. Or if you want to use the terms we have been using, some competition. It seems to me, therefore, that, as a general policy, one ought to look toward monitoring abuses rather than toward reducing the flow of funds into the foundation. It seems to me we do not want to confuse the two objectives and that the bill as it now stands does confuse the two objectives by assuming that you can substantially get around the abuse problem—and there have been abuses, no question about it—by going after the other objective; namely, reducing the flow of funds. While, again, I cannot quite comment on the specific provisions, the general thrust of it seems in this direction.

Senator PERCY. Just for the general guidance of the Senate, because the House has finished its work, I want to apply a litmus test to the issue of whether or not we want to encourage the private sector in this area or to continue to appropriate more and more public expenditures to finance Government personnel and Government bureaus to assume these obligations. You have now worked in both Government and nonprofit organizations. From the standpoint of effective programs, where do you see the greatest chance for innovative, creative new programs, in areas of public sector problems—housing, education, health, population control, government—or in these private institutions, foundations and nonprofit organizations? Which one is likely to innovate, more boldly and try new ideas—the public or private sector?

Mr. SCHULTZE. I would like to give a short answer to that and then comment on it.

It seems to me as a general proposition, the private foundations are much more likely to innovate, for the obvious and quite proper reason that they do not have to worry as much about the political

consequences of making a mistake, and you are bound to make mistakes if you innovate.

I would add to that a more general proposition, it seems to me, Senator, that both foundations and the Government ought to do much, much more than has yet been done in the way of designing and carrying out deliberately experimental programs. Now, I do not mean simply labeling a small program an experiment. I mean designing it so you can see what the results are.

One of the key problems that faces any administrator in the social area, be he from the State government, local government, Federal Government, or in a nonprofit institution, he does not know what happens when you push button X, what kind of results you get. He does not know what, in the economist's jargon, the production function is. One of the great opportunities, it seems to me, that we have with the kind of social programs both government and foundations are carrying out is deliberately to do some experimenting so we can find out, rather than simply assuming that if we spend money and if people like it, automatically it must be good. It seems to me we ought to go much more heavily toward carefully designing programs so we can see what in the dickens goes on in this area.

Senator PERCY. Has it been your experience that private, nonprofit institutions are able to take better advantage of, say, volunteers in their work and get many men and women involved who will contribute their services, where they would not contribute them to a Government bureau? They would contribute to a private institution and you can go all the way from character-building institutions—boys clubs, Campfire Girls, Girl Scouts, Boy Scouts—all the way up to the most sophisticated foundation—Ford Foundation, Rockefeller Foundation, Brookings Institution. Can you command more people volunteering and getting to work on the problem in private institutions than you can in a Government bureau?

Mr. SCHULTZE. In terms of enlisting voluntary support, I think you are right, you can do more in the private institution. I think general experience indicates that. That does not mean there are not substantial exceptions and the trouble one runs into in any one of these is the longer it is in existence, the harder it is to keep volunteer enthusiasm going. But particularly for a new and experimental approach, it seems to me you would more likely be able to commandeer voluntary reserves.

Senator PERCY. It took a Frenchman in 1832 to discover the genius of American society; De Tocqueville seemed to capture the feeling of how we got so much done in this country. Is it your impression that much of the good work of this country and our society is still done in private and nonprofit institutions where the Government's role has been primarily to provide financial incentives and stimulus to encourage private giving but to allow these private institutions to do most of this work? They make a very marked impact on American society. Is that your impression?

Mr. SCHULTZE. Yes, sir. As a matter of fact—this answer will sound peculiar the way I start it—but in any event, in considering, interestingly enough, what one should think about the various institutions that had been, of all things, financed by the CIA, it forced a lot of people to begin to think of the role of private voluntary organizations.

in America compared to the rest of the world. And at least for the first time, it got me to thinking about the precise fact you indicate, that one of the things you notice in our history which is not unique, but almost unique, is the tremendous role that voluntary associations of all kinds have played in American history. This means to me a little different than the development of most countries. It leads me, therefore, to believe we should do everything to preserve this diversity, pluralism, as much as we can. Which is not to say that they can do everything. Particularly what they cannot do is the things that need the large, ongoing operative resources.

But particularly, for the experimental and voluntary community activities, they are essential.

Senator PERCY. I am certain that there are abuses in philanthropy, but must we not be exceedingly careful that in stamping out abuse, we be very careful not to stamp out the genius that lies behind our American society and industry, and not to deflate the incentives that have taken years to build up?

Mr. SCHULTZE. Embarrassed only by the fact that my assent will sound self-serving; yes, sir.

Senator PERCY. One other area that I have discussed in these hearings with the present Director of the Budget, Mr. Mayo, is whether or not we can find a way to establish a set of national goals within the framework of Government. We have a national goals commission. It was worth while thinking through where we want to go, what kind of a Nation we want to be, what kind of a people we want to become. We have an economic council. Would it be of any value to try to see whether or not we could put together the kind of statistics or indicators that a social council might develop to prepare social indices and objectives so we know where we should be going in the future and see how we can finance it and how we can best get there?

I am struck by how little forward planning goes on in Government as against almost every other sector of American life that I have ever dealt with, corporate or foundations, universities or whatever. Everyone seems to know where they are going and they have a plan and a goal, except the Government. We just sort of live day by day. We do not even live that way. We are working on monthly projections and we cannot even get a budget approved and appropriations made this year for current needs.

Mr. SCHULTZE. I have two comments on that. First, Senator, I personally believe that continuing work on the concept of social indicators would be very useful. I think it is going to be a long, hard struggle. It is a very difficult area, but I think it would be terribly useful.

Point No. 2. In my view, what is needed is not so much an attempt to get a kind of—what is the word I want—a precise, agreed-on statement of longrun national goals. I think that is something that almost has to come out case by case in the political process of arguing about it. I think debate, bargaining and negotiation about national goals is perfectly healthy and desirable.

But what we really need is the kind of longrun planning which will show us exactly what we are now doing and what the relative costs are so that when we vote for program A or for carrier B, precisely what the longrun consequences are in terms of foregoing other goals

we might have. By that I mean what I would like is a planning framework made available to the Congress which would show what our commitments are so far during the next 5 years, what kind of free resources we have, and then look at every proposed program in terms of what it does to chewing up those free resources. Then let the actual decision, however, about the final goals we choose come out of the standard negotiating and bargaining process which is the essence of the political system. It is the framework of information about goals rather than trying to precisely pick a preset set of goals which seem to be important.

Senator PERCY. Thank you, Doctor. My time is up. I appreciate your comments very much.

Chairman PROXMIRE. Congressman Brown?

Representative BROWN. I am sorry, Mr. Schultze. I was delayed in my office this morning and did not get over in time to hear you present your statement. But I have read through it quickly and from the nature of Senator Percy's questions, I think I have the flavor of it.

The substance I would gather, of your comments, is that you think we can get some place with reference to the efficient use of our resources by encouraging the private sector rather than necessarily go to spending through the public sector. Is that a fair interpretation of your comment?

Mr. SCHULTZE. Without wanting to quibble, I would expand it and say that is half of it and the other half is even where we do it in the public sector, we ought to give more attention to providing incentives for public officials, the appropriate kind of program incentives to get the public sector to carry it out more efficiently. So it is both.

Representative BROWN. Do you see tax incentives as part of this package of providing private incentives, the effort to get somebody to do something by encouraging them through the vehicle of not having to pay as much tax if they do a public oriented act as a result of their decisionmaking process?

Mr. SCHULTZE. I guess that one, Mr. Brown, I would have to say generally no, but without being dogmatic about it.

Representative BROWN. Could you square the reason for me why tax incentives do not have your approval as a means of encouraging public-spirited acts by the private sector?

Mr. SCHULTZE. I will try.

First, let me note that I said generally. I do not mean that there are not exceptions. But I would treat it as an exception.

It seems to me as a general proposition, if you look at specific cases, where you are attempting to encourage a very complicated, specifically defined act like, say, bringing investment into central cities—

Representative BROWN. Let us talk about water pollution.

Mr. SCHULTZE. Water pollution is a good case. We will talk about water pollution.

If you provide tax incentives to industrial firms to reduce water pollution, what you are doing is, generally speaking in this area, encouraging an inefficient means, usually, of getting rid of water pollution. Because if you bring in tax incentives, you have to write the bill in terms of providing specific facilities to clean up pollution once it is created.

Representative BROWN. Why can you not provide a tax incentive for process?

Mr. SCHULTZE. You cannot define it. Necessarily, over the years, firms are always changing their processes and you cannot impute from a given act whether that was undertaken to clean up water pollution or not. If you require that an incentive be given for a specifically defined act to clean up water, very often you will find this will push firms into treating waste after it is created rather than changing their internal processes.

If you go the other way around and say to a firm, we are going to tax you on the amount of effluent or pollutants you put into the water, then the firm itself is necessarily—necessarily—going to undertake the most efficient means of getting rid of it. But if you try to label something that goes exclusively to water pollution facilities, you cannot write it.

Representative BROWN. Not reverse it and say we will reduce the tax by the percentage with which you reduce your effluent?

Mr. SCHULTZE. That is fine so long as you are dealing with existing firms and existing processes. That would be exactly symmetrical. The river, where do you start from? What is the amount of pollution he would be putting into the river in the first place.

problem with doing that, however, is when you get a new firm on the

Representative BROWN. You take the industry average.

Mr. SCHULTZE. The industry average changes over time. My only point is that if you look into the specifics of each proposal you will find there is every advantage on levying an effluent charge which does not run into these difficulties, rather than an incentive.

Suppose someone does decide as a national policy that we want to encourage the hiring of, generally speaking, unskilled, less educated workers. No fancy other requirements that they have to come from a particular area, that they have to be moved to a particular area. One could, like the investment tax credit, bring a relatively simple tax incentive program to do that. Those kinds of incentives, it seems to me, might make some sense. But when you get very specific, it seems terribly difficult to put into the tax law.

Representative BROWN. It seems terribly difficult to define an unskilled person. If somebody asked me to be a pipefitter, I could qualify immediately as an unskilled pipefitter. I would concur that it is not easy to write programs for tax incentives in any event. But I am not sure the answer to rejecting the tax incentive approach out of hand is the difficulty we seem to have in writing definitions to accomplish our purpose.

Mr. SCHULTZE. I guess what I am really saying is in any event, it is going to be difficult, that a fairly broad, very general incentive like the investment tax credit, it seems to me, is at least possible to do without substantial distortions and without getting the tax code terribly complex and making the Internal Revenue Service an administering agent for social programs.

The more specific you make your objective, you will find in case after case, you are shading over to the point where I believe, at least, you end up with an impossibly complex set of provisions and very often doing what you do not want to do in the first place

For example, I am absolutely convinced that if you try to write an incentive for an industry locating in the central city, the policy aspects are such that it would be expanded for poor rural areas, then expanded for areas which had lost their natural resources, and every possible group would be in until you end up not accomplishing your original purpose in the first place. Therefore, without being dogmatic, I would certainly want to scrutinize any one of them with a terribly fine eagle eye to make sure that it is "doable."

Representative BROWN. What are you suggesting that we do—what arguments are you suggesting to deal with that problem, that we put a tax burden on those industries located in efficient locations?

Mr. SCHULTZE. No, in this particular case, I am not suggesting that we do anything.

Representative BROWN. In other words, that we not deal with the problem?

Mr. SCHULTZE. Well, taking that particular case, personally, I have yet to be convinced that the big problem of the central city is the fact that firms do not locate there.

Representative BROWN. Would you buy the fact that one of the problems of the rural area is that firms do not locate there and they produce people that cannot be employed?

Mr. SCHULTZE. I would probably buy that fact, except then go on to point out that the reasons they do not locate there are probably so overwhelming that what you would do with the tax incentive is perpetuate a half sick industry, in not all but enough areas that on balance your goal would not be met.

Representative BROWN. Maybe you would adopt the policy of letting them alone and let them locate wherever it is efficient?

Mr. SCHULTZE. As a general proposition, without wanting to say there are not exceptions for industrial location, I would say you are probably right.

Representative BROWN. Like the flood plain?

Mr. SCHULTZE. No, sir; it seems to me in this case, one can simply devise an insurance program. Let them decide where to locate. You have an insurance program; if you want to pay the premium, fine.

Representative BROWN. We did approve the program, the reinsurance program in the Congress—

Mr. SCHULTZE. My recollection of that program, which is a little bit hazy, is that it goes clearly in the right direction. But has not yet gotten to the point where the insurance premiums, as I understand it, would be in any sense mandatory.

Representative BROWN. It is a Federal reinsurance program, ultimately, everybody pays the premium; that is, they pay it through taxation; right?

Mr. SCHULTZE. No, sir. My understanding now of the program is that it has two elements: First, with respect to new investment in the flood plain, which is all you can effect, they have to pay a premium actuarially adjusted to flood risks. But the firms already located there, the view, I think properly so, is you cannot force a man who has already made an investment decision to pay that kind of premium. So here is a subsidy, the idea being that over time, as investments and improvements take place, more and more of the investment will be paying the full actuarial premium.

Representative BROWN. Let me change the subject for just a minute. How long were you Director of the Bureau of the Budget?

Mr. SCHULTZE. Two and one-half years.

Representative BROWN. During that time, what was the increase in the Federal budget?

Mr. SCHULTZE. Large. With the new unified budget, I am not sure I can remember. From something like \$130 billion maybe—to \$180 billion. That is in that ballpark.

Representative BROWN. I am not very quick at percentages.

Mr. SCHULTZE. It is a large percentage, no matter how you calculate it.

Representative BROWN. Forty percent, 35 percent.

Mr. SCHULTZE. Yes, sir.

Representative BROWN. You have had time now to think about that whole period of history. Can you quickly summarize how we can avoid that kind of radical increase in our budgetary situation, our spending?

Mr. SCHULTZE. I would break my answer into two parts. One way is not to get into another Vietnam.

Representative BROWN. How do you control that?

Mr. SCHULTZE. I am reminded, if I may be just a little on the light side, when you ask a man a question like that, the answer is if you are so smart, why ain't you rich? I wish I knew. I am not sure I am the appropriate one to ask questions with respect to how one formulates and controls the foreign policy commitments of the U.S. Government. I do say, however, that is clearly one of the points involved, and more to the point, quite probably, we did not realize—I do not think I am revealing anything—nobody realized the true costs of what we were undertaking when we undertook it.

Representative BROWN. My time is fairly well up, but could you break out the Vietnam amount in that increase?

Mr. SCHULTZE. The amount is approximately, I would say in real costs, about \$25 billion.

Representative BROWN. And the other cost increase?

Mr. SCHULTZE. Maybe \$30 billion. I may have to correct this for the record. That is a rough one.

Representative BROWN. In 2½ years?

Mr. SCHULTZE. Well, over three budgets.

Representative BROWN. I think the Vietnam thing may be a subject for another hearing. We could certainly spend more than a day on that. But how do you avoid the other cost increase; or do you?

Mr. SCHULTZE. Let me give an answer which is admittedly only partly responsive. If I have to reflect back on the period, it seems to me, the following is the real problem that now impresses me. If you look at that amount of increase, which is a sizable increase, one would think that any government over that period—I mean over a short period of time having that big an increase—would have had a chance to really program its objectives. You would have had strategic policy as to just where you are going to go, you had a lot of freedom. If you tried to allocate resources by taking them from somebody and giving them to somebody else, it is very difficult. But you should have been able, one would think, to plan strategically just how to use a large increase.

Representative BROWN. We did not mean to take from anybody, we just wanted to allocate growing Federal resources. But if income doesn't match expenditures—

Mr. SCHULTZE. The increment, what was the increment in our national product.

Representative BROWN. We ran a substantial fiscal deficit. We really did not take them—or better said, pay for them—at the time. We are taking them now in terms of inflation which makes somebody pay.

Mr. SCHULTZE. We took them from the economy one way or the other, by borrowing or something else.

But my key point is, going back to something I said to Senator Percy, what happened was that even though this was a large increase and you thought you had a lot of flexibility. Yet in any one year, your prior commitments had boxed you in. In any one year, you had practically no room to move, because your prior commitments had taken up all the room to move. So in that one year, you put in commitments for the future in terms of low initial costs, so the next year, you again did not have much flexibility. Looking at it from hindsight, one would think you had a lot of flexibility. Doing it year by year, you did not.

This leads me to believe that the key thing needed is not so much setting national goals but setting a 5-year forward look in which you put down on paper the future costs of your current commitments and tag every proposal with its 5-year cost so that at least you know what you are doing. You can argue as to whether it should be \$20 or \$30 or \$40 billion. But at least we ought to be in a position of, whatever we do decide, doing it fully aware of what we are doing with this. That would be my big thing in this.

Representative BROWN. My time is well up.

Chairman PROXMIRE. Thank you, Dr. Schultze, for doing a fine job. I want to get the comments, as I say, of your successor on your most thoughtful and appealing notions here. I have a series of questions we would like to ask you. I am sure Senator Percy mentioned his, I have some. We will submit those questions to you to answer for the record.

Thank you very much.

(Supplemental information, subsequently supplied by Mr. Schultze, appears on p. 871 at the conclusion of today's hearing.)

Mr. SCHULTZE. Thank you.

Chairman PROXMIRE. Our next witness is Dr. Milton Friedman.

Dr. Milton Friedman is an internationally known economist and author. He received his A.B. degree from Rutgers University in 1932, and his Ph. D. from Columbia University in 1946. He has been an economist for the Natural Resources Commission and the Treasury Department, and since 1941, has been a professor of economics at the University of Chicago. He has authored a large number of significant economic articles and books, including "Essays in Positive Economics," "Studies in the Quantity Theory of Money," and "Capitalism and Freedom."

Dr. Friedman, when talking with the Chairman of the Council of Economic Advisers I do not know if he said we are all Friedmanites,

or he said he is not exactly a Friedmanite but he is Friedmanesane. At any rate, you have had a very profound influence. Some people say you have brought Adam Smith into the 20th century. Other people disagree as to the century into which you have brought him. At any rate, your ideas are enlightening and provocative. We are delighted to welcome you before this subcommittee.

**STATEMENT OF MILTON FRIEDMAN, PAUL SNOWDEN RUSSELL
DISTINGUISHED SERVICE PROFESSOR OF ECONOMICS, UNIVER-
SITY OF CHICAGO**

Mr. FRIEDMAN. Thank you, Senator Proxmire. I am very happy to be here with you. Much of the present widespread feeling of malaise in this country arises from the contrast between governmental promise and governmental performance—the contrast between the wide-ranging responsibilities that Government has grasped or had trust on it and its failure to discharge those responsibilities effectively. This malaise has been a slow growth. Its origins go back at least three decades. But in recent years, reinforced by dissatisfaction over Vietnam, it has become a veritable flood. The initial widespread willingness to take it for granted that there is a governmental cure for every social problem has reinforced the disillusionment that set in when adoption of the recommended cure was followed by a deepening of the problem. This has been the outcome in area after area, whether it be agricultural policy, public housing, urban renewal, welfare programs, regulation of railroads, or the war on poverty. And the final blow has been the failure of Government—distracted by ever more ambitious undertakings—to perform its basic function of protecting the persons of its citizens from violence and their property from theft and destruction.

The task your subcommittee has undertaken is therefore of vital importance at this moment. We urgently need a new governmental policy, an end to ill-considered expansion in all directions, a beginning of retrenchment and curtailment. It is past time that we started to cut the Government back to size, particularly the Federal Government. That is the only true route to economy in Government.

In the few minutes that I have with this committee, I thought it might be most useful if I summarized my conclusions in the form of eight broad guidelines for governmental activity. I shall first state them boldly, then illustrate them a bit, though necessarily still dogmatically and cryptically. I may say I have been interested in noting how much of an overlap there is between these guidelines as I state them and the general principles which Charles Schultze just expressed in his statement.

1. The basic function of Government is to make and enforce general rules governing individual behavior. Changes in such rules are frequently the most effective way to resolve problems without further Government intervention.

2. When in doubt whether to go farther, stay out and let private actions prevail.

3. If Government does go farther, the least harmful measure is generally to finance specified activities, openly and directly, without administering them, directly or indirectly.

4. When Government does finance, it is best to finance intended beneficiaries, not producers.

5. If Government not only finances but also administers an activity, it should always permit competition in order to have a private yardstick.

6. Also, it should buy the resources it uses on the market and not commandeer them.

7. Whenever Government produces a product or service, it should if possible charge the user his pro rata cost, not give the item away.

8. Only as a last resort should Government finance, administer, and deliver free of charge.

Let me illustrate these guidelines by applying them to a number of specific examples.

1. *Schooling*.—The clearest example of a governmental activity currently in category 8—that is, an activity which the Government not only finances and administers, but also delivers free of charge—is schooling. This is predominantly a local rather than Federal activity, but the Federal Government has been increasingly involved.

At the elementary and secondary level, government (1) enforce compulsory schooling, (2) finances schooling from general tax revenue, (3) administers the schools, (4) makes the schooling available without specific charge. The result, particularly in large cities, has been technologically backward schools, a bureaucratic maze, community dissatisfaction, and burgeoning costs. Private competition (guidelines 5) is permitted but under a severe handicap—parents who send their children to governmental schools pay nothing in addition to school taxes; parents who send their children to private schools must pay full costs—except as they are beneficiaries of the charity of others.

The least extensive reform that would yet enormously improve matters would be to apply guidelines 4 and 7: Let each community use its present schooling funds to give the parent of every child a voucher to cover his appropriate share of these funds. The voucher could be used for schooling and only for schooling but at any approved school, governmental or private. Government schools would charge a fee and would have to cover their costs from their receipts. This would decentralize schools, widen the opportunity available to currently disadvantaged, and promote a major improvement in efficiency and quality of schooling.

On the higher educational level, the failure to adopt guidelines 4 and 7 has produced one of the most disgraceful scandals of our time—albeit one that tends to be shielded by the self-interest of those of us who are the beneficiaries. Almost every governmentally run institution of higher schooling gives a substantial scholarship to anyone who is admitted, regardless of his present or future income or his parents' present or future income. The result is that we impose heavy taxes on the poor and unschooled to provide large subsidies to the present or future well to do and schooled. Every young man or woman who has the ability and the desire should be able to attend a college or university suited to his talents, provided that he or she is willing to pay the costs, either currently or out of the higher income that the schooling will make possible.

The way to achieve this objective is to apply guideline 7—charge full-cost fees—and guideline 4—make governmental funds available to

needy students—preferably by loans along the lines of the proposed Economic Opportunity Bank—rather than to educational institutions.

2. *Post Office*.—The Post Office illustrates the partial fulfillment of guideline 7 but the complete violation of guideline 5. Guideline 5, you will recall, is the availability of competition. Permit private competition and the present postal mess would be transformed. There would be an incentive for private institutions to introduce new and efficient techniques, and the Government Post Office would have to keep pace or go out of business. Equally important, it would become clear who is being subsidized and how much, and we might be able to go the next step—of adopting guideline 4—and give the subsidy directly to the persons it is intended to help, rather than reduce the price of the service to all consumers of it.

It is important to recognize two levels of efficiency: In production and consumption. Let production be however efficient, if what is produced is given away without charge, it will be wasted by the consumers. Subsidized postal service is one example. Schooling, already discussed, is a second. If college is available without cost to the student, youngsters will go to college who attach no value to it.

3. *Welfare*.—Welfare illustrates how great an improvement could be obtained by applying guidelines 3 and 4—give direct and open subsidies to intended beneficiaries. The negative income tax is an application of these guidelines. By comparison with the present system of attempted detailed administration and supervision, it would give the truly needy more assistance in a more dignified fashion; provide an incentive for persons now on relief to get off the welfare rolls; reduce governmental bureaucracy; and promise future financial relief.

4. *Oil*.—The broad applicability of these guidelines is illustrated by the relevance of the same items to oil as to welfare. The alleged objective of our scandalous collection of special measures about oil—rationing, depletion, oil import quotas, and still others—is the preservation of an oil reserve for time of national emergency. It would be far cheaper—and far less corrupting politically—to subsidize this objective directly—if indeed any subsidy is necessary—than to continue our present policies.

5. *Rent control in New York*.—An excellent example of guideline 2—stay out if possible—is the continuance of rent control in New York City after World War II. Other cities had the wisdom—or luck—to let rent control lapse when Federal control lapsed. New York is still stuck with the consequences of its lone decision. It is the only major city in the country that has a “shortage” of housing in the sense of more applicants for rent-controlled apartments than there are apartments available, that has under-the-table payments, and incredible redtape. More important, much of the deterioration in the physical character of New York City in the past two decades is the not-so-indirect consequences of rent control. And there is no end in sight.

New York’s experience illustrates the main virtue in guideline 2. The problem is not so much that governments choose the wrong thing to do. Of course, they do, but so do individuals and perhaps as frequently. The key problem is rather that once Government undertakes something, it almost never lets go. A private individual or enterprise will be forced, by limitation of resources and power, to terminate an unsuccessful

enterprise. Not so a government. Rent control in New York City was to be a temporary expedient. Again, our present agricultural price support program, also intended to be temporary, is almost uniformly regarded as a mistake. If it were not on the books, yet by some miracle all Members of Congress recognized as well as they do now how it would work, I doubt that there would be a dozen votes for it in the House and Senate combined. Yet it apparently cannot be repealed.

Many more examples could be added, and I shall be glad to comment on any other specific programs that you may wish to raise and on which I have some competence. However, these are, I hope, enough to suggest the direction in which these guidelines would lead us, and to give some flavor to the principles in terms of which a believer in freedom would seek to reverse the trend of recent decades toward ever greater control of individuals by Government.

Thank you.

(Supplemental information, subsequently supplied by Mr. Friedman appears on p. 873 at the conclusion of today's hearing.)

Chairman PROXMIRE. Thank you, Dr. Friedman. Your clear, cold, hard logic is very hard to resist. I would like to apply these guidelines in a particular area, since you asked for suggestions. The one big suggestion that seems obvious to me is in the area of military spending. As you know, more than 70 percent, maybe 80 percent, of our controllable spending is in the military area. I wonder if we can in fact cut the Government back to size effectively without reducing military spending? Do you care to comment on how your guidelines would apply, if they would apply, in the military area?

Mr. FRIEDMAN. Yes; let me say first that if we take a longer view, the military part of the budget is now a much smaller fraction of the total controllable budget than the 60 or 70 percent you refer to. Yet, obviously, military spending is too large.

Chairman PROXMIRE. That depends entirely on your assumptions as to what happens in the future. That is what the big debate is going to be about. The President said he expects the military budget to be substantially higher after Vietnam than it is now. He said that before the election. We have had testimony before the committee by military officials that they cannot see how the budget could be reduced after Vietnam. It will stay in the \$80 to \$90 billion dollar area. But all our experience is that with the enormous technological cost to these programs, we could continue to have 70, 80, 90 percent of our GNP involved in the total military budget. Close to 40 percent of the budget involved.

Mr. FRIEDMAN. I did not mean to say that. I was only meaning to comment that 40 percent of the total budget is in defense, not 80 or 90 percent. You referred to controllable expenditures. I was only saying that from a long-term point of view, a much wider range of expenditures is controllable.

The most obvious application of the guidelines is the application of point No. 6, that the Government should buy the resources it uses on the market and not commandeer it. I take that to mean, in application to the military, that we should have a voluntary military and not conscription. Involuntary servitude is not only inconsistent with the fundamental principles of a free society, but it is inefficient.

Chairman PROXMIRE. There again, we have the costs of it. I talked with Secretary Laird about this about a month or so ago. He said that what everybody is forgetting about after Vietnam—he hopes and the President hopes—and many people in Congress hope to have a voluntary army. But that means military pay is to be much higher, it will cost more.

Mr. FRIEDMAN. The problem, Senator Proxmire, is the definition of cost. In terms of budgetary cost, in terms of what goes down in your books, a voluntary army may cost more, though I am not sure even of that. But the true cost to the society will be less.

The trouble is that part of the cost is now hidden. Part of the cost is hidden in the form of the unduly low salaries being paid to the people who are conscripted. The present pay and benefits of first-term men in the military is roughly one-half of that of their civilian counterparts. The men serving their first term are, in effect, paying a tax—in the form of compulsory service—equal to about half of the money they could earn. A proper calculation of costs would include this implicit tax.

In addition, we now use men very wastefully. A draftee who is in the military for 2 years spends 6 months being trained or being sent somewhere. He spends the last few months waiting to leave the military. He ends up finishing at most a year's service. In addition, much time of other men has to be devoted to training him. The result is that for each man-year obtained by conscription, the Armed Forces get a good deal less than a half-year of effective service.

I should not speak so much at length on this, but I happen to be a member of the President's Commission on an all-volunteer Armed Force. We have been meeting this weekend. One of the interesting facts we have learned is that a voluntary army would require adding to the army each year only two men for each three you now have to add under conscription, because conscription is a wasteful method of manning a military force. In terms of true social cost, the cost of manning the military would be greatly reduced by shifting to a voluntary basis.

When you turn to the other aspects of the military, it is impossible for a dog to meow or for a cat to bark, and it is equally impossible for Government activities to be efficient. Unfortunately, we have found no way in which we can turn the business of defending this country over to private activity. We do have to have a Government program and it is going to be inefficient. How do we keep that inefficiency down?

One answer is insofar as possible, to require all military procurement to be on the open market, through auction, through bidding, through trying to maintain competition, and of course, through the surveillance which Members of the Senate and the Congress impose upon it. Beyond that, I have no easy cure for the reduction of military expenditures.

Chairman PROXMIRE. Our studies indicate that the private contractor, the defense contractor, is inefficient, grossly inefficient.

Mr. FRIEDMAN. Yes.

Chairman PROXMIRE. We have had testimony that has not been disputed that when you procure on a negotiated basis rather than a competitive basis, it costs 30 to 40 percent more. This is in the private

sector. At least, it is a privately owned corporation that has these high costs.

Mr. FRIEDMAN. You have the problem that you need competition, not only among producers, but also among buyers. In the defense area, there is no way, unfortunately, of getting that competition.

Chairman PROXMIRE. I hope you can help us get to that, because we have been stressing that but we move steadily to a lower and lower level of advertised competitively procured procurement. So now we are down to 11 percent. I think your point is excellent, but very hard to move in that direction.

I would like to ask you about one of your guidelines—I think it is No. 2—which indicates we ought to stay out of controls. You get into the New York rent control as an example.

Mr. FRIEDMAN. Right.

Chairman PROXMIRE. There is an enormous amount of support around the country; I found that a questionnaire I sent out to Wisconsin, with over 12,000 responses, that 70 percent of the people favor wage, price, rent controls right now for the whole country. They are fed up with inflation. They think this will stop it. Interest rates have gone sky high, there is some indication that they may go higher; prices are undoubtedly going to go higher for a long, long time. Do you feel that there is any point at which we should seriously consider controls, or do you think that regardless of what happens to prices, regardless of what happens to interest rates, this is one decision that would be a serious mistake?

Mr. FRIEDMAN. I think it would be a major mistake.

Chairman PROXMIRE. Regardless of what happens to prices and interest rates. Because wage and price controls do not stop inflation, they do not lower interest rates. Wage and price controls at best to divert pressure from one small area to another and in the process produce inefficiencies. The 70 percent of the people who are expressing a preference for wage and price control are really expressing a preference for less inflation. If they had wage and price control with a Government policy which is inflationary, the results would be just as unpopular as inflation is now; in fact, more so.

Chairman PROXMIRE. Would you say that the controls in World War II were a mistake?

Mr. FRIEDMAN. Yes.

Chairman PROXMIRE. Really?

Mr. FRIEDMAN. Yes. The price and wage controls were a mistake. They did no good.

One could make a case for some of the rationing controls of World War II, but not for any of the price or wage controls.

Chairman PROXMIRE. I am astonished. I thought that there was a general consensus among virtually all economists that under some circumstances, all-out war of that kind, so much of our resources were taken up that controls were necessary. But even there, you felt that we should not have them, rationing but not price control?

Mr. FRIEDMAN. Yes. There no doubt are many economists who believe that price and wage controls are necessary in case of all-out war, although the number who believe it is smaller now than it was in World War II. If you look at the experience of the United States

and other countries during periods of price control, you find that much of the harm attributed to inflation is in fact done by the controls that are imposed to suppress the inflation.

The first and best thing is not to have inflation. And you and I understand that the source of inflation is right here in Washington. It is a Grecian temple down on Constitution Avenue; it is the Federal Reserve Board that prints the money and creates the increase in the quantity of the money that produces the inflation. Obviously, other forces—affect inflation and I am oversimplifying, but basically that is the key source of inflation. So the best thing is not to create the inflation by too rapid an increase in money. But if you do create inflation, by all means let it be open instead of suppressed.

Chairman PROXMIRE. Certainly we would have to say that historically, on the basis of American economic history, wars and military spending have been the basic inflationary factor and military spending. Chairman Martin told the Banking Committee just the other day that he would favor a \$10 or \$15 billion cut right now in military spending. He is very concerned about inflation. He recognizes that as long as we have this uneconomic kind of expenditure, with no increase in supply, it is going to be highly inflationary.

There is really not much the Federal Reserve Board can do—or do you think they can do something in the very short run, the next few months, to reverseinflation without slowing down military spending?

Mr. FRIEDMAN. Oh, yes.

Chairman PROXMIRE. What can they do?

Mr. FRIEDMAN. They are doing it. The present inflation does not, in my opinion, owe anything to our military spending. There is no doubt in my mind that we could have avoided our present inflation despite the military spending. That would have required a slower rate of increase in the quantity of money in 1967 and in 1968. The quantity of money has been increasing more slowly since December 1968. Indeed, at the present time, in the short run, for the last 3 months, the Fed has been overdoing monetary restraint. What we need at the moment is a slightly less tight policy.

Chairman PROXMIRE. If they are overdoing it, we are not getting any results. We are still suffering a worse inflation than we were before.

Mr. FRIEDMAN. Quite right. That is because the effect of monetary restriction is delayed. It takes 6 to 9 to 12 months before it has significant effect. The inflation we have been experiencing this year is a delayed consequence of the expansionary monetary policy of 1968.

Chairman PROXMIRE. Are you telling us that within 2 or 3 months, prices will start to—

Mr. FRIEDMAN. Yes.

Chairman PROXMIRE. Will not increase as rapidly?

Mr. FRIEDMAN. Yes; I believe the rate of price increase will definitely be less by the end of this year than it is now. There are already signs that the economy is slowing down. The behavior of employment, of construction, other forms of spending all indicate that you are having a distinct slowdown in the rate of economic activity. I believe that this will be followed by a slowdown in the rate of price increase.

Chairman PROXMIRE. My time is up.

Mr. Conable?

Representative CONABLE. Mr. Friedman, apparently, you are alone with the First National City Bank in calling for moderation of restraint on the tight money situation now.

Mr. FRIEDMAN. I hope not.

Representative CONABLE. Are you not a little afraid of getting our monetary policy into a zigzag course?

Mr. FRIEDMAN. I am very much. More than a little. I feel very strongly that we are running at the moment very serious danger of overdoing matters.

Representative CONABLE. I am talking about too much of a veering in our policy.

Mr. FRIEDMAN. I agree. I think the degree of monetary restraint from December to about May or June was about right.

Representative CONABLE. That is roughly a 2 percent per annum increase?

Mr. FRIEDMAN. No; it was more than that. In terms of money supply narrowly defined—currency plus demand deposits—it was roughly 4½ percent. That is about what it ought to be, because that is about the growth that is in line with the growth in our economic output. But since June, the rate of monetary growth has been zero. That seems to me to be a degree of monetary restraint, which, if long continued, will make for an unnecessarily severe economic contraction next year. I do not believe there is any way to avoid paying some costs of slowing down inflation. Once you get started on an inflationary move, you build in expectations on the part of the public in general about a price rise. This tends to have a carryover effect. That is what we are speaking of here. And in the process of slowing down the inflation, you are bound to create some difficulty, but you do not want to create too much.

Representative CONABLE. Is it true that economists in general are coming to view Government monetary policy as rather more controlling than fiscal policy? I know there was great hope for the surtax when we passed it a year ago June. Yet the surtax had minimal impact because of the high level of savings, and so forth.

Mr. FRIEDMAN. Yes; you are entirely right. There certainly has been a shift in that direction.

Representative CONABLE. That is off the point of your discussion.

I am interested in the general issue of the conservatism of Government. I think that Central Government is one of the most conservative forces at work in the world. We certainly see that in Russia, I think we see it here to a very substantial degree.

In your statement, you say once Government undertakes something, it almost never lets go. You point out that this is partly the result of unlimited resources, or at least unlimited unless you start talking to the taxpayers.

Is there some way we could restructure our Government so that we would be more likely to find ways of letting go of unworthy programs or programs that have outlived their usefulness? It certainly is a very serious problem for us.

Mr. FRIEDMAN. I do not believe there is any sure way of doing no other than not getting involved in the activities in the first place. That is, I think the fundamental answer to your question is that, just as we have a constitutional provision which says Congress shall make

no laws interfering with freedom of speech or religion or assembly, what we need is a similar self-denying ordinance saying, for example, Congress shall make no laws that prevent any body from selling anything to anybody who wishes to buy it at as low a price as he wants to sell it for. Similarly, Congress shall make no laws that prevent any individual from producing anything that anybody else wants to buy.

I am simplifying. I do not mean to open up the door to producing burglars' jimmies and heroin. I am not talking about that. But unless you have a self-denying ordinance in general, unless you establish the general principle and presumption that Government stays out, the pressures are always to get in and to stay in. Because once a Government gets into an activity, a vested interest builds up in that particular activity and the people who would benefit by the Government's stopping it do not constitute such an interest.

The post office is an excellent example. If you try to open up the post office to competition, you will have the postal unions and also people like the publishers of magazines, who are getting a subsidy from the mailing privilege, on your necks. The people who would have jobs in a private postal industry do not know they would have such jobs. They will not be around here to pressure you. That is why, in the terms you are using, Government tends to be conservative.

Representative CONABLE. All governments do partake in this fault in one degree or another?

Mr. FRIEDMAN. Oh, yes. The only times you have been able to avoid it is when the public at large has had a strong presumption in favor of leaving things alone and leaving things to private voluntary action.

Representative CONABLE. As we accept further responsibilities, governmental responsibilities, and as we further specialize our executive branch to carry these responsibilities out, it is almost inevitable that it is going to get worse, is it not?

Mr. FRIEDMAN. I hope not.

Representative CONABLE. I really think that this is one of our major functions here in the Congress and that we are falling down rather badly on oversight. Of course, that is one thing that the Chairman is very much to be complimented on. He is concerned about the value of economic analysis in both going into these programs and in the oversight that should be exercised by the Congress itself.

Mr. FRIEDMAN. I am not as pessimistic as you are, because I believe there has been a public awakening to the fact that governmental programs often do not achieve the objectives that they are intended to achieve. There has been a great and increasing disillusion with the effectiveness of governmental programs. Therefore, I think the climate is becoming more and more ripe for public pressure on the Government to strip off some of its activities.

Representative CONABLE. I do not want to get too involved in this subject, because I am sure Senator Percy has some questions. You have heard the questioning on the general issue of pluralism. Of course, I am somewhat sensitive about this as a member of the Ways and Means Committee. I wonder if you would like to comment about the desirability of balance in this area? We really are approaching the philosophical point where we have to decide how much of the productive resources of the country we want to go outside the tax system.

We should try to impose at least some degree of accountability on the many problem solvers. Although I would be the first to acknowledge that it is desirable to have problem solvers on all levels. But of course, we have no accountability at this point, or at least a very low degree of accountability, among those agencies, those private and semiprivate agencies that constitute a very important part of our problem-solving process.

Mr. FRIEDMAN. I would be very glad to comment on it even though it does involve biting the hand that feeds me, and disagreeing, which I hate to do, with Senator Percy.

I am strongly in favor of pluralism. I think we very much need voluntary activity on all levels. But I believe the way to promote pluralism is by reducing the level of Government taxes, by making taxes more even and uniform, and by eliminating so far as possible special tax exemptions. I do not myself see how in a "proper" tax system, tax exemption can be justified for any institution, whether it be my university or a church or a private foundation.

Senator Percy properly referred to the extraordinary role that voluntary activity played in the development of this country. It did so at a time when there were no tax exemptions, but when taxes were low. The effective way to promote pluralism and voluntary activity is by a real reform of the tax structure which would broaden the base enormously, eliminate all exemptions of every kind except for occupational expenses, and apply a relatively low flat rate. That would do far more, in my opinion, to release resources for the proper kind of voluntary activity than will the exemption from tax of particular contributions to particular kinds of organizations.

Representative CONABLE. One last question, sir. With your penchant for cutting Gordian Knots, would you like to describe for us your alternative to the present agricultural program?

Mr. FRIEDMAN. My alternative to the present agricultural program would be: No. 1, to provide transitional subsidies on a declining basis to persons who are now receiving benefits and second, immediately to abolish all price supports and all regulation of production.

Representative CONABLE. Thank you very much, Mr. Chairman.

Chairman PROXMIRE. Mrs. Griffiths?

Representative GRIFFITHS. I really came all the way over here, Mr. Friedman, to tell you how much I personally appreciate the fact that you are one of the few people who have pointed out that working women are being cheated on social security.

Now, I would like you to mention that about every week or two from now on, because we have that social security bill up and I am going to try to change it. I have been working on it for some time.

I also would like to commend you on your negative income tax approach. I personally think this is the best suggestion that has ever been made.

Now, I would like to ask you, since I am sure you have considered this, how do you think your guidelines would work on school aid? What would be the effect upon the great State universities?

Mr. FRIEDMAN. Consider the question of the great State universities in stages. Let us say that the State of Michigan is now spending x million dollars on higher schooling. Suppose we said that an appro-

private scholarship is \$2,000 a year, some number of that sort. The simplest reform would be to divide that x million dollars by \$2,000 and give the corresponding number of scholarships.

We could have a competition, an examination, in which we would give that number of scholarships—one quarter of that number, because they would be tenable for 4 years—to those people who ranked highest, let us say, in the examination. And we would say to them, "You may use this \$2,000 scholarship for 4 years at any institution you wish." The University of Michigan would continue to operate, but it would then charge a sum of \$2,000 or whatever sum it wanted to. If it had private sources, maybe a private endowment, that would allow it to charge \$1,500, that would be all right.

But its only resource for funds—leaving out agricultural extension, et cetera—would be the tuition from the students that it would attract. If the University of Michigan or other State institutions turned out to offer as attractive an education as private institutions, as, say, Hope College, or Kalamazoo College, or the University of Chicago, or Harvard, then the students would continue to go to the University of Michigan or Michigan State, but they would have the alternative available to them of using the same funds somewhere else.

My belief is that over a period, the result would in fact be a reduction in the size of the State university and an expansion in the size of private universities. The reason is that, at the moment, the State universities are, as it were, operating under a competitive advantage. They can charge a less-than-cost price.

But the result would also be a substantial improvement in the quality of the schooling. I believe that the students today have much merit on their side when they complain about being neglected. At the same time, they have, on one level, little basis for complaint. I always say to the students when I talk to them: "You are objects of charity. If you are going to the State university, somebody else is paying your way. It is the taxpayer who is paying your way who ought to have the right to say what goes on in the school, not you. If you want to have some control over your schooling, you should pay your own cost."

That brings me to my second reform. My first reform would be simply to have the funds distributed in the form of scholarships to students which would enable them to have free choice and produce competition in the schools.

Secondly, I see no reason whatsoever why the poor taxpayer in the State of Michigan, who cannot himself go to school or whose children are not going to go to college, should be required to finance the schooling of people from upper income groups or people who are going to be in the upper income groups later on. My next stage, therefore, would be in the upper income groups later on. My next stage, therefore, would be to say require those going to college to pay their own expenses.

However, there will be some who are not in a position to finance it currently. For their sake, I would have a system of loans, preferably in the form of the kind of Economic Opportunity Bank arrangement, suggested by the Zacharias commission, which would enable them to finance their schooling by committing themselves to paying back the costs at a later date out of the higher income they would then earn.

That would simultaneously proved competition to improve the quality of the schooling and also greatly reduce the tax burden on the lower income people, on the people who do not get the benefit of schooling in the State of Michigan.

Representative GRIFFITHS. Now, if the result were to give many fewer people an education, there would, of course, be many people without or with poor education who are now inflicted upon the rest of us.

Mr. FRIEDMAN. Whether the reason would be fewer people or more people having an education would depend on the preferences and tastes of the people. Under present circumstances, a major problem with universities is that many people are going to universities who really have no business there. They would be better off, the world would be better off if they were using their skills in other ways. I do not blame them. At the moment, here is John Jones. It costs him nothing—I am exaggerating a little, there are small fees—but it costs him very little to go to the University of Michigan. He will go even if he values it very little. In fact, we are saying to people, go to college as long as you value it at the small sum of money it costs you to go there. What we ought to do is to have a system under which only those people who value it go.

The effect would be to make the schooling much better, because you would eliminate those people who are in schools and colleges for other than educational purposes. You would improve greatly the quality.

In the process some people would be induced to schools who do not now go. Some people who do not now go to school because they do not regard it as attractive enough, would then go. So whether the final result would be more persons in school or not, I am not sure. I would not want to predict. But whatever the result would be, it would reflect the true values and preferences of the people.

Representative GRIFFITHS. It is an interesting suggestion.

Thank you very much.

Chairman PROXMIER. Mr. Brown? I might say Senator Percy had to leave to introduce Senator Arrington of Illinois to the Finance Committee. He will be right back.

Mr. Brown?

Representative BROWN. Mr. Friedman, when you discussed your proposal for the farm plan with Mr. Conable, you suggested that there should be a gradual reduction in the subsidies being paid. Is this the same thing that you are talking about in price and wage controls with reference to inflation? In other words, is the impact of inflation greater when the inflationary pressures are allowed to follow their natural course, or is it worse if there is a deferment of the effects of inflation by price and wage controls, and then the problem really develops in getting out of the situation, taking off the price controls, when you come back to a free economy. Is that it?

Mr. FRIEDMAN. There certainly is a relationship between these two, Congressman Brown. But the reason I argue for gradualism in the case of the agricultural price supports is because I believe that Congress, by its measures over the years, has given people in the agricultural industry an expectation, a justified expectation, that they will have a certain kind of a program. It seems to me inappropriate on ethical and equity grounds to withdraw that expectation immediately.

We ought to ease the path, because we have given them a justified expectation of assistance. However, the way to ease it is to make the tapering off of aid not contingent on how much they produce.

When you come to wage and price controls for inflation, it is true that it is difficult to withdraw, but it is also true that they do harm when they are imposed in just the same way as the agricultural price supports do.

If you fix the price too high, as in the case of wheat, you encourage people to produce too much and then you have a storage problem. If you fix the price too low, as in the case of rents in New York, then you have a shortage, you do not have enough available, you encourage people not to produce.

In the same way, if you have inflation, if prices are going up and you try to hold one particular price down, that discourages production of that particular item. Therefore, it leads either to a shortage of that item or to bribery or rationing or indirect ways of getting around the price control. In either case, it leads to an inefficient and inequitable arrangement. And it does not reduce the inflationary pressure. It is like taking a balloon and pinching one corner. You just push it somewhere else.

Let's say you succeed in holding down the price of steel. That simply means the buyers of steel have more money left with which to bid up the price on something else. So I say that price and wage controls do not hold down inflation. They only change its form and shift it from one industry to another.

Representative BROWN. Then the only way is total controls, absolute and complete controls?

Mr. FRIEDMAN. Total, complete controls—that would be a way of turning this economy back to the stone age. Total and complete controls is total and complete death.

Let me emphasize this very strongly. We speak of Russia, for example, as a totally controlled economy. That is wrong. Russia exists and is able to operate because there is a large element of a market economy in Russia. And it is only because of those elements of the market economy in Russia that it is able to do as well as it does. One-third of the food of Russia, as you probably know, to come to agriculture, is grown on the 2 percent of land which is in private plots in the private market. So total and complete wage and price control is absolutely impossible. It has never been experienced anywhere. It is inconceivable.

Representative BROWN. Very good. I have a couple of quick questions I want to get in. Your answer is as I anticipated it might be.

You talk about social cooperation for these social purposes in times of low taxes. I assume this is stimulated to some extent because the Government is not taking social action and so it is a necessary reaction to a need on the part of individuals to undertake voluntary action.

But conversely, then, when taxes are high, do not tax exemptions for the accomplishment of social purposes have a greater impact? In other words, is this not a kind of bribery that does get the job done?

Mr. FRIEDMAN. The problem is, what job. It certainly is true that when taxes are high, any tax exemption encourages people to make use of that tax exemption.

Representative BROWN. Whether they are socially motivated or not, just out of sheer avarice, right?

Mr. FRIEDMAN. Of course. But then they will find ways of making use of it which are for private purposes and not necessarily for the social purposes which you would like to further.

The reason why the free market is so effective is that people are so ingenious. One of the things they are so ingenious about is finding ways to use these special tax exemptions, tax credits, and so on, for reasons other than those which the legislators intended them to be used for. The hearings before the House Ways and Means Committee have given many examples of abuses by the foundations. And there are many other kinds of abuses, of course.

So in fact, I think you would promote the objectives you seek far better by having as low a flat rate tax as possible, given governmental expenditures, rather than by having these special exemptions.

Representative BROWN. Do you think the private individual is sharper than the Government?

Mr. FRIEDMAN. No, one individual is as sharp as another individual. The difference is that the governmental employees are, first, few, and second, have a different incentive than private individuals. So you have a small number of people in Government trying to keep a very large number of people in private business from finding ways and loopholes. The fact that a man is a Government civil servant does not mean that he is not promoting his own well-being. Of course, he is. The plant manager in Russia is serving his self-interest just as much as the plant manager in the United States. But he has a different set of sanctions and rewards. He has to figure on possibly getting shot and he doesn't have any chance of getting a stock option. The man in the United States has different incentives.

In the same way, governmental civil service employees are, of course, promoting their own interests. I am not saying this invidiously, because their interests will include promoting values and causes that go far beyond narrow self-interest.

Representative BROWN. Congressman Conable made reference to the surtax being passed in July 1968 and then you noted that the money and credit supply was expanded in 1968. Were these two seemingly contradictory moves wise or unwise with reference to our economy?

Mr. FRIEDMAN. At the time, I was opposed to the imposition of the surtax. I am still opposed to the surtax and in favor of its abolition. The rapid expansion of the quantity of money was highly unwise. I believe that we are still suffering the consequences of that unwise act.

Representative BROWN. You are skipping one of the questions I have down here. Why was it done if it was unwise?

Mr. FRIEDMAN. Why was the monetary expansion done?

Representative BROWN. Yes.

Mr. FRIEDMAN. Because, of course, the people who did it did not think it was unwise. They thought it was wise. They thought at the time that the fiscal action was going to be far more efficient than there was in my opinion reason to expect. They did not do it out of malice. I am not saying anything like that. They did it out of what I regard as an erroneous estimation of what effect could be expected from the surtax.

Representative BROWN. And also because it was an election year.

Mr. FRIEDMAN. I hate to discuss or impute motives of that kind. The Federal Reserve Board has always been independent.

Let me go beyond that. Their behavior on this occasion was not different from their behavior on other occasions in the past when there was not an election pending.

Representative BROWN. You do not think it was a motive of individual survival and that it was only that their economic judgment was not sound?

Mr. FRIEDMAN. I believe that the people in charge of the Federal Reserve Board are publicly motivated and are trying to do the best job they can. I am not questioning their motives in the slightest. I believe they simply made a mistake in judgment about what they felt was the right policy.

Representative BROWN. Are we still feeling the impact of that?

Mr. FRIEDMAN. We certainly are.

Representative BROWN. How long are we likely to feel that?

Mr. FRIEDMAN. In one sense, we will feel it for a very long time, because it will condemn us to a higher level of prices than we would have normally had.

So far as the increase in prices is concerned, we are now beginning to get to the point where the impact of that mistake is declining and where we are beginning to feel the effect of the tightening that started last December.

Representative BROWN. What does the time lag usually run and what can we expect it to run at this time in the economy? In other words, we are experiencing gross inflation now because of errors which were made about a year ago or better than a year ago. We are well into the fall and this was an error that began in the summer of 1968—right?

Mr. FRIEDMAN. But continued until December, that is right.

Really, for an error that was made for the 2 years 1967 and 1968—we had 2 years of very rapid monetary expansion. If you go back, you had a slowing down in the rate of the price increase in the first half of 1967 as a result of the sharp tightening of money in 1966. Then the Fed took off again and you had 2 years of very rapid monetary expansion. That produced a very rapid acceleration of inflation for about the 2 years from the middle of 1967 to the middle of 1969. Now, as I say, I believe we shall see in the final months of this year a tapering off.

On the subject of the lag, it depends on the lag between what and what. The lag between the change in money and the impact on the security markets is fairly short. Interest rates—

Representative BROWN. You would agree that has shown up already?

Mr. FRIEDMAN. That has shown up very much. That showed up on interest rates beginning early in 1969 and showed up on the stock market in March or April of 1969.

The impact on spending and on the economy at large typically takes on the average of between 6 and 9 months. That does not mean it is always between 6 and 9. Sometimes it is 4 or 5 months, sometimes it is 10 to 12. So far as I can see, the present episode is about on target. It is not abnormally long. We had a change in monetary policy about December. We are starting a turnaround.

In retrospect, I would say we started to see the turnaround in the third quarter of this year in physical output or just about 8 months after the onset of monetary restraint. The effect on the rate of change tends to come still later. We can expect to see that effect in the final quarter of this year and continuing on into next year.

REPRESENTATIVE BROWN. When I was questioning Mr. Schultze about the two problems that he faced, the rapid increase because of Vietnam and the rapid increase because of the increased domestic and social spending during his tenure as Director of the Budget Bureau, I thought that perhaps he might have applied guideline No. 2 of your statement to Vietnam: when in doubt whether to go further, stay out and let private actions prevail—I asked Mr. Schultze about this. I do not know whether we can apply another guideline to social spending. But if we were to apply one, I would say seven would be applicable: Whenever Government produces a product or service, if possible, it should charge the user his pro-rata cost, not give the item away. In other words, a pay-as-you-go problem.

Would you clarify for me finally, No. 4: When Government does finance, it is best to finance intended beneficiaries, not producers. Can you define that a little?

Mr. FRIEDMAN. Sure. Let me give you a number of examples. Example No. 1 is the schooling case. If the Federal Government is going to appropriate money for higher schooling, let it appropriate in the form of scholarships to go to students, not in the form of sums to go to universities. The institutions are the producers of schooling; the individuals are the consumers, the beneficiaries.

Again, if the Federal Government wishes to subsidize the storage of oil, let it do so by subsidizing the storage of oil, not by giving large subsidies to the producers of oil in the form of oil import quotas or in the form of percentage depletion allowances.

Or again, if the Government wishes to subsidize the rural delivery of mail, let it give subsidies to people in farm areas to pay higher costs of mail delivery and not subsidize the post office, which is the producer of mail.

In every case, if you are going to subsidize, subsidize the person you want to benefit directly, not the production of some product or service.

Representative BROWN. Why do you argue this? That is what I want to know.

Mr. FRIEDMAN. In the first place, because if you subsidize the beneficiary, it becomes open and clear what you are doing and from a political point of view, it is easier to see.

In the second place, if you subsidize the producer, you subsidize all consumers of that product, some of whom you want to subsidize, some of whom you do not. When you give money to universities, you give money to every student at that university, although some of them you may not want to subsidize. When you subsidize oil producers, you are in this case raising the cost of oil for all kinds of consumers and not only are you providing storage for reserves for a national emergency.

You do two things when you subsidize one producer. You create a special powerful pressure group to continue the activity. Secondly,

you are inefficient because you spread the subsidies over people you do not wish to benefit.

Representative BROWN. Thank you.

Chairman PROXMIRE. Just one or two quick questions. What I am concerned about on your very firm forecast on getting the rising cost of living under control, which is most encouraging, and I am very happy to see you so explicit and definite—it is the kind of prediction we seldom get and it is welcome. We can tell you next year how wrong you were.

What puzzles me is your almost exclusive concentration on this money supply measure. I agree with you it is very important. But there are so many economic elements on the other side of the picture. Wage settlements have been going up very high, personal income at a very high level. Unemployment still extremely low and employment rising sharply, and the expectation that personal income is going to rise even more sharply at the beginning of next year.

All these factors, it seems to me, suggest that it is going to be hard to stem inflation within a very few months, especially in view of our experience in the 1950's, when as you know, we went into a recession and unemployment went up to 5½ and 6 percent and over, before we turned the corner on rising prices. Why do you have this firm confidence that the monetary policy by itself will do the trick?

Mr. FRIEDMAN. Well, it is hard to know what monetary policy by itself means.

Chairman PROXMIRE. Well, of course. I should say monetary policy with a fairly neutral fiscal policy.

Mr. FRIEDMAN. But in any event, let me forget about that. Let me face it directly.

The basic reason for my confidence is the study of historical experience for the United States and for many other countries. I know of not a single example when a sharp slowdown in the rate of monetary growth has not been followed by a significant slowdown in total spending and income. That is true for the U.S. experience which we have studied for a century. I have just come back from a trip to Japan, where I have been working with a university that is engaged in parallel monetary studies for Japan over the past century. They show exactly the same relation.

I have been working on some British data which go back about a century. They show the same relation. So we have an enormous amount of historical evidence. Of course, there is not a perfectly precise relationship between monetary change and economic change. I do not mean to say that every one-tenth of 1 percent change in money is going to be reflected in a precisely corresponding change in income. Not at all. But you have had a very substantial change in the rate of monetary growth. It was 7 percent in 1968, depending on which measure you take, it is now 0. Such a substantial change is almost certain to bring a substantial slackening of inflation. What bothers me about it is that the monetary restraint has now gone too far and you may have an unnecessarily severe recession next year which will raise unemployment to a level that is higher than necessary in order to slow down prices.

Let me add that your statement that military spending has always been the source of inflation happens not to be true empirically. If we

look at American history alone, we had a very great inflation in the 1850's as a result of the discovery of gold in California that had nothing to do with military spending. We had a rise in prices of about 33 percent from 1896 to 1913 that had nothing to do with military spending, but was the result of perfection of the cyanide process for extracting gold from low-grade ore.

After World War I, the budget was in surplus from early 1919 on. Yet prices rose over 20 percent from 1919 to 1920 because of a very rapid increase in the quantity of money in order to finance private spending. So it is simply not the case that you can establish empirically a 1 to 1 relation between military spending and Government spending.

Chairman PROXMIRE. You have seen those charts showing prices going up during wartime and dropping down fairly steadily, with some interruptions. The examples you give are completely valid. But I think that they indicate that whereas the gold discovery and so forth can be a factor, it is dwarfed, really, by the wars we have had.

Mr. FRIEDMAN. That is because the major reason why money was printed in the Civil War and in the first part of World War I and World War II was to pay for Government expenses. Military spending is a source of inflation insofar as it produced a monetary expansion, insofar as it is financed by printing money. If the same amount of military spending is financed by borrowing from the public at large, it will raise interest rates, but it will not produce inflation. That is why I said earlier, emphasizing money alone is too simple, because you then have to ask the next question, why does the quantity of money increase? There is no doubt that a major factor that has accounted for rapid increases in the quantity of money has been Government spending. That is the way it has entered in.

Chairman PROXMIRE. I do have just one other question. I am delighted to see your very, very forceful and forthright statement on oil. I think that is excellent. It is so good to hear it from somebody of your stature and with your following.

In your statement you refer to the oil import quota and other indirect subsidies, you call them scandalous. Would you comment on which of these subsidies, in your judgment, are in the national interest, because you seem to imply that perhaps some of them might have to be carried on?

You say: "if indeed any subsidy is necessary."

Mr. FRIEDMAN. As I understand it, the only valid justification that can be given for our oil policy is the argument that we may need a special oil reserve in time of national emergency.

Chairman PROXMIRE. You know the figures, the Comsat study that showed the cost of these subsidies is \$1.6 billion. The discovery resulting from them \$150 million in oil reserves, a ridiculous discrepancy, better than 10 to 1, \$10 cost for every dollar of discovery.

Mr. FRIEDMAN. In talking to people in the oil industry, I have often said to them, "If you consider an expenditure in your industry, you make an analysis of costs and benefits." Let me for the moment accept completely your argument that there are national benefits deriving from the oil policies. Have you made a similar cost analysis? How much is it worth paying for these gains? And how much are you paying?

As I understand it, one crude measure of the cost of the whole oil policy is in the neighborhood of \$5 billion a year, the difference between the domestic price and the foreign price times the amount of oil used. Now, I have never seen on the part of any proponent of any of these subsidies, and this may be my ignorance—you know much more about this—an analysis of whether it is worth spending that much money on achieving the particular objectives they have in mind.

The one objective that I can make sense of is the need to have a reserve for emergency. It always seems to me the cheapest way to have that would be by direct stockpiling of oil, either in the form of underground reserves that are held idle, in which you pay the cost of holding them idle, or in the form of storage. That is what I had in mind in suggesting that it might conceivably be that some subsidy is necessary. I am not sure any is justified on those grounds, but if any, it should take that form, it seems to me, rather than an indiscriminate subsidization of the whole process of producing oil for purposes whether many of which have no relation to future national needs.

Chairman PROXMIRE. Congressman Conable?

Representative CONABLE. Dr. Friedman, laymen always wish economists could work out the rules of economics in some other way than retrospect. I am interested in your position on the surtax. Did your opposition to the surtax include opposition to the extension of the surtax this summer?

Mr. FRIEDMAN. Yes, sir. This was not in retrospect, I may say. I wrote publicly against the surtax before it was imposed, I wrote publicly against the renewal of the surtax before that was done.

Representative CONABLE. You do not feel that with the state of the economy this summer, there is likely to be any danger of a stimulative effect as the result of reducing taxes, in effect, by 10 percent, or the return to deficit financing, which was inevitable if we did not extend the surtax.

Mr. FRIEDMAN. First, I do not believe there would have been any such effect if the monetary authorities had continued to increase the quantity of money at a slow rate. In that case, any deficit would have had to be financed by borrowing on the open market.

Second, I do not believe that the level of Federal spending or appropriations is independent of the level of tax receipts. In fact, I believe that the only effective method of cutting down Government spending is by cutting taxes. It would seem that you ought to go at it the other way. At one time, I used to argue, "Let's first get spending down and then we will get taxes down." But I have decided that the political pressures in this country are such that the Congress will in fact spend whatever the tax system will raise, plus probably a little more. If you can cut taxes, you will thereby cut Government spending in the only effective way.

Representative CONABLE. How do you square this with a \$25.2 billion deficit in fiscal 1968, which was considerably more than might be indicated by the tax rate?

Mr. FRIEDMAN. I agree. But that \$25.2 billion deficit brought very, very strong forces for either raising income or cutting spending. It was a temporary phenomenon. It was widely recognized as a mistake at the time. It seems to me that it illustrates the general principle that that is the most effective measure you can bring to bear on spending.

Representative CONABLE. You do not think that was a major part of the genesis of our present rate of inflation?

Mr. FRIEDMAN. Insofar as it induced the Federal Reserve to increase the quantity of money more rapidly than it otherwise would, yes, it was a major source of inflation. That is right.

Representative CONABLE. It seems like a strange inducement to increase the monetary supply, having this degree of fiscal stimulation.

Mr. FRIEDMAN. The fiscal deficit meant that holding down the rate of growth of the quantity of money would have made interest rates higher than otherwise. The desire on the part of the Federal Reserve to keep interest rates from going up meant that a deficit caused them to print more money than they otherwise would have. The end result was to raise interest rates much higher than they otherwise would have been. If the Fed had forced the whole \$25 billion of deficit to be financed through the open market, without printing money to finance it, interest rates in 1967 would have been higher than they were. But they never would have reached their present levels. Interest rates are as high as they are now as a consequence of inflation.

It is a funny thing, but what looks like easy money policy, namely, printing much money, temporarily lowers interest rates, but over a longer period raises interest rates by promoting inflation.

Representative CONABLE. All right.

Thank you.

Chairman PROXMIRE. Thank you, Dr. Friedman, for having done a brilliant, very, very interesting and stimulating job.

Mr. FRIEDMAN. Thank you very much, Senator Proxmire. I am very glad to have been here with you.

Chairman PROXMIRE. Our next witness is Mr. Ralph Nader. Mr. Nader is a prominent lawyer in Washington. He is nationally known for his stinging, public-interest critiques of the performance of several prominent institutions, including U.S. regulatory agencies and the automobile industry. His book "Unsafe at Any Speed" typifies his objective of bringing the facts of governmental and big business performance to the people. I think more than anything else, Mr. Nader is becoming known as a man who is bringing a new sense of public interest to the legal profession. It is welcome and needed. He has brought front and center the novel, and to some, the enraging notion that laws should serve the public interest. This attitude is very badly needed and very welcome.

This morning, Mr. Nader will testify on the need for imposing a more demanding public disclosure requirement on Federal agencies and departments.

Mr. Nader?

STATEMENT OF RALPH NADER, ATTORNEY AT LAW

Mr. NADER. Thank you, Mr. Chairman, members of the committee. I am grateful for your invitation to share some of my thoughts on efficiency and regulatory policy with your overall concern about efficiency, economic analysis, and governmental programs.

The concept of efficiency is customarily thought of in economic terms. Indeed, the discipline of economics has offered new tools in the

methodology and measurement of efficient performance. We have seen this in the testimony of Dr. Friedman and his analysis of the draft, for example, when he even used the term "social cost" as almost equivalent with the economic efficiencies of alternative proposals although it is well known that alternative suggestions for draft reform have to take into account the political repercussions of a volunteer army compared to a conscripted army. However narrow the concept may be, it is useful to limit it in some sense just so we can handle the variables and not go off in 16 different directions. Indeed, the discipline of economics has offered new tools in the methodology and measurement of efficient performance. Very often its concepts and tools have suffered severe limitation in practice by an inhospitable political environment. One has just to stretch the analytic framework of cost-benefit to include such questions of distribution in time, space, and economic class of these cost-benefits to illustrate how infrequently they are asked in policy forums due to political realities. For example, only until this week are we going to have a no-holds-barred hearing on some of the sequential costs of automotive design in terms of repair costs before the Senate Antitrust Committee. This is at least 50 years too late, but it is a definite and determinative consequential cost, involving billions of dollars every year. This is also true for the decades-long deferral of analysis of the tax expenditure budget on which you've had testimony and for the 3-year-long aversion to analyze the cost-benefit of administering organizations (such as insurance companies) in medicare.

At this time, I should like to present three areas of needed analysis that could markedly improve both the efficient use of Government resources which in turn are allegedly devoted to advancing the efficiency of those sectors of our society they are regulating. I am speaking not just in terms of economic efficiency, but also efficiency in meeting public needs. I am also not questioning at this time the regulatory scheme and whether it is appropriate, but rather, what the approaches should be to maximize its efficiency given the appropriateness for the time being. As a matter of fact, many of these points, which I am going to make very briefly, could point toward a change in the regulatory process.

It could point toward, in some areas, a deruglation and a different type of proposed overview such as engaging Government in independent research and development to put before the market prototype systems, such as nonpolluting vehicles or new kinds of antipollution controls, coupled with a vigorous antitrust enforcement. That is, if you push the analysis of an agency to its limits, you will not only discover ways of being more efficient or inefficient, you may even, of course, begin to challenge the very assumptions that that agency is operating under.

It is realized that the concept of efficiency in these environments inevitably has a heavy informative input—stemming from the enabling legislation—but that the rigorous tools still are required to evaluate the statutory and more detailed regulatory missions. These three areas are (1) compliance and sanctions policy; (2) disclosure policy and (3) a new kind of public servant accountability.

COMPLIANCE AND SANCTIONS POLICY

An efficient compliance and sanctions policy maximizes regulatee observance of the laws and regulations that represent the articulate impact of the agency. Such a policy also makes the more efficient use of existing agency manpower dealing with compliance. Yet there is probably no area in regulatory government that has received less analysis and change than compliance and sanction. Compliance surveys by regulatory agencies are not made regularly; indeed in most cases they are not made at all. Instead, limited compliance manpower has been used as the basis for an antianalysis, for an obstinate reiteration of inaction and a shallow justification for a noncompliance policy for many activities under regulation.

The need for regular compliance surveys is obvious. They help assess and locate the extent of violations. They help evaluate the cost-benefit effectiveness of available sanctions which the agency is empowered to apply. What are the respective deterrent effects of different applications of sanctions to various regulatees having been charged with different violations? What is the spillover effect for deterrence, coverup strategies and the like of alternative compliance policies? How can limited enforcement resources be optimally distributed? What additional tools (from computers to permitting private remedies to the utilization of focused disclosure) can supplement such enforcement efforts?

I might add to what extent can a large company, by a conscious strategy of delay, tie up an enormous portion of the enforcement personnel of a particular agency, knowing that it would have to divert its attention from other sanctions under its regulatory responsibility? General Motors is doing this quite successfully in the National Highway Safety Bureau, stretching out over 13 months a particular defective wheel hazard involving 200,000 Chevrolet trucks between 1960 and 1965 models. They have tied up an enormous proportion of the enforcement manpower of that small agency, which of course, has its costs in delaying or postponing other enforcement efforts that should be underway. A compliance survey would address itself to sound treatment of such questions.

At the present time, there is every indication that most regulatory agencies consciously avoid making such compliance surveys. Such surveys may be confidential. But as far as publicly available documents are concerned, I am aware of very few such analyses. I think I would be aware of some of these analyses even if they were confidential.

In 1965 the Wage and Hours and Public Contracts Division of the Department of Labor, charged with enforcing the Fair Labor Standards Act, conducted a public study. The Division's Compliance Survey 1965, as it was called, provided the kind of data that enable analysts to construct a cost-benefit framework that would permit more precise calculations of future compliance benefits of a particular investigation pattern. (See "Law Enforcement and Cost-Benefit Analysis" by Lester C. Thurow and Carl Rappaport, Discussion Paper No. 19, March 1968, Harvard Institute of Economic Research, Harvard University (unpublished)). (It is interesting that such a study did not come out of any of our law schools.)

Realistically, the reason for such lack of agency interest in conducting compliance surveys of its enforcement activity is the massive amount of illegality which it would have to recognize under its jurisdiction. Most agencies are not willing to reveal the extent to which their regulations are not being enforced or the extent to which these agencies are condoning, and often ignoring, the most blatant violations. Perhaps it is easier to understand why civil servants, who are keen on enforcing the law against economic crimes or safety and health violations, are considered troublemakers and boat rockers and eventually replaced, by briefly viewing the congressional oversight performance of compliance with regulatory laws.

Most citizens in this country know how concerned Members of Congress are with law and order—a certain type of law and order associated with the absence of property and corporate status on the part of the alleged violator. Innumerable speeches on the hustings and in the Congress attest to such concern. What about the mockery of law and order displayed, to select a few examples, by (a) the systematic violation of the motor carrier safety regulations by interstate bus and truck companies; (b) the widespread violations of the already weak railroad safety regulations; (c) the dozens of violations of the 1968 and 1969 motor vehicle safety standards by the automobile companies; (d) the dozens of tire failures to meet Federal standards uncovered but not moved against by the National Highway Safety Bureau; (e) the tragically shocking fraud that has permitted false claims and gross violations of the Federal motor vehicle pollution standards; (f) and the rampant violations of wholesome meat and poultry standards. With few exceptions, the Congress maintains an unsuitably indented silence. Oversight hearings of the regulatory agencies that are informed and arms length continue to have a very rare incidence. So I would respectfully advise the members of this committee that if they wish to understand some of the problems of the regulatory agencies, they begin by trying to understand their own behavior. There is an extremely close analogy here.

Endemic nonenforcement over time builds up a corruption of the political-legal process that is difficult to overestimate. The regulators begin having a stake in nonenforcement in numerous ways. The distortion, if not repudiation, of the regulatory process reflects the mistaken belief that the regulatory process is generically defective on the part of well-meaning citizens, such as Dr. Friedman. I would urge this committee to request of all Government agencies, with law enforcement duties, their records of compliance and what their explanations and suggestions are, respectively, for the degree of noncompliance and for remedying the situation.

To give an illustration, the judgment section in the Antitrust Division of the Justice Department is composed of 12 lawyers, including the head of the section. Six of these lawyers are allocated to insuring compliance with consent decrees. There are literally hundreds of consent decrees affecting all kinds of corporations and trade associations and industries. It is totally unrealistic to expect even a one percentile compliance overview with that amount of staff.

DISCLOSURE POLICY

A generous disclosure policy contributes to regulatory in-house efficiency and to the firmer performance of the regulatory mission in several ways. First, disclosure of the agencies' activities by the agencies permits more external evaluation by the public of how well the agency is doing. Assuming the process of agency intransigence and complicity with the regulatees not to have hardened irrevocably, such disclosure can have reformist impact. At least, such disclosure reduces the pretense of public interest that is radiated by the agency's brochures and public relations. Second, disclosure distributes and decentralizes participation in the agency's objectives among more groups and more citizens throughout the country. The force of public opinion, citizen intervention, editorial comment and more formal countervailing pressures tend to increase with greater disclosure. The power which special interests have over Government and the citizenry is very substantially a function of their power over information and the rate and locus of its distribution.

I have found time and again that agencies not only fail to develop improved systems of information giving but also spend an inordinate amount of energy to develop ways and excuses to withhold information or make sure that it never is developed so as to be distributed. In that context, I would like to submit for the record, Mr. Chairman, a statement by Representative Ken Hechler of West Virginia detailing some of the examples of information withholding on the part of various agencies.

Chairman PROXMIRE. Without objection, that statement will be printed in the record.

(The statement referred to appears on p. 878 at the conclusion of today's proceedings.)

MR. NADER. From the General Services Administration to the Department of Transportation, there is a great deal of product test information and service information that could be of use to consumers, which in turn would help the efficiency of the free market system to critically feedback the desires and objectives of knowledgeable consumers. There, of course, are strong economic schools of thought in this country that still believe in the effectiveness of the invisible hand. The invisible hand, of course, has to have facts if it is going to be effective. The original theory of the market system was posited on the buyer having facts and on a very, very high degree of competition. It seems to be extremely superficial to talk about the market system without rigorously analyzing the quality of the disclosure to the buyer and the quality of the competition in the marketplace.

The question of Government information which could be given to the consumer to help him in the marketplace is elaborated in a letter I have sent to Mr. Herbert Klein, the Director of Communications. I would like to submit that for the record.

Chairman PROXMIRE. That will be printed in full in the record.

(The letter referred to follows:)

SEPTEMBER 20, 1969.

Mr. HERBERT KLEIN,
Director of Communications, The White House,
Washington, D.C.

DEAR MR. KLEIN: One of the most important domestic information policies which your Office can help establish deals with freeing the multiple sources of information which could assist consumers in their purchasing decisions, counter much deceptive or false advertising, and improve overall the efficiency of the market system. As you know, federal agencies have resisted in past years the disclosure of brand and nonbrand information developed in the course of procurement or other governmental testing functions.

A dramatic change began to occur within the federal establishment in the latter half of 1968 over the refinement and release to the public of brand and other product information accumulated by various agencies with this same public's funds. The Veterans Administration indicated it would release brand information from future tests on products such as hearing aids and wheel chairs. The Federal Trade Commission was in full swing in its disclosure of nicotine levels by brand of cigarette. But above all, the most optimistic evidence was contained in the still restricted "Report of the Task Force on Product Test Information," (dated December 9, 1968) requested by the White House under the Johnson Administration. I consider this Report the most encouraging policy document in the consumer affairs area prepared by the previous Administration. A flavor of its contents, which will now be released, suggests how bright was the promise in December and how dim the follow through since that date.

The Task Force surveyed six agencies—the General Services Administration, the Department of Defense, the National Bureau of Standards, the Veterans Administration and the Departments of Agriculture and Health, Education and Welfare. These agencies perform the bulk of government product testing. One of them, HEW, announced through Secretary Cohen that it would initiate a broad, new program for releasing product information regarding the "cost, safety, merit or comparative value of goods and services." The Department of Defense, the Task Force noted, "may possibly be able to release some brand information relating to drugs;" GSA could release 98 product types including tests of anti-freeze, flashlights and hand files and HEW might be able to disclose tests of contraceptive devices and drugs. Perhaps most remarkable was the Task Force's report that the Commerce Department—"and specifically the National Bureau of Standards—is enthusiastic about taking on the program, believing that during the first year general information on perhaps a dozen products (including paints, roofing materials, floor coverings, and textiles) could be prepared for release." "As to nonbrand product information," the Task Force continued, "since GSA tests a great many unbranded or specially branded products that consumers use in other branded forms, it possesses large amounts of general information about consumer products. Of the Federal specifications and standards used in the procurement of items for government agencies, GSA estimates that approximately 900 pertain to items of possible use to the general public. Except for clothing, this generic information includes almost the entire range of products purchased by the average family." At the present time only the manufacturer of the specific product tested is informed of the results of the tests. The Task Force noted that the Army possesses "considerable information" on drugs and added that "a substantial portion of the drugs sold through commercial pharmacies do not meet the exacting specifications set by the Army. The Task Force strongly believes that every effort should be made to include some of this information within any release program."

A strong reminder of the forces working against disclosure is contained in the Report's mention of the Department of Agriculture's research program in household appliances that was discontinued without explanation in 1965. "Tests were conducted regularly on commercial refrigerators, stoves, water heaters, irons, washers and dryers for the purpose of evaluating performance in use," said the Report; "much brand data were amassed, but department policy precluded reference to brand names in Departmental releases."

The Task Force recommended, in a draft Presidential memorandum, that the President request that "all federal departments and agencies review existing programs to determine what information they have about the properties and performance of products purchased by consumers and to consider the means they can employ to make available to the public information not now released." The

draft memorandum suggested by the Task Force would name the President's Committee on Consumer Interests to serve as coordinator of the program on the following timetable—all federal agencies would report to the Task Force by April 1, 1969 on what they can release to the public, and by July 1, 1969 "on the steps they have taken to carry out the directions" in the proposed memorandum by the President, and by August 1, 1969 the Committee would report to the President on its findings and recommendations.

Since the present Administration took office, the recommendations of the Task Force on Product Test Information have either been ignored or actively opposed. Led by the Bureau of the Budget and a highly unsympathetic Presidential staff, this incipient breakthrough in consumer autonomy has been squelched as a practical matter. Lip service attention remains in Mrs. Virginia Knauer's office, but even in that last repository of consumer concern, there is little anticipation that anything will be done. Of course none of the timetables suggested in the Report have been met and the entire operation is on the shelf. It is important to note that the Task Force's recommendations center on assisting the consumer to help himself in the marketplace, with little need for added government manpower and funds.

Perhaps an indication of how hostile modern industry is to an efficiently functioning market system and an intelligent consumer body that the recommendations contained in the Task Force Report are strongly opposed by industry and commerce. During the past decade, this is the reaction to any governmental official or member of Congress who proposed such disclosure. The auto industry, for example, has wielded strong representations to keep the National Highway Safety Bureau from releasing the results of compliance testing of automobiles, even though motorists have a right to know at what levels their seat belts tear out or their fuel tanks rupture or what vehicles fail to meet the government's safety standards (by the Bureau's own admission between 15 and 20 percent of the vehicles or equipment tested failed one or more standards.)

Enough has been said to etch the outlines of a massive and long on-going suppression of government information relating to consumer products, and thereby to consumer protection. I ask you to address your energies and influence in these directions so as to expedite & assist those now weak forces in government who wish such disclosure to be accomplished on an ever more refined and efficient scale.

I look forward to your thoughts and recommendations on this matter affecting 200 million American consumers.

Sincerely yours,

RALPH NADER.

Mr. NADER. If the objective of many regulatory agencies is to improve the efficiency of the regulated industry such as competitive efficiency so they are more responsive to the needs of the people, such information helps consumers provide a similar spur or feedback.

One illustration is particularly instructive. Congress has been concerned about waste in governmental expenditures. Since it is being asked to support more and more State and local activities, Congress is presumably interested in State and local purchasing practices. A few months ago, the General Services Administrator, Robert L. Kunzig, took note publicly of GSA's intention to apply a provision of the Intergovernmental Cooperation Act that would enable States and political subdivisions to make their purchases through GSA and its storage facilities. Mr. Kunzig estimated at least 25 percent savings, adding "We know in many of the commodities purchased by the States that we buy them from 25 to 35 percent less at the Federal level." The reason is that GSA buys in volume from the manufacturer, while States and localities purchase from wholesalers-distributors. When it is considered that State and local purchasing amounts to about \$35 million a year from these wholesalers-distributors, a saving of at least 25 percent amounts to a vast resource for financially pressed

State and local governments. It also may amount to a cleansing of the State and local political process.

Just last week, in only one example, one of the purchasing officials for the city of Indianapolis was also given the duty by the political party of soliciting political contributions. So here he was on the one hand in the role of negotiating contracts for purchases and on the other hand, trying to dun various contributors for contributions to the political party. The entire local-State purchasing or procurement picture is heavily related to a level of political corruption or political waste that is characteristic.

Soon after Mr. Kunzig made this statement in late May, the National Association of Wholesalers began a most sizable effort to persuade the Congress and the administration of the unwise nature of GSA's impending policy. The Bureau of the Budget, with its customary declaratory but not explanatory fiat, overruled GSA. What Members of Congress spoke out, spoke out in favor of the wholesalers' groups. The claim was made that GSA was misinterpreting the law. That may be. But the advisability of such a purchasing policy and what was needed to institute it was never discussed rationally in terms of the economic and political benefits. The proposed move by GSA was shouted and pressured down in a typical power play. In the meantime all levels of government are wondering where their billions of dollars are to come from to meet mounting demands for public services.

Had GSA followed an early and full disclosure policy on the differences in purchasing prices between it and State and local purchasers over the last 10 or 15 years, say, a substantial public constituency would have developed to make the subject at least one for balanced public inquiry and debate. Instead, this recent dustup involving a potential of saving billions of dollars annually received little attention outside of the restricted circle mentioned above.

PUBLIC SERVANT ACCOUNTABILITY

Public servant accountability involves one of the most vexing problems of any bureaucratic structure. As such, little thinking has been done about the subject except by operational lobbyists and other pressure groups. Consequently, there is an overdevelopment of public servant accountability to political-business pressures and an underdevelopment of such accountability to aggrieved citizens or other groups with much cause and little power. Many observers of Government have lamented over how immovable, unreachable, irresponsible, Government officials can be when they wish to be. The syndrome has become a favorite cartoon subject. But it is not humorous at all. The quality of justice dispensed by an organization of Government is tied to the degree of accountability of its higher leadership levels. The present system enhances the kind of accountability to interest groups as a matter of power, not as a matter of right for all citizens. This is the antithesis of basic principles of due process.

What is needed is an access system to invoke accountability as a matter of procedural right so that any citizen can have access no matter how unpolitically connected or poor he may be. Such a system would

serve to protect civil servants from the one-sided pressures from groups who apply them as a matter of their power. Or to put it another way, civil servants can better resist, if they wish, these one-sided pressures, or their potential application, if the people had certain rights vis-a-vis the agency and its officials. These officials take an oath of office and all agency employes are expected to adhere to an employee standard of conduct of some length, which is printed in the Federal Register. There has been little development of what these principles mean for individual civil servant accountability toward citizens for their policies or refusals to act. In the next few years, there will probably be a more extensive testing of some of these principles in the form of mandamus and injunctive actions against agency officials. Unless there is a basis in law for the presently unrepresented interests in society to invoke individual agency official accountability and responsibility, the inefficiencies of agency performance as a result of being captured by the regulated industries will continue unabated. Piercing the bureaucratic veil and reaching the responsible agency officials will assist significantly in connecting men's decisions with their consequences and inducing the kind of administrative behavior that is more consonant with the statutory and regulatory framework.

Thank you.

(Supplemental information, subsequently supplied by Mr. Nader, appears on p. 878 at the conclusion of today's hearing.)

Chairman PROXMIRE. Thank you, Mr. Nader, for a most useful presentation. I am tremendously impressed by this. I must say I find myself in very strong agreement with you.

But I would like to ask you some of the questions that come quickly, I think, to the mind of most of us.

You talk about compliance and about what appears to be, and I think that conscience would indicate that you probably are right, an enormous lack of compliance, and because of the inadequacies of the compliance staff and so forth. We rely in this country a great deal on voluntary compliance in our tax laws and elsewhere.

Do you envision that to have effective compliance, we are going to have to greatly increase the number of our enforcers, the people who go out and watch and supervise and secure information, and then be able to follow up? Would this not increase the bureaucracy substantially, or is there a way we can do this without that kind of action?

Mr. NADER. There is a need to increase enforcement personnel levels which are now, really, at ridiculously low levels. If the motorists in this country knew how few enforcement personnel were at the Highway Safety Bureau, I think they would realize just why so very little is being done over there.

But I think improvements can be made in the strategy of enforcement. If you have a choice, due to limited resources, choosing whether to enforce a particular violation on one company or on another, the question to ask is, what is the exemplary preference on behalf of the one or the other? If you go in one direction, you may radiate a deterrence throughout the industry that is far greater than if you go in another direction.

For example, the highway safety bill has chosen for its first enforcement the violation of the outside rearview mirror standard on the

part of Fiat. A sizable amount of time was spent on that case, although in the possession of the Highway Safety Bureau are many violations by Firestone, General Motors, and so on. So if the appropriate selection is made, you can see that they would get far more deterrent impact for a given application of resources.

Chairman PROXMIRE. Why is it that they make this kind of choice? Is it not because the natural pressures that you discuss later on in your paper, by pressure groups that are directly effective, have great political influence and power against effective enforcement? Do you not indicate that this is consistently going to be the case?

Mr. NADER. That is quite true and that is what has to be overcome. One way to overcome it is for the Government to look at people as their allies, try to provide people and potential counteravailing groups with as much information as possible so that they exercise their right of citizen selfhelp.

Chairman PROXMIRE. Well now, that brings up your next point, which is disclosure. I am all for that. I was author of the Truth-in-Lending bill, but I do find that in this area, many people complain that there is just too much information now; the papers are too big, the radio and television are just full of information of one kind or another. People can only read so much.

People are apathetic about some of the most crucial decisions they make in a public area. So even if we provide this information, what is there to persuade us that we need act on it?

For instance, Congressman Conable whispered to me, and I agree with him, on the instance you cite, that nobody in Congress rose to the defense of the GSA in their purchasing policy that seemed in the public interest—the reason is we did not know about it. I do not think Congressman Conable knew about it, or many Members of Congress. And if we had known, the disclosure would have helped, but we were involved with many other things.

As you expand this kind of information, I just wonder if we are organized, if we know about it, if we would be in a position to follow through with the myriad of responsibilities.

Mr. NADER. No, we are not.

Chairman PROXMIRE. How do we get organized so we can do that?

Mr. NADER. I think we have to recognize that this country is far better organized for the pursuit of private interests than it is for the pursuit of public interests.

Chairman PROXMIRE. You are working hard in the legal profession—

Mr. NADER. Right. That is a perfect example; namely, the legal profession is deployed almost overwhelmingly in the pursuit of the representation of the private classes, who have to be represented. As society becomes more complex, as more goods and more technologies clash and interweave, as more decisions have to be made for the public interest, we have to also deploy more and more resources, more and more professional people, more and more systems in the public service arena.

There is no escaping that.

What you say is quite true, that individual consumers are now overloaded. One hundred years ago, they had to make a purchase a week, if that. Now, they are making them with extreme rapidity and they are

overloaded. So there needs to be the kind of institution which will provide them authoritative data at the point of purchase in order to facilitate this judgmental factor.

For example, recently, Safeway Stores decided to help the consumer by putting calculators in their supermarkets—at least in a couple of supermarkets. It was a pilot project. That was so that they could calculate the unit cost per ounce of the various products. That is a lot more difficult than if they had put on the package the unit price which told the consumer, you pay 10 cents per ounce, period. The calculation is already made.

So there has to be a constant thrust along the continuum to make information qualitatively, quantitatively and easily available and to reduce the amount of calculations that have to be made by each individual consumer. This is why I think it is very important to see how the computer can be deployed for public services.

It is another example of the computer's applications being heavily deployed for private needs—merchandising, producers, et cetera. But if the computer were ever applied to consumer information systems, to the other side of the marketplace, you would have remarkable efficiencies, remarkable counteractions to deceptive advertising, because then a detergent manufacturer could not get away with selling a detergent which was chemically identical to an unbranded name and selling it for 25 or 30 percent higher. That fact would be instantaneously known through a computer information system at the shopping center level.

Chairman PROXMIRE. Then your third area is a new kind of public service accountability to counterbalance what happens to our regulatory agencies, I presume in part; they become really client agencies for industries they are supposed to regulate. I suppose we know how this happens: their exposure is to industry, they are sometimes wined and dined and entertained. At last, they earn a great deal of the approval they get and sometimes their future when they leave Government depends on the attitude they have toward the industry they are supposed to regulate.

I am just wondering how we counterbalance that kind of pressure group.

Lee White suggested in earlier hearings to us that we have a people's counsel. Some of our staff members were concerned that this might become bureaucratized, too. You seem to be operating in a way that has been highly successful, but I think you would agree that it has been quite limited, too, of course, because you have limited resources. But you are outside of Government. You are doing it in a voluntary area, largely.

I guess you get a little foundation money. But what can we do up here in Congress to provide an effective counteraction on this operation?

Mr. NADER. In the consumer area, I think what is needed in the executive branch is an Office of Consumer Advocacy, which is unabashedly consumer oriented.

Chairman PROXMIRE. Where would it be? Would it be by itself?

Mr. NADER. Yes; an agency which would be composed of all the professional advocates that are needed to make the case before these regu-

latory agencies—lawyers, economists, statisticians, scientists, and so on. It would not have regulatory functions at all. It would not have to be in a referee or a compromising position. It would have purely an advocate's function, to appear before the Interstate Commerce Commission, the Federal Power Commission, the Federal Trade Commission, the Highway Safety Bureau, the pollution agencies, and other agencies—and present the position of the public in these areas to countervail all the special interest submissions that are made.

Only in that way, coupled with disclosure functions, information procurement functions, and testing functions, will we get an internal bur, so to speak, on the bureaucratic structure. But that is by no means a sole suggestion.

For this kind of institution to work optimally, we need outside of Government the kind of full-time professional citizen; as there are law firms for corporate clients, we need them for public interest or consumer clients. This is where I think Professor Friedman suffers from a limitation in his analysis.

He is assuming, in his projection about the incapacity and the incapability of Government, he is assuming a continuation of the abysmally disorganized nature of our citizen process. He may be right. Certainly, history is on his side. But I think that there needs to be and there may be a much more vigorous organization of both lay citizen groups and professional citizen groups who will change the rules of the game very substantially in these areas.

Chairman PROXMIRE. My time is up. I shall be back for some quick questions.

Mr. Conable?

Representative CONABLE. I would like to follow right on that point you are making there. I am concerned about where the agency is properly situated in overseeing consumer interests, where the agency is properly active. We do have in the private sector groups that analyze the quality of the private commercial items, things like Consumer Reports, I wonder why, if there are very serious problems of quality control, if you have actual deceit on the part of sellers, these particular private agencies do not have more success and a wider circulation than they do.

Is it possible that the people themselves do not feel the need for this type of protection to the extent that your statements might imply, or are they in fact relying on the Government to counter the old caveat emptor type of mentality? What is the fact here?

You say we should have more concerned groups of private citizens working to insure that this sort of cheating does not occur, and I am inclined to agree with you.

Mr. NADER. Yes. I think there are several factors that can be pointed out. First of all, there is an enormous public reliance on Government that I have found in talking to people all over the country.

They really think that they are being protected in the food and drug area, for example. Of course, this is partially the function of the tendency of people to try to make themselves feel comfortable by thinking that someone is looking out for them.

Representative CONABLE. It is also partly the result of the promises of the politicians, I would judge. We have had a credibility gap here, also, have we not?

Mr. NADER. Yes.

Secondly, Consumers Report, which is the major consumer magazine, is increasing rapidly its circulation. It has doubled to 1.6 million in the last 4 or 5 years. But it suffers from a severe limitation. That is, that what the consumer needs is instant, at-the-point-of-sale information, and this Consumer's Report type of information, however it may be, comes every month and often late and not particularly parallel with the particular purchase desired by the consumer.

Third, so subtle are the frauds and the swindles that many consumers do not know they are being defrauded or swindled or they are so pressured by other considerations that they do not care.

Example: The kind of debtor you see in the slums, who wants that money, wants that loan so badly that he does not even care to find out what the rate of interest may be. All he is looking at is what the repayment is every month on the installment contract. He does not even know that he is signing over, sometimes, a second mortgage on his house, which is in the small print, as we have seen from the second mortgage scandal here in the District of Columbia.

So it requires a kind of professional and Government leadership that will constantly disclose these latent frauds and these latent defects.

How is a consumer to know that his particular meat product contains an excessive amount of pesticides? More and more of the problems in safety and health affecting the consumer are latent problems. He is not about to sense the violence of air pollution, because it is not the kind of violence that immediately challenges his sensory responses, of pain, for example.

It is a silent type of violence over time. Radiation is another example. So are some kinds of chemical additives in food. So what we need is to continually sharpen the communication process and the perception of citizens, because their perception is being outdistanced by the rapidly developing technologies.

Representative CONABLE. Do you have any suggestions for us to achieve a greater oversight in this area and a more successful oversight? I am frank to acknowledge that we are not terribly successful. As the Senator said, I had not even heard about this GSA matter that you mentioned. Do we need some sort of special ombudsman for the people here? That is supposed to be our function.

Would you like to comment on the whole question of a special ombudsman?

Mr. NADER. Yes.

Representative CONABLE. You, yourself, are a sort of super-ombudsman for special types of consumer's interests.

Mr. NADER. I think the first, immediate change would be to develop a different congressional information policy. There are too many committees that are like cabals with the respective Government agencies, they funnel all this information into their files, and they keep them all secret, so the public, is not given the benefit of this information.

We have a serious subversion of the concept of Federal separation of powers.

You can look at agency after agency and look at its clientele committee and there is no separation of powers worthy of the name. It is really antithetical to the Constitution in a very fundamental sense.

I think, second, there are too many congressional committee hearings held in secret. I think the Congressional Quarterly has the latest figure, around 40 percent—more in the House than in the Senate.

And third, I think there needs to be more activity on the part of committees. Many do not hold hearings. This committee is a major exception, but there are many committees in the Congress that have not held hearings in years on the kinds of subject they should be holding hearings on.

But the more fundamental change, really, has to be "thinking big." Congress is not too much larger than it was 100 years ago in terms of staff, and it is trying to cope with a country which is 50 times larger than it was in GNP and an executive branch which is enormous.

Representative CONABLE. I find that hard to believe, sir. I do not know the figures, but I recall when my predecessor came here in 1952, we back in the congressional district were outraged that he had two people on his staff, whereas his predecessor had always gotten along with one. And I have nine people on my staff now. This is some 16 and 17 years later.

Chairman PROXMIRE. Will the Congressman yield?

Representative CONABLE. Yes.

Chairman PROXMIRE. How many of those nine staff people spend their time answering mail?

Representative CONABLE. Frankley, the answering of mail is one of the most time-consuming functions of a Congressman, responding to questions, trying to assist people.

Chairman PROXMIRE. I do not demean it at all.

Representative CONABLE. It is perfectly true, but this is one of the things that I am sure Mr. Nader would advocate, improving our representative function relative to these specific problems our people are having with Government.

Chairman PROXMIRE. I would estimate 60 to 80 percent of congressional staff personnel is involved simply in the mechanical process of handling the mail. That does not leave very much time for the rest of the job.

Representative CONABLE. I do not know how much it is in the Senate but it is not necessarily a mechanical process. We in the House love to put a little thought into our answers.

Chairman PROXMIRE. We love our voters in Wisconsin as much as you do in New York.

Mr. NADER. Let me say that arithmetically, there has been an arithmetic increase, but in terms of the job to do, there has not been an increase in the size of the staffs. Take any regulatory agency. Often-times, there is not one person in Congress, a professional staffman, who is spending full time on that regulatory agency—not one.

Where there is one assigned, he spends too much of his time currying the favor of the particular industries that are subjected to regulation.

I do not think it is outrageous at all to recommend very seriously a half-billion-dollar operation here, to establish a first-rate analytical capability on the part of Congress. You simply cannot possibly find out the directions in which the country is going and how to allocate

resources and how to perform your duties unless you have this quality of information.

The very fact that you gentlemen did not hear of the GSA episode, and I am sure that is true for the majority of the Members of Congress, is an indication that something is breaking down serious in the communication process. We are dealing in billions of dollars in a procurement problem like this.

Agencies have gone through 30 or 40 years without a single critical overview of their function in the executive branch. Look how long the Department of Defense had before it received the first systematic overview here.

Now, going back to your point of public service accountability, I think it is important to recognize that if one is not part of the risk, one is not going to be part of the solution; one is not going to be part of the problem solving. Too many Government servants know full well that they can condone waste, that they can condone antisocial activities, that they can condone nonenforcement of laws and there is never accountability to their official status. At the most, the agency may get criticized by a Senator or a Representative, or maybe have an investigation. But it almost never goes to the status of that civil servant.

And until the individual feels a personal responsibility in addition to his institutional responsibility, you are going to get these kinds of behavior frequently.

These acts are, quite candidly, far, far beyond even the outer limits of impropriety. There are examples in Government where civil servants are cloaking clear, outrageous violations of the law that have ended up in the death of people, whether it deals with drugs or deals with railroads.

Railroads are a perfect example. I think maybe you might have read the quote by a railroad official in the Wall Street Journal. He said, "One of these days they are going to blow up a town"—of course, inadvertently. There are tremendous hazards. And the Federal Government is either pursuing a policy of condoning these violations, or not vigorously asking for a strengthening of the law or resources.

Representative CONABLE. One of my law professors once constructed a whole class around the idea that the product of competition was monopoly. I sometimes wonder if that is not also the end product of a rigid set of regulations, if inevitably this does not reduce, ultimately, the freedom of choice people have to seek the type of goods and the type of services they want.

This is a philosophical question, obviously, and I am not directing it to any specific area. But I am sure you have worried about that, also, because we all hear small businessmen saying to us, "I just cannot put up with all the redtape and all the regulations, and I am going to go out of business." Certainly, that is a perfectly legitimate viewpoint, whether they may be saying it half in jest to us or not.

Mr. NADER. Yes, these rigidities obviously occur in Government, corporations, unions, any bureaucratic structure. The real challenge is not to fall prey to the myth that it is peculiarly a problem of Government only. The real challenge is to try and develop a broad recognition that these denials of freedom of choice exist in many power centers throughout our society, whether it is a denial of the freedom of

choice of a rank-and-file union member vis-a-vis his leadership, or whether it is a denial of consumers having the right to buy a non-polluting engine, or the collusion between manufacturers to restrain innovation because the innovation might reduce their aggregate sales.

For example, the long-lasting light bulb is in the last category.

Representative CONABLE. I am not advocating something based on ignorance or deceit. It has to be a real freedom of choice, and that is a very good point you make.

That is all, Mr. Chairman.

Chairman PROXMIRE. Senator Percy?

Senator PERCY. Mr. Nader, we are facing a gap in society between huge social needs on the one hand and limited financial resources on the other. We have a constant battle between whether the problem should be solved essentially in the public sector or in the private sector.

We have built up a series of incentives to stimulate private giving, established foundations which, through the years, have now built foundations up to the level of about \$21 billion in assets.

Do you feel that the present tax laws that are now under revision, that it is a concern or a danger that we may be penalizing and removing the very incentives which have tended to help encourage the solution of these problems through the private sector, not always the public sector? I am referring particularly to the tax hearings that are being held this week.

Mr. NADER. I think if it is a reasonably accurate assumption that people are diverting some of their personal resources to foundation-type efforts primarily because of the tax incentive, then I think the answer to your question has to be yes.

Professor Friedman indicated that before taxes, there were a great deal of resources diverted to private voluntary efforts thereby implying that perhaps you would still get this diversion absent the tax incentive. I do not know the answer to that question except to say that when you talk with people who give to charities and give to foundations, their use of hard money/soft money distinctions borders on the frantic in the sense that they will not consider hard money contributions, but they will consider soft money contributions, the latter meaning contributions which are deductible.

It could be that this process over the last 25 or 30 years has been so insinuated into our personal economic psychology that there is no return, there is no attempt to get back to just pure giving for giving's sake without the deduction.

I think that one of the problems the foundations face today is they have a very difficult time quantifying their social contributions, unlike a profit-loss statement of a company. Their contributions are diffused and dispersed and have a great deal of difficulty quantifying them. When you are up before a congressional committee trying to defend your performance, it is difficult to do so, just as a president of a university would have a difficult time trying to defend his performance in terms of quantifying the contributions of the educational process to the State or the country.

There are some things that simply are too diffuse, but which we know are sine qua nons for the kind of growth and progress we have seen in the country.

Senator PERCY. In the area of incentives which have developed in the private sector, an elaborate series of incentives to stimulate production, all the way down to the individual worker on the line, in measuring work performance through executive bonuses and executive compensation—you have dealt a great deal in both the public and the private sector. Is there anything we can do to stimulate productivity in the public sector; that is, among civil servants, among Government employees, to, if they are in a compliance section, insure that they are vigorously pursuing taking the hard line rather than the soft line in exercising the authority and the responsibility they have, other than the general desire to do a good job, which industry has never been able to really resort to in its necessity of having performance in a measured way other than just what the person can exert?

Mr. NADER. Well, let me try to answer the question in this way: I see throughout many Government agencies at lower levels in the civil service, very dedicated civil servants, who really believe that the law should be enforced, the violator should be sought out, the harmful products should not be allowed in the marketplace.

They start speaking up through the echelons, and they get a negative feedback. They get a negative feedback because obviously, their particular advocacy comes up against certain realities that are filtering at the top of the agency.

How do you overcome that pressure downward, that negative feedback? That is the question of our times, obviously.

One way, I think, is to make the agency officials more personally accountable for their decisions. If an agency official willfully condones the sale of a defective product which he is empowered to keep off the market, he should have to incur some sort of personal responsibility, whether it is financial or in terms of cessation of his governmental status, or whether it is some other sanction or disincentive.

Once he feels that he, not just the organization, that he is responsible, the negative feedback downward, I think, will tend to be attenuated.

As far as incentives to productivity, I have a suggestion which I think could be made and could be implemented with an enormous effect in the health and safety area. It goes back many years, when Napoleon first offered prizes for anyone who could come up with better ways of preserving food for his army to carry across the continent. That is for the Government to engage in what I call exemplary research and development, the kind of prototype model or process development.

We have a problem now where the auto industry tells us, we cannot find a prompt and solid solution to pollution. There are many people at MIT and other places who think this problem is solvable with a minimal investment—\$20, \$30, \$40 million—what is it against just the massive property costs of pollution? If the Government would develop these vehicles and allow them to be used by anybody in the market system—that is, basically free license—coupled with a vigorous antitrust policy to preserve competition, and lower barriers to entry, you will get this kind of rapid encouragement. Even if you do not get producers to adopt these vehicles, you build up enormously the public pressure which rises as a result of the industry's argument of nonfeasibility being swept away.

Now, this can be done across the board in terms of more flame-resistance building materials, in terms of less flammable fabrics, in terms of superior transportation systems, which find an example in the Northeast Corridor project, in terms of the Metroliner.

These are the kinds, I think, of projects which can be undertaken at small cost across the board, dealing with little hazards as well as big hazards, which can advance technology and the development of it in the marketplace.

There is nothing new about this proposal except for the fact that it is on the other side of the 50-yard line; that is, is prototype development for the consumer and public interest?

We know about prototype development for the producer interests, the supersonic transport, the entire subsidization of the private atomic energy industry in competition with other industries which were not that subsidized. I think it is time to recognize that the Government has a responsibility to break through the rigidities and obstacles to innovation and the sales of these innovative products by spurring competition here.

Senator PERCY. Thank you.

Chairman PROXMIRE. How about adopting that, as a number of witnesses have testified we should do, with regard to pollution and provide a tax on the automobile to the extent to which they do pollute the air, and, of course, to the extent to which the company can show pollution was eliminated, cut in half, the tax would be eliminated and cut in half.

Mr. NADER. That might be a viable proposal given one condition, that the companies would compete. If the companies agree not to compete, and they take the same brunt of the tax, then they are even.

Chairman PROXMIRE. Well, they have to pay the tax.

Mr. NADER. Yes, they will pay the tax, but as long as they are paying the tax, there is no comparative—

Chairman PROXMIRE. I mean if this were something you accomplished for \$40, \$50, \$100 million, with the enormous cost of automobiles, a small excise of a fraction of 1 percent would make it much more economical for them to invest a little bit in discovering how they can produce an engine or a fuel which will do take job without pollution.

Mr. NADER. Yes, if the tax is sufficient so that demand begins to decline for automobiles, that will be the case. But every fiscal policy of that kind is premised for its efficiency on the competitive market structure, because it can be undermined by a collusive or conscious parallelism between various large companies.

Chairman PROXMIRE. In either case, you think a strict enforcement of the antitrust laws is necessary, no matter how you do it?

Mr. NADER. Absolutely. This points out very well one of the three areas I tried to cover. Here we have the Justice Department's Antitrust Division, with 170 practicing lawyers, with an immense responsibility in antitrust enforcement and compliance throughout the country. There are law firms in New York, single law firms, that have more than 170 practicing lawyers.

The budget of the antitrust division is about \$7 million. It has not increased in real terms in the last 8 years. Yet the economy, the

GNP, has grown enormously, by \$200 to \$300 billion in that period of time.

This is why, in order for a person to be consistent, like Professor Friedman, he has to, I think, pay adequate attention and adequate advocacy to enforcement of the antitrust laws and disclosure of information in the marketplace, and the breakdown of monopolistic or oligopolistic obstructions to market efficiency.

This is where I find him rather lacking in terms of his advocacy, that he spends a lot more time in very healthy criticism of governmental operations, but the shift of public responsibilities which he would put on the marketplace is not balanced by the critical demand that the tremendous rigidities and bureaucratization of the marketplace be eliminated or severely reduced. Then who is going to do that? We come back again to the Government.

Chairman PROXMIRE. I think Senator Percy wanted me to yield for a moment.

Senator PERCY. I just wanted to comment on your perceptive question there, that I think we are going to have to go into a combination of incentives to stimulate industry, to stimulate individuals to not pollute, and then a penalty for the polluters.

I can just think of a number of cases. We penalize the disposal of waste. If a company or a factory does do it by one means as against another, that would impose much less of a public burden, we ought to lessen the penalty or increase the incentive.

Automobile carcasses—I am sure we are going to have to get around to a tax on bodies so the manufacturer has the ultimate responsibility of disposal of it, or paying or charging the customer for the disposal of it ultimately.

A manufacturer who utilizes bottles—one has a 2-cent return and he collects them. The other has a nondisposable—a disposable bottle, and they are all thrown away, billions of them. He simply, by his decision to use a disposable bottle, imposes a litter on every city, every community, another layer of costs of collecting trash.

I think they have to be—I think we are getting to a point where I am ready to move and crack down hard on the manufacturers who simply do not take into account what they are doing to our environment.

Chairman PROXMIRE. That is very well put, especially in view of your experience as a manufacturer.

We have to view it as, look at what we have viewed as free—air, water, and so on—we have to view it as something people are, in effect, buying when they are polluting it. One way is to charge them for what they are doing.

I would like to ask you, Mr. Nader, what you would think about a staff attached to the Joint Economic Committee, a kind of “office of systems analysis” here? I was told by Secretary Laird that we ought to do something like that up here in Congress, we ought to have our own office of systems analysis.

They are understandably very reluctant to disclose to the public what their systems analysis shows, because they feel it would tend to destroy it, that they would not be willing to go ahead and make economic analyses on programs they like and want to go ahead with if they are going to be adverse.

So we feel it would be desirable to have it in Congress.

One question would be whether it would be desirable to have it here. Another question is, whether a reasonably modest staff, eight to 10 people or something of that kind, could be effective. Do you have any views on that?

Mr. NADER. Yes, I think the Joint Economic Committee is probably the preferred place for such a step, because it does not have the kinds of responsibilities or jurisdictions that surround it with the clientele that occurs in many other committees, frankly.

Whether eight or 10 people can have an effect, of course, depends on their quality and the degree of freedom that they are given by their superiors. But if there is any doubt as to the effect that one or two people on the Hill can have, I suggest Mr. Kaufman as a staff member who demonstrates that again and again and again, one staff man, two staff men, are behind either making major inroads along the road of progress, or at least staving off serious erosions.

The one-bank holding company movement, which is gaining ground in Congress and which will change the economic system in more fundamental ways, probably, than any single piece of legislation in the last half century, is being held at bay by a handful—a handful—of congressional staff.

So I think that given a strategic positioning point, 1 or 2 people can have an immense impact.

Chairman PROXMIRE. Well, I want to get into something else very quickly, but I would like very much to talk to you sometime about the One-Bank Holding Company Act. We are going to consider that before our Banking and Currency Committee very soon. I am ranking member of that committee and I would like to discuss it with you.

As far as disclosure policy and the public servant accountability is concerned, this subcommittee has been trying for over a year to get the release of Program Overview Data detailing the costs and benefits and distributional impact of all Government programs from the Bureau of the Budget, Public Law 84-801, which requires executive agencies to provide Congress with 5-year budget projections on any programs of any size has been ignored completely.

I should say that so far, the Budget Bureau has refused to release to Congress the questions put to agencies in the 85 issue letters requiring program analysis.

Do you have any concrete suggestions on how we should proceed to establish a comprehensive disclosure policy which will also enable an appropriate use of an executive privilege?

Mr. NADER. I am the wrong person to ask that, Senator Proxmire. I happen to believe in maximum open disclosure on the Swedish model, when it comes to governmental programs. I do not think that there is any justification for holding back these kinds of information, even short-term discomforts are nothing compared to the long-term costs that obtain from secrecy in Government.

So in terms of neatly balancing x versus y along the whole sequence, I am not the person to ask.

I think that 5-year programs that I have seen, and they are obtainable—if you cannot get them voluntarily, there are many other ways to obtain these documents which the people have a right to see—they are

pretty innocuous and if they are disturbing, it is only because of the lack of analysis; the lack of firm, hard thought.

There are people in various agencies who do these 5-year analyses as a full-time job. It is a routine, prototype thing.

Chairman PROXMIRE. Of course, the outrageous fact is that this is supposed to be, by law, made available to the Congress. The Director of the Budget Bureau tells us that the committee chairmen have to request it, and we are going to, at least this committee is going to request it. I do not know if they will give them to this committee, because we do not have oversight on all the agencies, but the failure to provide this is outrageous because the Congress has said that we should get them.

We should know the projections, but they just do not send them to us.

Mr. NADER. This is a new style of demand that I have come across. They are now beginning to treat Congressmen as classes. They are saying that it is not acceptable that a Congressman or a Senator request it, only the particular chairman of a committee, of course, the committee with whom they are most familiar, has to request it. That imposition of a double standard of congressional citizenship might be of some interest for the Congress to look into.

Chairman PROXMIRE. You assert that public disclosure of product test information, as well as other disclosures, would improve consumer decisions. Because of your statement, we asked Budget Director Mayo, when he testified before us last week, whether the Bureau had recently recommended that product test information be withheld from public disclosure.

Mr. Mayo said he was not familiar with that incident.

Do you have any information on the recent decision not to disclose product test information that would be helpful to us in securing it?

Mr. NADER. In the first 7 months of this year, memorandums went out from the Bureau of the Budget to various Government agencies asking them for their comments on the Johnson administration's task force on product test information disclosure—not only the way the memorandums were phrased, but also the oral communications to these agencies suggested that a negative reply would be highly desirable, and they got negative replies right across the line.

It was in such contrast with the optimistic projection of the Johnson administration's task force that I think more clearly than ever, there is a kind of ambience or attitude that flows down forcefully from the top level of the executive branch.

Chairman PROXMIRE. How did this negative disclosure work?

Mr. NADER. For example, a particular department, like the Department of Agriculture, would state all kinds of objections as to why it would not release its product information. Example: Should it release the amount of fat content in frankfurters, by brand name?

They are claiming that it is a trade secret.

Now, this is obviously absurd, because they receive this information by buying frankfurters on the open market and testing them. So how can the constituent parts of a product that is sold be a trade secret? So they deny that kind of release. And every little agency had its own reasons for denying to the public information that it has.

Chairman PROXMIRE. Mr. Nader, thank you very, very much. I have a couple of other questions that I shall submit for the record. When

you correct your remarks, I would appreciate it if you would answer them in writing.

You have made a fine and useful contribution to this sub-committee. We are grateful. I am delighted that this series of hearings winds up with you as the witness, because you have contributed so much.

The subcommittee will stand adjourned, and the record will be open for a couple of weeks until we can get the questions by other members and replies.

(Whereupon, at 1:05 p.m., the subcommittee adjourned.)

(The following was supplied by Mr. Schultze subsequent to his appearance as a witness during the proceedings of October 6, 1969:)

THE ROLE OF INCENTIVES, PENALTIES, AND REWARDS IN ATTAINING EFFECTIVE POLICY*

(By Charles L. Schultze)

Charles L. Schultze is Senior Fellow at the Brookings Institution and Professor of Economics at the University of Maryland.

He here discusses the important role of incentives in designing and implementing effective public policy. Dr. Schultze observes that because the attainment of national objectives increasingly depends "on the joint action of many independent decision makers, private as well as public; and . . . because the growing complexity and geographical diversity of public programs requires decentralized decision making within the public sector itself" some structure of incentives, "rules, organizational structures, performance measures, and penalties and rewards" is necessary to ensure that the results or public programs coincide with their original objectives. He examines the different stages of public expenditure policy at which incentives can play a major role: "incentive considerations should enter into the formulation of public objectives, the design of public programs and the allocation of budget resources, equally as much as in program execution." The different types of incentive problems which may be encountered in the consideration of public policy are analyzed as well as the possibility of channeling private actions toward public objectives by removing negative incentives, supplying positive incentives, and properly applying Federal user charges. Dr. Schultze argues the importance of encouraging efficiency within public programs by providing appropriate market-type penalties and rewards.

Some of the major problems of concept and political feasibility which will be confronted as incentives are employed in formulating effective policy are also discussed. The definition and measurement of public sector outputs is cited as one of the major difficulties. While application of incentives to individuals as well as to institutions is essential to assure program effectiveness, further study of the feasibility of applying such incentives is needed. It is suggested that the nationwide functional basis of the Federal budget should be accompanied by a complementary system of regional budgeting to chance political incentives at the local level. Dr. Schultze stresses that "the problem of incentives is not a discrete and separate part of public expenditure theory relating to how programs are carried out, but an aspect of social behavior which should be taken into account at every stage of public policy formation."

Introduction

The traditional theory of public expenditures concerns itself primarily with such questions as the proper role of Government, the evaluation of the benefits and costs of public programs, and the optimum allocation of national resources

*Reprinted from Joint Economic Committee, "The Analysis and Evaluation of Public Expenditures: The PPB System," committee print, 1969.

to the various public programs.* It deals with *what* ought to be done and *how much* of our resources ought to be devoted to doing it.

In a similar vein, designers of social legislation in the past decade have concentrated primarily on what ends should be sought. Most Federal programs are characterized by two features—(i) a *grant-in-aid* of funds to State and local governments or private institutions, conditional upon the submission and approval of (ii) a *plan* setting forth the objective for which the funds will be used.

But objectives, plans, and budgets are not synonymous with actions and results. Promises are not performance. The adoption of an urban development plan does not guarantee that urban investment will fit the plan. The establishment of water quality standards does not clean up pollution. The formulation of a model city neighborhood plan will not itself produce a model neighborhood. When a particular public program in health or education or pollution control or urban development must be jointly carried out by a complex governmental structure and a host of private decisionmakers, it becomes crucial that those who execute the program have incentives or inducements to act in directions which are consistent with the objectives of the program.

It is becoming increasingly important to recognize the difference between objectives and plans on the one hand and performance on the other. The great expansion of public spending in recent decades has primarily been devoted to programs which involve the private as well as the public sector of the economy. While programs which produce purely public goods (like national defense) or simple income redistribution (like veterans' pensions) are still important, the cutting edge of the recent expansion in Government activities involves such matters as urban rehabilitation, control of air and water pollution, the provision of medical services, on-the-job manpower training, the development of depressed areas, and the like—programs in which public actions and decisions cannot alone determine results. Moreover, even where programs are predominantly confined to the public sector—as is the case with elementary and secondary education—the major instrument of Federal policy is not direct action but joint action with State and local governments through the grant-in-aid mechanism.** To a growing extent, therefore, public program performance depends upon the behavior of a large number of *independent* decisionmakers, public and private. Actions cannot be commanded. There is no hierarchy of officials in a single line of command who can be directed toward a set of predetermined objectives. In such cases the careful specification of plans and objectives by a public agency will not suffice to guarantee effective programs. The program must also be explicitly designed to provide incentives or inducements for the relevant decisionmakers outside the public agency to act in directions which are consistent with program objectives.

Even within the public sector itself the problem of incentives is taking on growing importance. Social goals have become more ambitious, program objectives more complex. The model cities program is infinitely more difficult to execute than the disbursement of veterans benefits or the management of an agricultural conservation program. Designing, procuring, and operating a strategic nuclear weapons systems is a far cry from buying and maintaining the mounts for a cavalry regiment. Moreover, one of the chief characteristics of recent social legislation is that it seeks to realize national objectives in thousands of diverse communities across the land. Highly centralized managerial systems cannot cope with the sheer number and diversity of the day-to-day decisions which have to be made. Decentralization of decisionmaking is not only desirable, it is unavoidable. But decentralized decisions should be compatible with central goals. And that in turn requires a system of rules, organizational structures, performance measures, and penalties and rewards, which induces decentralized decisionmakers in public programs to act in ways consistent with overall program plans and objectives.

For two reasons, therefore, the problem of incentives deserves particular attention in the formulation of public expenditure policy: *first*, because national objectives increasingly depend for their realization on the joint action of many independent decisionmakers, private as well as public; and *second*, because the growing complexity and geographical diversity of public programs requires decentralized decisionmaking within the public sector itself.

*Further discussion of this issue is found in the papers by Steiner and Arrow in this volume.

**Further discussion of this issue is found in the paper by Mushkin & Cotton in this volume.

Incentives have a role to play in public expenditure policy which goes well beyond the problem of program execution. Incentive considerations should enter into the formulation of public objectives, the design of public programs and the allocation of budget resources, equally as much as in program execution. Or to put the matter another way, the problem of incentives is not a discrete and separate part of public expenditure theory relating to how programs are carried out, but an aspect of social behavior which should be taken into account at every stage of public policy formulation.

The first section of this paper considers the role of incentives at the various stages of public expenditure policy—program design, budget allocation, and program execution. The next part of the paper discusses the various types of incentives which appear to be relevant in formulating public policy. A final section examines some of the theoretical and political problems which arise in applying incentive concepts to public expenditure programs.

I. THE ROLE OF INCENTIVES AT THE DIFFERENT STAGES OF POLICY FORMULATION

Webster defines the word "incentive" as: "something that incites or has a tendency to incite to determination or action;" looking further, we find the word "incite" defined to be: "to induce to exist or occur."

In the case of public programs, considerations of incentives arise when we concern ourselves with the problem of inducing individuals and groups, either public employees or private decisionmakers, to undertake actions which produce results desired by public policy. There are three stages of public expenditure policy to which considerations of incentives apply: program design, program execution, and budget allocation.¹

1. *Program design.*—Many of the Federal Government's most important expenditure programs involve—or at least ought to involve—a mixture of public and private actions. More specifically, in perhaps the majority of public programs, the public sector is not producing a pure public good, but is attempting to take account of external costs and benefits in the production of private goods. Public programs seek to modify, in quality or quantity, the outcome of private production and investment decisions. Urban development programs, air and water pollution controls, and flood protection are examples. Yet too often, by concentrating solely on the public sector side of a joint public-private problem, public programs produce distinctly inferior solutions.

Flood protection is a case in point.* Since the Flood Protection Act of 1936, the Federal Government has spent some \$7 billion on flood protection projects. Expenditures on such projects currently run about \$500 million per year with an additional \$100 to \$150 million per year spent on disaster relief to flood victims. While estimates of national flood damages are very approximate, they exceed \$1 billion a year and are increasing. Extensive economic and engineering literature has been developed on the optimum design of flood control projects and on the techniques of benefit-cost measurement for such projects.

National policy toward flood losses has been quite straightforward—build flood protection and prevention works primarily at public expense and assist States, localities, and individuals to recoup against large flood losses. Where it could be shown that potential projects would prevent losses whose value exceeded the cost of the project, then those projects became eligible for Federal financing, subject to the overall availability of funds in the Corps of Engineers budget and the normal vicissitudes of pork barrel politics.

But, as a matter of fact, public policy ought not to be expressed solely—or even primarily—in terms of criteria for the construction of public works for flood prevention. Rather it should be formulated in terms of encouraging rational use of flood plain lands. We should be seeking a policy which induces public and private investment in the flood plains only if the advantages of locating there are greater than those of alternative sites by an amount which exceeds the expected value of flood damages or the cost of preventing those damages. The present policy, which concerns itself almost solely with public projects, not only fails to consider the establishment of incentives for economic private investment in flood plain lands,

¹ This paper does not, except peripherally, deal with public regulatory policies, where questions of incentives also arise.

*Further discussion of this issue is found in the paper by Knetsch in vol. 3 of this collection.

it sets up a series of monetary and political incentives which induce distinctly uneconomic investment decisions.

Once the flood plain is developed, the standard cost-benefit calculation will often show that the construction of flood prevention or protection works is worthwhile in terms of expected damage avoided. However, in all too many cases the preferred alternative would have been a much less intensive development of the flood plain land or no development at all. In other words the differential advantage of the flood plain over the next best alternative is worth less than either the cost of flood protection works or the expected value of damage. Since States, local communities, and individual beneficiaries typically contribute only a fraction of the cost of Federal flood protection works (ranging from 5 to 60 percent and averaging 25 percent) there has developed a set of incentives for uneconomic use of flood plain lands. Development occurs in flood plains. Either in response to or in anticipation of floods, strong and often successful pressure is brought to bear for Federal flood protection. In many cases, flood-proofing of individual buildings would be much cheaper than building flood control public works. But the costs of floodproofing are borne by the individual owner; the cost of public works is not. Once Federal works are constructed, further development occurs, beyond the protected areas. The resulting encroachment on the flood plain itself raises unexpected flood heights, increases the expected flood damage to prior investments and leads to still further flood protection works. Studies of flood plain use "show that some flood plain encroachment is undertaken in ignorance of the hazard, that some occurs in anticipation of further Federal protection, and that some takes place because it is profitable for private owners even though it imposes heavy burdens on society."²

In earlier years most flood control projects were justified on the basis of protecting existing developments. More recently, however, an increasing proportion of flood control projects have been justified on the basis of protecting land for future development. Most often the economic and engineering surveys upon which construction authorization is based do not examine alternative sites for the projected development. As a consequence, benefits are calculated on the basis of the absolute value of the site as a location for the potential development, rather than its differential value compared to the next best alternative. This tends to accelerate still further the "cycle of losses, partial protection, further induced (though sub-marginal) development, and more unnecessary losses."³

As the Task Force on Federal Flood Control Policy pointed out, an effective approach to national flood damage policy would "alter the price signals received by potential flood plain developers." The full costs of flood plain occupancy would be shifted to prospective occupants through an occupancy charge equal to estimated annual damages plus any external costs which occupancy causes others. These payments would, in turn, be used to compensate those suffering flood plain damages. Flood control works would lower the annual occupancy charges and the costs of the necessary public works would be charged to the beneficiaries, whose annual costs had been reduced.

As initial steps in this direction, the report recommended the careful experimentation and development of a flood risk insurance program, with premiums on future investment in flood plain land related to flood damage risk. Ultimately such insurance would be a requirement for any investor in flood prone lands in order to be eligible for Federal loans, guarantees, flood protection investment, or other similar assistance. The development of such a program must necessarily be gradual, since premiums seriously out of line with actuarial risk would invite uneconomic location and heavy costs. As a corollary to this recommendation, the report urged a sharply expanded program for determining flood hazards, flood frequency, and unexpected flood damage. Without such information economically meaningful premiums cannot be developed—and, to stress again—an insurance program with a poor premium structure is worse than no program at all. In 1968 the Congress enacted a flood insurance program. While premium rates on existing residential dwellings and small business establishments will be subsidized (up to a specified dollar value limitation)

² *A Unified National Program for Managing Flood Losses*, a report by the Task Force on Federal Flood Control Policy. (Printed by the Committee on Public Works, Aug. 10, 1966), p. 11.

³ *Ibid.*, page 12.

premium rates on all new construction and major improvements will be set to cover actuarial risks.

In addition to flood insurance the task force report recommended the development of a cost-sharing formula for flood control works which would more nearly assign the costs to the beneficiaries.* Should an insurance program be developed, with premiums related to risks, the existence of a heavily subsidized means of reducing premiums would continue to generate excessive development in the flood plains. And requiring beneficiaries to pay for the cost of public works would tend to neutralize the present bias against investment in the flood-proofing of individual structures.⁴ Where flood control projects are justified on grounds of benefits from future development, as opposed to protecting existing investments, the report urges that only *net* locational benefits be taken into account—that is, only the excess value of flood plain location over the next best alternative be taken into account.

The point of this summary of flood control policy is that the problem of incentives must be considered in the initial specification of public policy objectives in those cases where joint private and public action is involved. And joint action is likely to be involved in a high proportion of cases where the basic objective of public policy is to take into account the external benefits or costs which arise in private decision-making. And "incentive-oriented" point of view would recognize that present flood control policy is deficient on at least three counts:

It fails to provide incentives for private decisionmakers to consider flood hazards sufficiently in their investment decisions.

By its lack of user charges, it positively encourages uneconomic investment coupled with political pressure for subsidized flood protection works.

By its lack of user charges it also sets up a false set of incentives to minimize floodproofing and maximize flood protection.

Other examples are numerous, in which failure to consider incentives leads to an inferior specification of objectives and inferior program design. In the field of water-pollution control, for example, public policy emphasizes the subsidized construction of waste-treatment plants, dams for low-flow augmentation, and the separation of storm drains from sewers, as means of treating pollution once created. But it generally fails to consider means of altering the price signals received by polluters through the mechanism of user charges and effluent charges.** Through such charge, industrial polluters would be assessed the social and economic cost of pollution, and in many cases would find it profitable to change their internal processes to reduce the amount of pollution they create. In general, it is cheaper to improve the quality of our streams by combination of prevention and treatment than by treatment alone. But because the private sector is primarily responsible for prevention and the public sector for treatment, public policy excessively concentrates on the latter aspect. And to the extent it does deal with the prevention aspect of pollution control, it does so by attempting to enforce, through the police power, a set of water quality standards rather than providing economic incentives to individuals which would induce them, in their own interests, to take action to improve water quality. Again, the question of incentives arises in the specification of objectives and the design of programs—not merely in program execution.

More generally, public policy must often concern itself not with the provision of public goods which can only be handled by the public sector, but with the problem of external costs and benefits in the private sector. In such cases market prices and costs do not reflect "true" social benefits or costs. As a consequence purely private decisions do not produce desirable results. Pollution is a cost to society which the polluter does not bear. The full costs of flood damages are often not foreseen and even less often borne by those who locate in flood plain lands. As a consequence, public action is needed. But that public action need not be simply the provision of public facilities (waste treatment plants or flood protection works) to offset the economic losses caused by private actions. Rather the objectives of public policy, in such cases, should in-

*Further discussion of this issue is found in the papers by Krutilla and Millman in this volume.

⁴ See footnote 13, p. 217.

**Further discussion of this issue is found in the papers by Davis & Kamlen, and Kneese & d'Arge in this volume.

clude a modification of the "signals" given and incentives provided by the marketplace so as to induce private actions consistent with public policy. Excessive concentration upon the purely public part of public policy may result in poorly specified objectives and ineffective programs.

2. *Program execution.*—In the 1920's, expenditures of the Federal Government outside of the traditional functions of defense, post office, veterans' benefits and interest on the debt represented less than 1 percent of GNP. In the budget for fiscal 1969, such expenditures will equal 10 percent of GNP. The Federal Government today manages large enterprises—the space program, the Atomic Energy Commission, the Forest Service—whose very size and complexity require highly decentralized operations. The establishment of objectives and plans at the top level of the agency concerned does not guarantee that the vast number of decisions which must necessarily be delegated to subordinate officials will result in effective and efficient program execution.

The problem of providing incentives for effective program execution is closely related to the problem of devising measures of performance for subordinate decisionmakers. It is impossible to provide incentives without knowing what to reward and what to penalize. Two major consequences flow from failure to provide performance measures related to program objectives. The first is the growth of detailed regulations which rigidly specify what is "acceptable" behavior by subordinate decisionmakers. Standard contract provisions multiply, and are required to be included in all contracts regardless of their suitability to a particular situation. Tables of organization are centrally established and carefully monitored. Elaborate procedures are developed to control the purchase of supplies, the use of long-distance communications, travel, and the like. Since subordinate decisions cannot be controlled by judging them in terms of their effect on output, they are controlled by a rigid specification of inputs.

The second consequence of failure to provide appropriate performance measures, is that individuals and institutions often become avid risk averters. Overall success cannot be recognized, but individual "mistakes" can be singled out for punishment. A few examples will help. In 1966 inflationary pressures mounted rapidly in Vietnam. As one means to counteract those pressures, the Agency for International Development launched a commodity-import program, designed to soak up some of the excess purchasing power with American-furnished commodities. Two options were open in running the program:

A. A carefully controlled license program, in which every possible step was taken to insure that import certificates did not fall into the hands of black marketeers or into the hands of the Vietcong. One consequence of such a program would be a mountain of redtape and a very slow trickle of imports into the Vietnamese commodity markets.

B. A less tightly controlled program whose main objective was introducing rapidly a large volume of commodity imports into the country. One early foreseeable consequence of such a program was that a significant proportion of imports would end up with black marketeers and some part with the Vietcong.

Given its overall objectives, AID quite properly chose the second course of action. And inevitably, a year later, it found itself subject to sustained and violent attack in the Congress for the easily identifiable consequences of its policy, namely the appearance of AID-financed imports in the hands of black marketeers and small amounts in the possession of the Vietcong. The obvious reaction of program operators to the performance criteria which implicitly underlay this attack, is in the future to accept a lower expected value of program accomplishment in exchange for a smaller proportion of "mistakes."

A similar situation commonly arises in the loan programs of the Federal Government. Many of these programs, rightly or wrongly, have the supposed objective of providing loan capital to small enterprises which are too risky for investment by commercial lenders. The Small Business Administration is a case in point. Measures have not been developed, however, which can be used to judge the performance of various regional loan offices in terms of overall program objectives. Defaulted loans, on the other hand, are easily identified, and a significant default rate is sure to invite congressional questions. Loan officials, therefore, tend to avoid risky loans. As a consequence, far from meeting their original objectives, the programs end up, in many cases, simply in making loans of commercial quality at less than commercial rates.

The problem of providing incentives for effective program execution is even more difficult when the Federal Government itself does not directly operate the

program, but provides grants-in-aid to other governments or to private organizations.* The major growth in Federal expenditures in recent years has been devoted to complex social programs in such fields as health, education, manpower training, urban development, and the like. These programs deal with problems which, while national in scope, require very particular solutions in thousands of individual communities. The Federal Government provides the financing and requires the submission of plans which specify the objectives for which the funds are to be used, but it does not have direct responsibility for operating the programs. The current widespread pressure for decentralization and particularly democracy arises, in part at least, from a recognition that highly centralized decisionmaking is virtually impossible in these programs. Yet without meaningful measures of performance and effective incentive systems, is it possible to decentralize decisionmaking while still making progress toward the generally accepted high priority national goals toward whose realization the Federal grant programs were originally established? I believe that in selected cases, at least, an incentive approach can help to resolve the national goal versus decentralization dilemma.

3. *Budget allocation.*—It is not customary to think of budgetary allocation from the standpoint of incentives. We tend to view the budget allocation process as one in which the Government seeks to adjust program levels so that equal marginal returns are realized from the last dollar spent on each program. Massive problems of evaluating benefits and costs confront decisionmaking in trying to approach this ideal result. But in what sense do incentive considerations arise? In two ways, I believe.

In the first place, with few exceptions, the Federal budget is developed on a nationwide functional basis—education, health, defense, space, manpower training, and so forth. There is no mechanism, however, by which tradeoffs among alternative Federal programs are possible at the local or regional level.** A mayor or Governor has almost no means of negotiating a tradeoff between a submarginal flood control project and a highly needed hospital; between an urban freeway and a waste treatment plant. Hospital, highway, pollution control, and water resource budgets are decided nationally. This fact has two major consequences:

First, it sets up incentives for local communities and their Congressmen to lobby in the Executive and the Congress for almost any project they have a chance of getting. Incentives are established for inefficient political bargaining; the relevant set of tradeoffs has no way of appearing in the bargaining process.

Second, many functional decisions involve both gainers and losers. Water pollution control programs help downstream communities and often hurt upstream. Location of low-income subsidized housing in suburban communities is often viewed by that community as entailing positive costs. Concentration of assistance to depressed areas in potential growth centers is, quite naturally, viewed with some hostility by hinterland counties who receive no immediate help from this approach, but whose poverty may be much greater than the community actually receiving the assistance. As a consequence, losers are often able to veto potentially high priority programs. But considering the entire range of potential Federal programs, it may often be possible to compensate losers in one functional program with perfectly appropriate assistance of another kind. Yet so long as budget allocations are made solely on a nationwide functional basis, there is no mechanism by which compensatory tradeoffs can be negotiated in particular cases.

Third, theory tells us that funds should be allocated among various Federal programs so that the benefits from the marginal dollar in each program are the same. But many Federal programs have objectives which are reached through particular projects in individual communities scattered across the Nation (for example, hospital construction grants, flood control projects, and so forth). In such cases an evaluation of the merits of one program relative to another is much more difficult to make on a national basis than it is in a specific community. The relative desirability of allocating more Federal funds to hospital grants, flood control, or to slum rehabilitation can often be determined more reasonably for New York City than it can for the Nation as a whole. This is not to say that considerations of national objectives are unimportant in making such a deter-

*Further discussion of this issue is found in the paper by Mushkin & Cotton in this volume, and the papers by Grosse, Brandl, Mangum, and Ross in vol. 3, of this collection.

**Further discussion of this issue is found in the paper by Schmid in this volume.

mination. Rather it is to say that, at the margin, allocation of Federal funds among various programs can often be done better on a regional or community basis than on a nationwide functional basis.

In short, for certain types of programs purely functional budgeting sets up political incentives for inferior bargaining, suppresses incentives for a kind of compensatory bargaining which might hold great promise, and fails to provide for the kind of relative benefit comparisons which efficient allocation demands.

For these reasons experimentation with a limited form of *regional budgeting* could be very worthwhile. Tentative functional budgets could be drawn up on a national basis, just as they are now. But in each locality, Governors and mayors could be given the right, up to some limit, to propose reallocations among particular Federal aid funds flowing into their own jurisdiction. They might propose, for example, an increase in funds for education and a decrease in highway grants. In effect, the final allocation of Federal budgetary funds would arise out of a joint set of considerations—national allocations based on nationwide objectives, modified by reallocations based on conditions and preferences in particular communities. Functional budgeting would be supplemented where appropriate and feasible by regional budgeting. Such an approach has much to recommend it, but it is not without its problems. I shall return to a discussion of those problems, and some suggested means of overcoming them, at a later point in this paper.

Another type of incentive problem in budget allocation arises when major elements of cost are not charged to the decision unit responsible for making decisions which involve those costs. Examples range from major areas of program policy down through detailed management decisions. The U.S. merchant marine is supported with a massive subsidy program on the primary justification that national security demands it. Yet if the costs of this decision were charged to the Defense Department, it is quite likely that defense strategists would opt for a smaller subsidy program and for use of the savings in other defense purposes. Whatever the result, the appropriate program tradeoffs could at least be considered. On a smaller scale, if military personnel are not charged to the budget of the commander of a military installation, he has every incentive to substitute this free good for those other inputs which do enter his budget.

More generally, budgetary structure affects the incentives of decisionmakers. Program whose costs do not enter the budget of the decisionmaker, being a free good, are easily recommended. Free resources are overused. In other cases desirable programs are blocked because the budgetary structure provides no means by which "losers" in a particular decision can be compensated. As a consequence they have no incentive to agree to a reasonable compromise. In still other cases State and local officials have no incentive to develop and negotiate an effective program for the use of Federal assistance, because the excessively functional character of Federal budget decisions leaves them no leeway to negotiate transfers among functions.

So far we have examined the role of incentives under a set of classifications based upon the various stages of public policymaking—the specification of objectives, program design, program execution, and budgetary allocation. Further insight can be gained by considering a classification based on the various types of incentive problems which arise in the consideration of public policy.

II. THE VARIOUS TYPES OF INCENTIVE PROBLEMS

1. *Incentives designed to channel private actions toward public objectives.*—A. Removing or modifying current incentive structures which lead to actions with large social costs or prevent the achievement of social objectives.

If we review public programs designed to modify private behavior in socially desirable directions, we find that failure to consider the problem of incentives has often led to very ineffective or inefficient solutions. In some cases ineffective solutions have emerged because public policy has attempted to impose on the private decision system detailed plans which require actions running directly counter to those called for by the existing system of private rewards and penalties. Enforcing the plans by use of the police power may often be far less effective than eliminating or modifying the private incentives which run counter to the plan.

In other cases, public programs have specific subsidy structures which themselves set up highly inefficient responses. Approximately the same subsidy objective could be reached with a subsidy designed to encourage efficiency.

Let me cite some examples:

Both the Federal Government and city governments have struggled for years with the problem of planning urban development. Almost every form of Federal

assistance to municipalities is conditioned on some kind of a planning requirement—comprehensive plans, functional plans, planning processes, social renewal plans, workable programs, and so on down the litany. But, all too often, the plans are more breached than observed. And in large part this occurs because the system of rewards and penalties at work in connection with urban investment is not merely neutral to but runs precisely counter to the goals and objectives of the plan.

One major aspect of urban development plans is zoning for differential intensity or other differences in use.* The purpose may be esthetic, it may be to control development along lines conducive to efficient urban transportation, or it may have other purposes. But the principal characteristic of zoning is that it reduces the potential rent on specific parcels of land below the rent which could be earned without zoning restrictions. Under the most favorable conditions, this characteristic would make zoning hard to enforce. But this problem is substantially increased by the present tax system. The return to investment in physical improvements will not generally vary with zoning changes—the landowner will capture the gains from such changes. And while physical improvements yield an annual return subject to normal tax rates, the potential rewards from securing a change in zoning can be realized as capital gains, and will be taxed at much more favorable rates. As a consequence, the energies and capital of real estate developers are channeled into land speculation and into massive efforts to secure favorable changes in zoning codes. Other things being equal, this kind of activity yields returns which pay less than half the tax securable by investment in physical improvements. Small wonder that “year 2000” plans in most metropolitan areas quickly succumb to the relentless pressure of land developers.

In a similar vein, the owner of slum property hoping for a rise in land prices, has every incentive when faced with a tradeoff between improving his property and extending his holdings of existing property to favor the latter. Improvements yield a return subject to normal tax rates. The yield from the acquisition of additional property can be taken as capital gains. The availability of capital gains tax treatment on capital gains from the sale of land, shifts in the margin of tradeoff between improvements and extension of holdings in favor of the latter.⁵

More generally, the availability of highly favorable tax treatment for those who speculate in land, tends to work counter to most of the objectives contained in urban plans. A change in the tax system would not itself automatically channel urban investment in socially desirable directions—there are a host of other factors which influence such investment. But certainly the system could be made more neutral with respect to planning objectives, rather than being highly counter-productive as it now is.

The system of payment by which hospitals are reimbursed under medicare, medicaid, and most private insurance plans represents another example of an existing incentive system which produces highly undesirable results.

During the past several years, hospital costs have been rising at a highly accelerated rate. In 1967, hospital costs rose by more than 16 percent for the second year in a row. Average per diem hospital costs now approach \$60, and have been projected to rise to \$100 within 5 years.⁶ If means could be found to reduce the rate of increase in hospital costs by only 2 percent per year, the resulting savings would amount to \$5 billion annually by 1975. Not only have per diem costs at hospitals been rising, but hospital utilization, in terms of hospital days per thousand population, has also been increasing rapidly. Per capita utilization of hospital services rose by 47 percent over the 1955–65 decade.⁷ There is an accumulation of evidence that some part of this rise reflects an excessive use of hospital services relative to patient's needs. If a 25-percent reduction in hospital

*Further discussion of this issue is found in the paper by Ross in vol. 3 of this collection.

⁵ The tax treatment of depreciation on buildings complicates matters, but does not invalidate the basic proposition. In fact the particular rules relating to the tax treatment of existing buildings compared to the treatment of major improvements tends to discriminate in favor of the former and against the latter. See Richard E. Slitor, *Tax Approaches to Low Income Housing Problems: A study prepared for the National Commission on Urban Problems*.

⁶ *Secretary's Advisory Committee on Hospital Effectiveness, Report*. U.S. Department of Health, Education, and Welfare, 1967, p. 10.

⁷ Derived from data in the *Report of the National Advisory Commission on Health Manpower*, U.S. Government Printing Office, November 1967; app. I, table 4. The per capita increase in average daily hospital beds used (11 percent) was combined with the increase in the deflated value of service per patient day to arrive at the 47-percent figure used in the text.

utilization rates could be effected, without reducing the quality of patient care, an annual savings in medical costs of \$7.5 billion could be realized by 1975.⁸

The Federal Government's medicare and medicaid programs now pay for the hospital care of a significant part of the population. Built into these programs is the concept of fully reimbursing hospitals for the costs associated with medicare and medicaid patients. Through these programs the Federal Government can have a major impact on hospital costs, both directly and through its influence on the practices of Blue Cross and commercial insurance carriers.

At the present time Federal reimbursement formulae undoubtedly contribute to hospital inefficiency. Essentially each hospital is reimbursed by the Federal Government for the "reasonable costs" of delivering services to patients under medicare and medicaid programs. Payment is matched to the individual costs of each hospital. There are virtually no incentives for efficiency. Any savings from more efficient operations result in lower Federal payments; any increased costs are fully passed on. To the extent that larger staffs bring prestige and promotion, there are positive incentive for inefficiency. Moreover, since policies in most hospitals are controlled by the physicians serving it, and since the hospital provides, in effect, a free workshop for those physicians, there are powerful incentives to upgrade the workshop, when the costs are reimbursed, insofar as most patients are concerned, either by Government program or private insurance carriers.

All of the evidence indicates that there is substantial room for improving efficiency in the delivery of hospital services. For example, recent data show that average per diem costs in voluntary short term teaching hospitals in New York City ranged from a low of \$50 to a high of \$87. The range among 42 New York City community hospitals was \$34 to \$61. Among a group of 12 hospitals carefully chosen for high quality care, costs per patient-day ranged from \$46 to \$96, after wage scales had been adjusted to a common basis.⁹ The American Hospital Association compiled operational data on 431 hospitals of different sizes throughout the Nation and found substantial economies of scale: small hospitals produced an average 3.7 laboratory procedures per man-hour, large hospitals averaged 8.9; small hospitals annually served 1,800 patient-days per one administrative employee, large hospitals 4,100; small hospitals produced 3.9 meals per man-hour, large hospitals 5.9.¹⁰ While some of this huge variance in costs among hospitals many indeed be associated with differences in the quality of care, much of it is undoubtedly traceable to differences in efficiency.

A number of schemes have been suggested for "incentive reimbursement" as a technique for reducing hospital costs. Payment might be based on a regional average cost. Hospitals with higher costs than the regional average would have to absorb part of the excess; hospitals with lower costs would be allowed to share part of the savings. Incentives would thus be introduced for each hospital to reduce costs. Over the long run, hospitals of more than average efficiency would be able to accumulate internal funds for expansion and to demonstrate to lenders that their cash flow could amortize borrowings. Inefficient hospitals could not. An alternative scheme is to reimburse each hospital initially on the basis of its own costs, but to reward it for reducing costs toward the regional average and penalizing it in contrary cases.

Incentive schemes, however, will ultimately prove viable only to the extent we can distinguish change in cost for a constant quality of care from changes in cost associated with changes in quality. We seek a means to reduce hospital costs per unit of output. We do not seek a reduction in per diem costs achieved by lowering the quality of care provided. The National Advisory Commission on Health Manpower has suggested the establishment of peer review panels—groups of physicians, hospital administrators, and other professional personnel who would review the case provided and make judgments with respect to the quality and utilization of services.¹¹ While this approach appears to have much merit, and may become an indispensable part of any incentive reimbursement scheme, it needs to be backed up by the development of criteria for evaluation purposes. The range of services provided by a hospital are too complex and diverse

⁸ *National Advisory Committee on Health Manpower, report, vol. 1, p. 68.*

⁹ All of these data are cited in vol. I of the *Report of the National Advisory Commission on Health Manpower*, p. 55.

¹⁰ Cited in Herman M. Somers and Anne R. Somers, *Medicare and the Hospitals*, Brookings, 1967.

¹¹ *Report, op. cit.*, vol. I, pp. 46-48.

to be calculated as a lump, particularly when the evaluation is for the purpose of establishing payment for those services. Rigorous analysis of hospital care directed toward establishing output oriented functions or categories is clearly a prerequisite for the establishment of meaningful evaluation criteria for peer review panels or for any other quality evaluation mechanism. In short, to apply incentive reimbursement we must first make progress toward measuring the "output" of hospitals.

Other examples of inappropriate or positively harmful incentive systems are numerous. The American merchant marine is a case in point. We spend about \$500 million per year to subsidize the American merchant fleet. The justification is two fold: to provide a carrying capacity in case of war and to have a weapon against discrimination by foreign-owned fleets in this highly cartelized business. While the case for subsidy is dubious on both grounds, let us accept its necessity and look at the subsidy system itself. The basic operating subsidy essentially makes up the difference between American and foreign operating costs. Any productivity gains result in lower subsidies—inefficiency leads to higher subsidies. Not only does the overall subsidy remove any incentives for efficiency, its detailed composition discourages the kind of merchant fleet which is most appropriate for the American economy. The subsidy brings each element of American costs in line with foreign costs—labor, repairs, and maintenance, etc. But the *comparative* advantage of American ships lies in higher speed—i.e., American ships' fuel costs are no higher than foreign costs, but labor costs are much higher. Consequently, American ships should be designed for high speed, quick turn-around time, catering to high-value cargo. But the subsidy system removes any incentive for pursuing this comparative advantage. To make matters worse, while the subsidy is partly justified as a means of providing a competitive weapon against potential foreign discrimination, our cargo preference laws have resulted in the fact that more than half of the export cargoes carried by U.S. ships are preference cargoes, leaving less than half of our capacity to compete in the world market. Even accepting the need for a subsidy program, we have designed one which is guaranteed to produce decreasing relative efficiency in the American merchant marine compared to its foreign competitors.

We have so far concentrated on the negative aspect of the incentive question; i.e., those situations in which the existing incentive structure produces private actions which run counter to the public interest. But in addition to removing "negative" incentives, public policy also provide "positive" ones:

B. Providing new incentives designed to channel private actions toward public purposes.

Two important examples have already been given of areas in which incentives for private action might be created as a means of achieving quite specific public objectives:

Mandatory flood insurance, with premiums adjusted to risk, as a means of encouraging economic investment in flood plain lands.

Effluent charges as an efficient means of reducing air and water pollution.

In both of these cases, the necessity for a public program arises from the existence of external costs and benefits in the private market. But the possibility of creating an incentive system which channels private actions toward public goals is not limited to programs which primarily deal with externalities. The massive new Federal housing program, passed by the Congress in 1968, proposes to construct 6 million low-income housing units in the next decade, and to subsidize part of the rental or ownership costs. The primary objective of this program is presumably income redistribution—redistribution through transfers-in-kind, but redistribution nevertheless. (Anthony Downs has eloquently pointed out the host of problems connected with achieving this ambitious goal—problems whose solutions will require massive changes in urban institutions.)¹² Consideration of this program from an incentive standpoint, however, raises questions which go well beyond the matter of income distribution. In particular, the availability of authority to the Federal Government to contract for large blocs of low-income housing—both sale and rental housing, both multifamily and single unit—may make it possible to test various devices to encourage innovation in the development and construction of low-cost housing. Will the market provided by large-scale multiyear contracts induce new kinds of firms to enter the

¹² Anthony Downs, "Moving Towards Realistic Housing Goals," in *Agenda for the Nation* (The Brookings Institution, 1968).

industry, encourage the development of specialized materials, promote substantial R. & D. expenditures by building materials and construction firms? The Defense Department's proposals for the fast deployment logistics ships (FDL's) was based on a positive answer to these questions in the case of the shipbuilding industry. In the case of housing we do not know how important economics of scale and the security of long-term markets are. But the new program does make it possible to test whether large-scale markets and long-term contracts will provide incentives for significant cost reductions.

Another example of potential "incentive" creation arises in connection with manpower training programs.* The Federal Government in its manpower training programs has begun to shift emphasis away from numerous small-scale, publicly-operated institutional training programs, toward subsidizing large-scale on-the-job training programs with private industry. In effect, Federal retailing of training programs proved relatively expensive and ineffective; hence the switch toward wholesale operations. The question arises whether incentive type contracts can be developed, in which private industry is automatically driven toward achieving the kind of results desired by public policy. For example, in training the hard-core unemployed one of the major problems is persistence of effort. Absenteeism is high; motivation is often low; accepting work discipline does not come easy; and all of this is sometimes exacerbated by the hostile attitude of existing employees. To the extent that these obstacles to increasing the employability of the hard-core unemployed can be eliminated with enough time on the job, then program benefits (measured by increases in the long-term employability and productivity of trainees) are not linearly related to hours of on-the-job training. Presumably, up to a point at least, the marginal benefit from on-the-job training rises with length of training. If subsidy contracts do not recognize this fact, but, for example, treat a half year's training for two men as equivalent to a full year for one man, the program will be less effective than it could be. This argues for incentive contracts—analogueous to the incentive contracts in military procurement—under which the return to the contractor depends in part on persistence of effort.

In a similar vein, the Government should be interested in the "job mix" into which trainees are placed. If a contractor places all of them in menial and unskilled positions, and suffers no monetary penalties, his incentive for testing and motivating trainees is reduced. Again, incentive contracts which include as a performance measure, the job content of training positions, might well be devised to overcome the added costs of sophisticated testing and training for higher skills.

I have been able to devise no theoretical framework which could be used to help policymakers determine which kinds of public programs and public objectives lend themselves to the development of new incentive for private actions. The examples given simply show that the range of possible applications is quite wide. I can offer nothing more sophisticated than the proposition that if policymakers are continually aware of the importance and potentialities of the incentive approach, applications will suggest themselves in large numbers.

C. Improvement of Federal user charge policy as a means of more efficient resource utilization.**

User charges are a special aspect of incentive policy. Most of the potential applications are not new to economists. The use of prices as a rationing device, however, often seems alien to the public policymaker.

One of the most dramatic examples is the current agitation over congestion and delays at major air terminals. It is easy to predict that limited facilities will be rationed by congestion, when the prices charged for facilities are either extremely low (as in the case of general aviation) or unrelated to the degree of congestion. I will not pursue this example in detail, except to note that in the case of air traffic, the administrative problems of levying congestion charges are far less than in the more classic case of highways (despite Professor Vickrey's ingenious suggestions for the application of congestion charges to highway). ***

There is one major area of Federal programs in which user charges might well be profitably employed to change current *political* incentives for the better.

*Further discussion of this issue is found in the paper by Mangum in vol. 3 of this collection.

**Further discussion of this issue is found in the papers by Vickrey, Krutilla, and Millman in this volume.

***Further discussion of this issue is found in the paper by Vickrey in this volume.

At the present time, a large part of Federal water resource investment is devoted to projects whose major beneficiaries are identifiable, but who pay little if any of the cost of the projects. In the case of navigation projects, there are no charges levied on the barges which use the waterway. Beneficiaries of Federal irrigation and flood control projects typically pay only a small fraction of the cost. Moreover, there is little evidence that the benefits are distributed primarily to lower income groups, and much evidence to the contrary. But the availability of substantial subsidized benefits, primarily available to the "establishment" in the affected communities, sharply increases the political pressure for the authorization of marginal projects, and for the maintenance of very liberal benefit-cost criteria (low interest rates, liberal rules for defining and evaluating benefits, and so forth). Adoption of more stringent rules on user charges would probably reduce sharply the political incentive to maintain uneconomic project evaluation criteria and to lobby for very marginal projects.¹³

We have considered, to this point, the problem of publicly instituted incentives for *private* action. The second major type of incentive problem deals with the provision of incentives for *public* decisionmakers.

2. *Incentives for public officials designed to improve the effectiveness or efficiency with which public programs are executed.*—In dealing with large scale programs, top level public executives labor under a major handicap compared to the situation facing their counterparts in large business concerns. Large complicated programs must be carried out by a hierarchy of subordinate officials. Decentralization is necessary. But given the lack of any measurable performance criteria for subordinate officials, the top level public executive is often forced to specify in detail the set of permissible and nonpermissible actions of his subordinates. This leads both to excessive rigidity and often to poorly conceived program plans, imposed uniformly from the top on a variety of differing situations.

An analysis of this problem from the standpoint of creating incentives for decentralized operators to pursue public objectives, suggests two ways of attacking this problem:

providing market competition for public programs.

imitating market conditions in public programs.

These approaches may not prove viable in many situations; but at least in selected cases they may prove very useful in improving the design and execution of public programs.

A. Introduce market competition into decisions about the production of public goods.

The fact that public programs produce public goods does not imply that they need be completely sheltered from the competition of the marketplace.

Public elementary and secondary education is a case in point. In the inner cities of the Nation the public school system is virtually a complete monopoly, with a captive market, since in practical terms the private school alternative is open to few ghetto residents. Not only is the system a monopoly, but it usually tends to be fairly well isolated from control by the community, except as that control is expressed in overall budget limitations.

Much emphasis has been placed in recent years on educational research, and Federal funds have begun to flow into this field. But there is little use in inventing new or more effective approaches to compensatory education, if there is no incentive in the various school systems to adopt the more promising changes, and to evaluate alternative educational improvements seeking the most effective. Change in established routines and procedures threatens the security of the existing order, introduces uncertainty and tensions, and is inevitably painful on those who are subject to it. Without strong incentives, therefore, a monopolistic structure is unlikely to be very receptive to innovation.

In recent years a number of proposals have been made, designed to introduce a competitive element into the system, and thereby provide incentives for higher performances. These include the radical proposals of Friedman and Jencks which would in effect completely replace the present public school system with a private competitive model financed indirectly through school support grants

¹³ I am aware, of course, that where projects have declining average costs, marginal cost pricing rules may dictate low user charges. Yet I am convinced that the resultant shortrun allocational efficiency is often far outweighed by the lack of investment signals and the political incentives for poor project selection that large project subsidies entail. See also the papers by Krutilla and Millman in this volume.

made to individual parents. A more moderate suggestion has been made by James Coleman under which school districts would contract out, on bids, for specific parts of the public school curriculum—remedial reading, science courses, etc. A similar suggestion, adapted specifically for neighborhood-controlled school boards, has been proposed by Henry Levin.

The literature on this subject is growing rapidly. And I do not intend to try to summarize it. But analysis and exploration of this approach should not be confined just to elementary and secondary education systems. Decisions about financing higher education—whether through grants and loans to individual students or through aid to institutions of higher learning—should take into account the incentive effects of the decision. And we can go beyond the field of education. There is no reason why the public health facilities for the poor need be solely run by local or State public health agencies. Cannot private institutions (profit or nonprofit) be allowed to bid for a contract to provide such services?

B. Imitate the market more fully in public programs.

This category primarily deals with changes in organizational and budgetary structure designed to provide incentives for public officials to see *efficiency* in the administration of governmental programs.

The recommendations of the President's Commission on Postal Organization are principally directed to this end.* Creation of a public corporation, with power (subject to review) to set prices and wages, with authority to borrow from the public for capital investment, and with a directive to cover costs with revenues, would, in effect, make the Post Office an analog to a private utility. While this solution represents no panacea, it is far superior to the present arrangement in which there are few incentives for efficiency, and in which the basic variables of managerial control—prices, wages, investment, location of facilities, etc.—are decided by a 535-man "board of directors" primarily on political grounds.

Other examples, of a less dramatic kind, are not hard to find:

- Federal agencies could be charged in their budgets for the full costs of all the resources they use—rent for building space, full costs of employment retirement benefits, interest on capital equipment used in internal operations, etc. At the present time some resources are free and, therefore, either overused or controlled by arbitrary central regulations.
- Charge Federal construction agencies interest on funds during the construction period. In evaluating alternative bids on construction projects, agencies now have no incentive to put any value on time. In addition, use of an interest charge might provide incentives to reduce the seasonality of construction, which in turn should help to moderate the rapid increase in hourly wage costs of construction workers.**
- Charge Federal agencies for services provided by other agencies. The major case in point is the AEC's nuclear weapons production, which is now transferred to the Defense Department at a zero transfer price. While nuclear weapons costs are given shadow prices in the Defense Department's systems analysis, an actual charge to the DOD budget should strengthen the motivation to consider all costs fully in making decisions. Moreover, by providing the DOD with the funds for nuclear weapons and having them contract for production with the AEC, decision-making power would be transferred from the producer to the consumer, avoiding the natural tendency of producer-controlled decisions to result in excessive output.

The suggestions made earlier, to charge the Defense budget for subsidy programs primarily justified on national security grounds, is an extension of the "full cost" principle enunciated above. Principal examples are the merchant marine subsidy, and the commodity stockpiling program. An even more radical extension would be to charge the Defense budget for the economic costs of those "protectionist" programs which are justified in national security grounds, but do not show up as budgetary expenditures. Examples would be oil import quotas and some part of the oil depletion allowance. The likelihood of being able to make these changes, of course, is so low that the suggestion should be treated as an interesting application of the basic principle rather than a serious proposal.

C. The problem of additivity and substitutability in Federal grant-in-aid and transfer-in-kind programs.

*Further discussion of this issue is found in the paper by Haldi in vol. 3 of this collection.

**I owe this suggestion to Professor David Martin, Indiana University.

A very particular kind of incentive problem arises in the case of Federal grant-in-aid programs, which constitute a very large part of recent Federal social legislation. Presumably the purpose of the grant is to increase the resources devoted to a particular objective. (If the purpose of the program were to ease State and local overall financial burdens, revenue sharing or some form of tax credit would be much more appropriate.) But, as a matter of fact, little attention is paid to the problem of whether Federal grant funds, designed to achieve a particular purpose, add to the resources currently being spent for that purpose by State and local governments or simply substitute for funds that otherwise would have been spent by those governments.

Various "maintenance of effort" provisions have been written into Federal grant programs, but we know little about their effectiveness. In some cases, there may be other approaches to maximizing "additivity." Title I of the Elementary and Secondary Education Act, for example, provides funds to *school districts* to be used for increasing the resources devoted to the education of poor children. But the larger and more diverse the income levels in the school district, the more difficult it is to determine the extent to which Federal funds have actually increased resources devoted to the purposes of the program. Allocation of Federal funds to units smaller than the school district (neighborhood areas, individual high school with their associated junior and elementary schools, etc.) might help to increase the additivity of Federal funds.

But my point is not so much to describe "solutions" as to point to a major problem. To the extent that the Federal grant-in-aid system continues to be the major tool of social legislation, we need to do substantial research on the factors which determine additivity and to experiment with various devices to maximize additivity.

A similar problem arises in the case of Federal transfers-in-kind to individuals and institutions. To what extent does the transfer-in-kind increase the consumption of the particular good by the recipient, or merely substitute for funds which otherwise would have been spent on that good, thereby freeing up income for other consumption. More accurately expressed, we need to know the extent to which transfer-in-kind change recipient's consumption patterns from what they would have been if the same resources had been transferred through a cash grant.

Evidence seems to suggest that low income housing subsidies and food stamps do increase recipients' consumption of the goods in question beyond what they would have been under cash grants.¹⁴ But there are other cases which are distinctly questionable. The Federal Government's college housing program is a case in point. Under this program about \$300 million in loans, at 3-percent interest, are made to public and private universities for the construction of college housing. For public universities, who have access to tax-exempt bond financing, the value of the interest subsidy is relatively modest, amounting to about \$6 to \$7 per month for each student housing in the newly constructed facility. Some 45 to 50 percent of the students at publicly supported universities come from families with income of \$10,000 or more. Of those who board on campus, the proportion from upper income families is probably higher yet. At these income levels, it is hard to believe that a subsidy of \$60 to \$70 per year has any significant effect on the quantity or quality of education demanded, although it might have some small impact on the number of those who choose to board rather than commute. In the case of public universities, therefore, the transfer-in-kind probably has little effect in raising the consumption of the particular good, and is, in effect a disguised *cash* subsidy heavily favoring upper income groups.

More generally, Federal grant-in-aid and transfer-in-kind programs need to be reviewed in terms of the additivity question, and techniques devised to maximize incentives for grant recipients to use the funds for the purpose intended.

III. CONCEPTUAL AND POLITICAL PROBLEMS

The first two sections of this paper concerned themselves with describing and classifying the problem of incentives, first, in terms of the various stages of policy-making and second, in terms of the various types of incentive problems. We know turn our attention to several major problems of concept and political feasibility associated with the use of incentives in public programs.

¹⁴ In the case of food stamps, additivity arises from the fact that recipients are required to purchase the stamps at an aggregate cost which equals what they had previously been spending on food. Barring a black market on stamps, this should guarantee additivity.

1. *The definition and measurement of output.*—There is a major danger associated with the introduction of incentive systems into public programs. In the case of a private good, its various characteristics can be evaluated by the market and reflected in a single measure—*price*. Although buyers are not always perfectly rational, and sometimes lack all the relevant information, in most instances market prices are a reasonably good measure, at the margin, of the value of private output. There is usually no such single measure which commensurates all of the various aspects of the output of a public program—indeed that is why it is a public rather than a private output. The measurement of the output of public programs, therefore, is usually extremely complex. Yet, in devising incentive programs, we must know what is the set of outcomes that we wish to induce. If we are not careful, we may end up producing large unwanted side effects. This was the basic problem of early socialist production systems. The manager of a nail factory, whose quota was set in terms of the *number* of nails, and who was rewarded as he made or exceeded his quota, was inevitably driven to producing large numbers of small nails, regardless of market requirements. With production quotas specified as a certain *weight* of nails, the same manager would necessarily concentrate on producing a smaller number of very heavy nails—again, regardless of market demand.

More to the point, examine the problems of measuring output and defining objectives in a few of the incentive systems used as illustrations earlier in this paper. One suggestion was the establishment of incentive reimbursement schemes for Medicare and Medicaid, designed to induce more efficient design and operation of hospitals. Reimbursement on the basis of regional average cost was suggested, with low cost hospitals retaining some part of their “savings” and high cost hospitals being forced to absorb some fraction of excess costs. The discussion pointed out, however, that we are interested in reducing costs *per unit of output*, not in reducing costs through a sharp deterioration in quality of service rendered. Consequently, any incentive reimbursement scheme must be accompanied by some measure of and control over the quality of output produced. I suggested a possible approach: *first*, research directed toward establishing a usable classification of hospital “outputs”, and *second*, the use of peer review panels which would rate hospitals on the basis of these classifications, with the rating results incorporated in the reimbursement formula.

Another example is the use of incentive contracts in Federal manpower training programs. Without a careful specification of the multiple objectives sought by the program, an incentive contract might well result in producing one kind of output (e.g. retaining trainees for long periods) at the expense of other aspects of output (e.g. training in a useful skill). A mandatory flood insurance program in which premiums were not reasonably adjusted to risk might increase rather than reduce uneconomic investment in the flood plain. A system of effluent charges on water pollutants, not devised to reflect a reasonable approximation of the costs of pollution, would result in either too much or too little effort being devoted to removing pollution and too much or too little industrial relocation. Introducing competition into the public school system (e.g. by allowing specific types of services to be contracted out to private bidders) may produce little of value unless there is some means of evaluating the various bids and some method of measuring performance.

In short, the use of incentive systems puts a premium on the careful specification of objectives and output. This is both an advantage and a disadvantage. An advantage because it forces program designers to be more specific in their statement of objectives and in the relative weights they attach to various aspects of output.¹⁵ A disadvantage, because we often are literally unable, given the present state of knowledge, to specify objectives and assign weights to various aspects of performance with sufficient confidence to warrant the introduction of incentive systems.

What all of this suggests, is that the introduction of incentives into public programs calls for two things: *first*, extensive experimental projects, testing various alternative incentive schemes and *second*, substantially increased research in the area of specifying and measuring output.

¹⁵ The introduction of incentive contracting into DOD and NASA had the side advantage of forcing decisionmakers to make explicit judgments about tradeoffs among various aspects of contractor performance—promptness of delivery, operating characteristics, costs, etc.

2. *Incentives to institutions and incentives to individuals.*—Many of the examples suggested in this paper, particularly those related to the provision of incentives for public action, take the form of incentives to institutions: the inclusion of all relevant costs in agency budgets so they do not have access to "free" resources; incentive reimbursement for hospitals; reorganization of the Post Office et cetera. But if decisionmakers in these institutions are not themselves judged and "rewarded" on the basis of criteria which are consistent with the incentives provided the institution, then little good will come of incentives to institutions: the inclusion of all relevant costs in budget of an agency or an installation, is to present the decisionmaker with the full costs of his decision. If he is interested in minimizing costs, he will presumably seek the lowest cost resource mix. But if he has no interest in cost minimization, then we should expect no results from the full cost approach.

It has been suggested that incentive reimbursement for most hospitals will accomplish little. Most hospitals are really run by the staff physicians, who are reputed to have little concern for the financial condition of the hospital itself.²⁶ To the extent this is true, then incentive reimbursement will not be very effective in lowering costs. Introducing competition into the public school system may change performance very little if the individual decisionmakers who let the contracts and evaluate performance themselves have no incentives to seek significant changes and improvements in the school system.

In one sense, these considerations suggest the obvious: that incentives for more effective and efficient performance of public programs cannot be considered apart from the structure of motivations, rewards, and penalties which determine the attitudes and actions of the bureaucracy. To the extent that public employees are themselves judged and "rewarded" by criteria which relate to the effectiveness and efficiency rather than to the mere size of the programs under their control, individual and institutional incentives can be made consistent.

3. *Political problems in regional budgeting.*—In an earlier section of this paper, I pointed out that purely functional planning and budgeting by the Federal Government provides little or no scope for the consideration of tradeoffs among alternative Federal investments or projects at the local level. I then suggested that some form of regional budgeting, as an adjunct to functional budgeting, might serve this purpose, providing a framework within which bargaining about meaningful choices might take place.

As soon as one begins to consider specific means of carrying out this proposal, one major problem emerges. A complete regionalization of the budget allocation process would surely lead to major power struggles among the various States, regions, and cities over the division of the budgetary pie. The current struggle over functional budgetary shares is widely diffused among a constantly changing set of alliances and factions. No Congressman or Senator need have his entire constituency at stake in any one functional budget decision. The divisiveness of the conflict is muted because of its complexity. But with purely regional budgets, the struggle would be etched in sharp outline, and the regional allocation of a given budget total would be a zero sum game to the participants.

To derive some of the advantages from regional budgets, however, it is not necessary to construct the "pure" model whose consequences were sketched above. There are a number of ways in which a partially regional approach might be grafted onto the existing process:

A. There are in existence, at the present time five federally sponsored regional development commissions. The commissions are composed of the Governors of the affected States and a Federal representative. Except for the Appalachian Regional Commission, the commissions are still in relatively embryonic form. Rather than become vehicles to lobby for "special" Federal authorizations and appropriations, the commissions might be organized to participate in the budgetary planning and allocation of those Federal projects which have special relevance for the economic development of the region: water resource projects, highways, economic development assistance, pollution control facilities, and so

²⁶ Personally, I do not put much store by this argument. Under incentive reimbursement schemes continually inefficient hospitals will eventually be squeezed out of existence. And to say that those who make hospital decisions are not overly concerned about the financial condition of the hospital does not square with the vigorous efforts of the American Hospital Association to obtain more favorable reimbursement formulas from Medicare and Medicaid.

forth. The commissions could draw up several investment budgets—representing alternative overall constraint levels. These recommendations could then be used as guides in the formulation of the relevant nationwide functional budgets.

B. Functional budgets could be formulated, proposed to the Congress, and appropriated as is now done. In turn, for a selected number of investment and project-type programs¹⁷ the relevant agencies could make allocations to major cities, or metropolitan areas.¹⁸ Those functional allocations could be combined into consolidated budgets for each such area. In turn, the mayor (or a council of chief executives in a metropolitan area) could be given authority to reallocate funds, within prescribed limits, among the functional components. Constraints of various kinds could be imposed—for example, certain minimum sums for particular functions. Depending upon the nature of the project involved, the reallocation might be subject to joint approval by the local chief executive and the governor. Individual projects or grants would still have to be approved in terms of the relevant statutory and administrative requirements.

Several facets of this last suggestion deserve mention. First, it would substantially mute the regional battle over "shares", since the determination of those shares would depend on a complex set of functional decisions, and a host of separate regional allocations. Second, it would retain in Federal hands the authority to approve individual grants as a means of carrying out national objectives in a local context (for example, Model City grants would still be subject to the requirement of neighborhood participation in decisionmaking, hospital grants would be subject to minimum standards and planning requirements, et cetera). Yet, at the same time, it would transfer to State and local hands some additional authority over budget allocation—that is, authority to determine marginal trade-offs: The *composition* of the local budget would be less completely dictated by Federal budgetary decisions than is now the case. Finally, it would tend to transfer power from local department bureaucracies to State and local chief executives. Under today's purely functional budgeting, bureaucracy deals with bureaucracy—the Federal Public Health Service with its State counterpart, the Office of Education with State departments of education, and so forth. These relationships, coupled with the rapid growth of categorical Federal grant-in-aid programs, have tended to take a large part of the power over budget allocation out of the hands of State and local chief executives. Introducing some elements of regional budgeting into the Federal structure might help to strengthen the central authority and planning capability of State and local chief executive while retaining in Federal hands sufficient control over the use of funds to accomplish basic national goals expressed in functional terms. One final point on this matter. Any move toward "regionalizing" parts of the Federal budget will surely be vigorously resisted by many Members of Congress. Regionalization transfers some of the power over budget allocation from congressional subcommittees to Governors and mayors. Decentralization of power from the executive branch to State and local governments is one thing—presumably a good highly to be desired. Decentralization of congressional de facto powers is quite another matter.

I cannot pretend to have thought through the full consequences of budget regionalization. I am sure that as any particular proposal is worked out in detail, important difficulties and problems will be uncovered. But I believe that the basic concept of budget regionalization warrants further exploration, as a means of changing political incentives and motivations in the direction of making better allocation decisions at the local level among alternative Federal investment programs.

(The following comments on Mr. Schultze's article were subsequently supplied by Mr. Mayo:)

FLOOD PLAIN PROTECTION INCENTIVES

Mr. Schultze urges the restructuring of public policy objectives and the creation of a set of incentives to private investors for rational investment policy in flood plain lands. We recognize the compelling need for wiser and more economic use of the flood plain.

¹⁷ I.e., "project" as apposed to "formula" grants.

¹⁸ Agencies, in effect, make such allocations now, as they approve individual projects or grants. Under the proposed scheme they would have to "budget" for such allocations in advance.

As a first step in meeting this need, a flood insurance program currently is being implemented under the provisions of the National Flood Insurance Act of 1968. The aim of the flood insurance program is to make flood insurance available at reasonable premiums, including those below the full-risk premium rate, to those persons already occupying the flood plain. A companion aim is to discourage new development, or substantial improvements to existing structures, in flood plain areas by making insurance available only at the full rate. The Flood Insurance Act requires that, after December 31, 1971, no flood insurance under the act shall be provided in any area which has not adopted adequate land use and control measures that the Secretary of Housing and Urban Development considers consistent with comprehensive criteria for land management and use. These measures are those which will:

1. Where appropriate, constrict the development of land that is exposed to flood damage;
2. Guide the development of proposed construction away from locations that are threatened by flood hazards;
3. Assist in reducing damage caused by floods; and
4. Otherwise improve the long-range land management and use of flood-prone areas.

Prior to December 31, 1971, the Secretary is authorized to make flood insurance available providing he is given satisfactory assurances that by that date, land management measures will have been adopted that meet the above criteria.

In areas in which flood insurance sold under this program has been in effect for at least one year, a property owner who is eligible for insurance is not eligible for Federal disaster relief to the extent that he could have insured himself. Exceptions are made only for low-income property owners. Even before an area is eligible for flood insurance, structures erected in the area after it has been identified as a flood plain area having special flood hazards will be insurable only at the full-risk premium rate.

In addition to the new insurance program, the Water Resources Council currently is reviewing plans for a unified national program of flood plain management, including proposals for the allocation of costs among beneficiaries of flood protection.

ECONOMIC INCENTIVES FOR WATER POLLUTION CONTROL

Mr. Schultze advocates the use of effluent charges as an incentive for industry and municipalities to reduce pollution. Effluent charges would consist of charges on the amount of pollution discharged into waterbodies, e.g., 10¢ per pound of oxygen-demanding organic wastes. The charges would act not only as an incentive for pollution abatement, but would approach an economic solution, since firms with low-marginal abatement costs would abate wastes at high levels while firms with high-marginal abatement costs would abate at lower levels. In the aggregate, quality goals could be met with less private cost than under current policy.

Although effluent charges are appealing on efficiency grounds, there are a number of institutional, technical, and attitudinal barriers to their adoption. Such charges require sophisticated modeling and analysis in establishing charges, and extensive monitoring to determine the charges. In many cases, the costs of administration may be greater than the gains in efficiency of control. There are currently few institutions with adequate powers and responsibility to administer them. Finally, they have been opposed by industry as an oppressive tax and by conservationists as a license to pollute.

Another form of economic incentive has been proposed by Professor J. H. Dales of the University of Toronto. He recommends allocating the assimilative capacity of streams through the sale of discharge rights. After an original auction, the discharge rights could be bought and sold in the private market. In theory, firms with high marginal abatement costs would be willing to buy a greater share of discharge rights than those with lower-marginal abatement costs, thereby approaching an economic solution. This proposal would have some of the advantages of effluent charges, but again there are a number of practical problems that would make implementation difficult.

Despite the problems, we believe it would be highly desirable for these two proposals, and others, to be demonstrated and evaluated. The control of water pollution is costly and complex; new approaches should be encouraged to meet our water quality objectives more efficiently and effectively.

HOSPITAL INCENTIVE REIMBURSEMENT FORMULAE

Mr. Schultze is correct that our present reimbursement arrangements for hospitals remove incentives to efficiency since the hospital can pass on its added costs to the Government and efforts to achieve lower costs do not benefit the hospital. Proposed remedies to this situation have ranged from price controls (such as the New York City provision that it will pay no more than a specified percentage over the prior year average costs) to regulatory or planning arrangements under which no hospitals can be constructed or expanded without either an approval by a State regulatory body (as in New York) or review by a State and/or areawide planning body as is provided in the Administration's proposed Hill-Burton legislation. Experimentation with new approaches to reimbursing hospitals to provide incentives to efficiency were authorized by the 1967 Social Security Amendments and are being pursued by the Department of Health, Education, and Welfare under the Medicare, Medicaid, and Child Health programs.

The incentive reimbursement experiments have significant potential for correcting the problems cited in the Schultze testimony. However, some problems have arisen which we feel require legislative correction. The number of proposals emanating from the hospital community for experimentation have been far below expectations. This is due in large part to a satisfaction on the part of the hospital with the present reimbursement arrangement, and a feeling that the hospital really has nothing to benefit immediately or directly from participation in experiments. Therefore, the Administration has proposed in its "Health Cost Effectiveness Amendments of 1969" that the Secretary of HEW be empowered to require the participation of all hospitals and other providers in a given geographic area unless a substantial proportion of the providers would be significantly hurt by the experiment. In addition, the proposed broader authority would also allow inclusion of services within the experiment that are not currently covered under the Medicare, Medicaid, or Child Health programs.

MARITIME INCENTIVES

Mr. Schultze suggests that the existing Maritime Subsidy Program serves as an incentive against greater efficiency in the maritime industry.

On October 23, 1969, President Nixon transmitted a message to the Congress which outlined his program for the maritime industry. The new program will offer the following incentives for the industry:

1. A 300-ship construction program over the next 10 years which will encourage more efficient shipbuilding practices through block procurements of ships of standardized design.
2. The rate of government subsidy will be reduced from 55% of total cost to 45% in 1971, and 2% a year each year thereafter until it reaches 35%. If the shipyards cannot meet this challenge, the program will be revised.
3. Ships operating subsidies will be restricted to differentials in wage and insurance costs and will be tied to an industrial wage index that would provide incentive for cost reductions.
4. Tax-free reserve funds would be utilized by all operators having well-defined replacement programs.
5. Maritime R&D programs will be expanded and place greater emphasis upon joint government/industry funding of research projects.
6. Extension of direct subsidies to all carriers will permit the phasing out of premium rates under cargo preference and the construction of new modern bulk carriers.

The construction of new more productive ships at lower costs because of more efficient shipbuilding practices should do much to improve the competitive position of the United States Merchant Marine.

EDUCATION INCENTIVES

A. DIRECT AID TO HIGHER EDUCATION STUDENTS

Mr. Schultze suggests that assistance given to students will provide a more effective incentive for improved performance on the part of institutions of higher education than direct institutional aid.

This proposal is being given serious consideration at this time.

B. HEAD START VOUCHERS

Mr. Schultze favors providing funds directly to parents and letting them choose the Head Start or other educational program that they wish. OEO plans to experiment in FY 1971 with various Day Care programs and their content, as well as with a voucher system.

PERFORMANCE MEASURES IN THE SMALL BUSINESS LOAN PROGRAM

In his statement, Mr. Schultze points out that in the absence of appropriate measures for judging the performance of Small Business Administration regional loan offices in terms of overall program objectives, criteria based on default rates have evolved which results in actions that are actually in conflict with program objectives.

We agree, in general, with the points raised; the Bureau of the Budget has, for some time, been working with SBA toward developing better measures of performance.

DOD "FREE" RESOURCES ACCOUNTABILITY

A. MILITARY PERSONNEL EXPENSES

The practice described by Mr. Schultze of providing "free" resources to the military installation commander was followed by the military departments prior to the military introduction in FY 1969 of a new system for management of operating resources. This system, called Project Prime, provides for issuing to the services operating budgets that include military personnel expenses along with civilian personnel and other operation and maintenance expenses. The services then issue these budgets to the major commanders who, in turn, issue them to the installation commanders. Thus, the budget received by the installation commander does include practically all of the resources that he will consume. The number of so called "free" resources, referred to by Mr. Schultze, has therefore been significantly reduced.

It should be noted, however, that Congress—especially the appropriation committees—has been very skeptical about implementing this program. The committees have advised Defense to move in a "slow and deliberate" manner, stating that "perfecting action should take precedence over expansion of the program."

B. FUNDING OF NUCLEAR WEAPONS

The question raised by Mr. Schultze about whether the Department of Defense or the Atomic Energy Commission should budget for nuclear weapons has been examined periodically by the Bureau of the Budget since the late 1950's. For a variety of substantive, legal, and procedural reasons, no action has been taken to change the present practice of having Atomic Energy Commission budget for the program.

The costs of nuclear weapons are set forth, in general, in the annual budget document, and the details are well known to the Budget Bureau, the Department of Defense, and the appropriate Committees of the Congress. Nonetheless, the issue of whether the Department of Defense might take a somewhat different view of its needs for nuclear weapons if they were included in the Department's budget is a valid one which deserves periodic examination.

Because of budget time constraints and the complexities of the issue, no study or action on this matter can be undertaken until after completion of the 1971 budget; however, this matter will be reviewed again in detail after the budget is presented to Congress.

(The questions which were sent to Mr. Schultze by Chairman Proxmire following Mr. Schultze's appearance as a witness at the hearing of October 6, 1969, and the responses received follow:)

Question 1. Are you familiar with P.L. 84-801? This is the law which requires Executive agencies to submit 5-year budget projections on all programs involving \$1 million or more in annual expenditures. In your judgment, have the requirements of this law been fulfilled by the Executive Branch? Do you feel that this information would be helpful to us in the Congress? Shouldn't these projections appear in the budget document published annually by the Executive?

Answer. With respect to P.L. 84-801, and more generally with respect to estimates of future budgetary costs, there are two types of projections possible. The *first* is a long-term projection of budgetary costs (in total, or for a particular program) which only takes into account the "built-in" consequences of *current* decisions. Such a project does not attempt to forecast future program changes, except as they are the necessary consequence of prior or currently proposed actions. The *second* type of projection represents a full long-term plan for the use of budgetary resources, including a tentative estimate of future program decisions. For example, the *first* type of projection would include the estimated costs over the next five years of the recently proposed Family Assistance Plan, including its estimated impact on Medicaid costs. Conceivably the Administration might also tentatively hope to propose increased benefit levels in later years as part of the use of any "fiscal and peace" dividend which subsequently became available. But since this would incorporate expenditures under decision not yet made, and not yet proposed to the Congress, the costs of such increases would not be included in the *first* type of projection but would be included in the *second*.

It is my view that the *first* type of projection—excluding the cost of possible future decisions—should be made available to the Congress in response to the requirement of P.L. 84-801 with respect to particular legislative proposals. In addition, I believe it would be useful to the Congress if the Administration periodically published an overall five-year projection of "built-in" expenditure increases, classified by major program areas. I do not believe, however, that the public interest would be served by attempting to put the stamp of Administration approval on some official projection of the second type, incorporating tentative plans for the use of future budgetary resources which involve decisions neither the Administration nor the Congress need yet take.

Your question also asks whether the Executive Branch generally fulfills the requirements of P.L. 84-801. It is my recollection that, as a general proposition, whenever the Congressional Committee considering a particular Administration-sponsored bill requested projections of future costs under P.L. 84-801, they were furnished. In many cases, of course, the relevant Committees did not request such information. On several occasions in the past, various Committees or individual members of Congress requested projections of the second type, incorporating the forecasts of how a particular federal agency would like to use additional budgetary funds, should they subsequently become available. Because of the nature of these forecasts, the Administration at the time was quite reluctant to make them available, since they incorporated the cost of future proposals on which no decision had yet been made or needed to be made.

Question 2. I find your discussion of the role of incentives to be most convincing. However, I am bothered by the problem of how to build proper incentives into public programs on a comprehensive basis. Do you have any suggestions concerning how we should proceed? A major comprehensive study of incentives and beneficiary charges by the Joint Economic Committee? A Presidential study commission funded by the Congress? A Congressional resolution requesting a Budget Bureau or Council of Economic Advisers study?

Answer. Getting proper incentives built into public programs primarily requires that both Administration officials and Congressional Committees charged with responsibility for various program areas explicitly take into account the problem of incentives in designing and reviewing programs. Achieving this goal, however, will not be an easy matter. Several suggestions come to mind:

First: A series of Hearings by the Joint Economic Committee on the subject of incentives in public programs (accompanied, perhaps, by a Compendium of papers.)

Second: Either the Government Operations Committee or the Appropriations Committees could hold hearings on the specific subject of the impact of budgetary accounting on incentives for efficient use of resources in federal programs (e.g., should federal agencies rent space from GSA; should the Defense Department pay AEC for the nuclear warheads which AEC produces, etc.).

Question 3. Your suggestion concerning the inclusion of program costs in the appropriate budget makes a good deal of sense to me. Wouldn't your point concerning the placement of expenditures in the wrong budget apply with equal force to "tax expenditures?" Do you feel that the functional breakdown of "tax expenditures" should be shown in the budget document? Shouldn't they be allocated to the budget of the department most closely related to the purpose of the tax expenditure, e.g., oil depletion tax expenditure placed in the Department of the Interior budget? Wouldn't the development of a full program budget go toward eliminating the problem to which you refer?

Answer. I believe that estimates of "tax expenditures" should be calculated and made available, along the general lines of the estimates presented by former Treasury Secretary Barr early this year. I do not believe these data should be combined with regular expenditure data in the normal budget presentation. However, such combinations, assigning various types of "tax expenditures" to the appropriate departments and program categories, could be published as a separate "special analysis." Whether this should be included as one of the regular special analyses published along with the annual budget or should be published separately by the Treasury Department is less important than that this information be published somewhere.

Question 4. Earlier during this set of hearings, another witness questioned the wisdom of the policy which gives the Corps of Engineers an instrumental role in public works projects. Would you give us the benefit of your views on the efficiency of that organization and whether it would be better policy for a civilian agency to be responsible for public works projects?

Answer. There are two aspects to the question of efficiency in Corps of Engineers public works projects. *First*, are projects, once approved, constructed and operated effectively and efficiently? I have no reason to question the ability of the Corps of Engineers, relative to other construction agencies, to carry out such work in an efficient manner. *Second*, is the selection and design of projects optimal from the viewpoint of economic efficiency and income distribution effects? Optimal project design and selection depend upon the quality of the underlying river basin framework studies, the project evaluation criteria used, and the good judgment of those applying the criteria to particular projects. I see no reason, except historical accident and the subsequent build-up of political interest in the status quo, why the economic and political functions of analysis and project selection in the water resource area should be fragmented among three major agencies of the federal government, or why one of those agencies should be a branch of the military services.

One suggestion which has often been made is to consolidate the analysis and project selection functions of all three agencies in the Department of Interior but to leave with the Corps of Engineers the first function, i.e., supervising the actual construction of projects once they have been selected and funded. The Corps' involvement in civilian construction projects, as a means of maintaining its proficiency during peacetime, would be preserved. But the economic and political aspects of water resource programs would be transferred, as they should be, to a civilian agency.

Question 5. You are the third witness to testify before this Subcommittee who has recommended direct and open subsidies to intended beneficiaries rather than elaborately and often inefficiently administered government programs. In your judgment, is the administration moving closer or further away from this goal? Is it not true that the recent reduction of the role of the Office of Economic Opportunity from a substantive funding agency to a promoter of pilot programs reflects the difficulties that public agencies get into when they try to work directly with intended beneficiaries?

Answer. I do not think it is possible to give a general answer to the question of whether or not the current Administration is moving toward making subsidies more direct and open, rather than having them hidden in various ways. One major example of such subsidies is the tax exemption of interest on state and local bonds. The House-passed tax reform bill would make a major step in

converting such indirect (and very expensive) subsidies to open (and more efficient) subsidies by giving states and localities the option to issue taxable bonds accompanied by an explicit federal interest subsidy. The Administration has opposed this part of the House measure, but has indicated that it would later propose an alternative solution. Until that proposal is forthcoming, it is impossible to judge the extent to which the Administration, in this area, is committed to open versus hidden subsidies. I am not aware of other areas in which proposals have been made to change indirect into direct subsidies, although some may have been made which have escaped my notice.

You also ask whether the recent change in the role of OEO reflects the difficulties facing public agencies when they try to work directly with intended beneficiaries. I do not believe that this was the primary problem to which the changes in OEO's structure were addressed. In the first place, many of the direct operating functions of OEO will be or have been transferred to other agencies, who will continue to operate essentially the same programs—e.g., Head Start. In the second place OEO and its successor agencies usually have not dealt directly with intended beneficiaries but with "sponsoring organizations," such as local community action agencies, state or local employment services, etc.

(Answers submitted by Milton Friedman to supplementary questions submitted by Senator Proxmire, after appearance of Mr. Friedman as a witness on October 6, 1969:)

Question 1. You did not mention the SST and the space program in your testimony. How would you apply your 8 guidelines of governmental activity to these programs? Can they be justified through economic analysis? If not, how could we justify the enormous expenditures?

Answer. I have not myself made any detailed study of either the SST or the space program. On the basis of the information about them that I have, I find it hard to justify the governmental expenditures on them.

With respect to the SST, private market incentives seem ample. If the SST cannot be justified by a sufficient demand from airlines to pay the costs of developing and building them, I do not myself see any external benefits to the community at large that justify subsidizing development or construction. On my understanding, this would seem a clear case for applying guideline 2: when in doubt, stay out.

If the judgment of the public or of Congress is different from mine, then guideline 3 would be relevant: provide finance but do not administer. One way to do so would be to offer a substantial prize of a specified sum for each of the first n successful super-sonic transport planes constructed by U.S. companies. This method would avoid the present detailed supervision by governmental agencies of the plans for the SST, the costly process of governmental decision on a single plan, the vested interests that get established between particular suppliers and particular governmental agencies. It would also permit and foster competition among companies rather than, as now, fostering concentration of production in a single company.

I do not mean to offer this proposal as a finished, thoroughly researched proposal but only as illustrating the direction in which my guidelines would recommend going.

On space, there may be military purposes served by our space expenditures. To this extent, they seem to me justified. I have never myself seen any justification for governmental expenditures beyond this amount. Universities, foundations, and other private interests seem to me the appropriate groups to finance and promote space exploration.

Question 2. I am not altogether clear on your analysis of the Post Office. Would you abolish the present system and substitute it with a private corporation, as has been proposed, or do you favor continuing the present system by encouraging competition?

Answer. My brief answer is that I would continue the present system but remove the present legal barriers to competition.

As I understand the proposal that has been made, it involves substituting a quasi-governmental corporation for the present Post Office department. The new corporation would continue to be a monopoly but it would be more nearly independent of the Executive and of Congress than the present department.

This proposal may be an improvement over the present system but still retains, in my opinion, the worst feature of the present system—its legalized monopoly power.

The alternative I favor is far simpler, yet I believe would be far more effective. Let Congress simply repeal the present provision of the law which makes it illegal for private individuals to carry and deliver mail unless it also carries full government postage. This would open the postal business to the winds of competition and, in a very brief time, I predict, would produce a major improvement in the quality of service and a reduction in cost.

If the governmental Post Office is, as some of its proponents claim, moer efficient than private arrangements, it would survive despite the competition. If not, it would decline.

I enclose two *Newsweek* columns that deal with this matter at slightly greater length.

(Columns follow:)

MILTON FREIDMAN ON THE POST OFFICE

Complaints on postal service sent to the Postmaster General are directed to the wrong address—that is like berating a dog for barking instead of purring. The Post Office is both a monopoly and a government bureau—so it should occasion no surprise that it is costly, inefficient and backward.

Even Postmaster General O'Brien has recognized this fact. He has proposed that the Post Office be converted into a nonprofit government corporation. But that would change only the form not the substance. As a monopoly, it would still be costly; as a government organization, it would still be inefficient and backward.

There is a simpler, more modest yet more effective solution. Let Congress simply repeal provisions of the present law which prohibit private persons from competing with the U.S. Post Office (presently, private persons may provide mail service, but only if the letters also carry U.S. stamps).

WHY MONOPOLY?

The tyranny of the status quo leads most of us to take it for granted that the postal service must be a government monopoly. The facts are very different. There have been many private ventures—including the storied Pony Express, which failed when the telegraph line (also private) reached California and provided an even faster service. Many others succeeded—which was precisely what led postal officials to foster, over many decades, a succession of Congressional enactments to outlaw private mail delivery.

It will be objected that private firms would skim the cream by concentrating on first-class mail and especially local urban delivery—on which the Post Office makes a substantial profit—while leaving to the Post Office the mail on which it loses money.

But this is an argument for, not against, competition. Users of firstclass mail are now being overcharged (taxed is the word we use in other contexts) to subsidize the distributions of newspapers; periodicals and junk mail. Similarly, local delivery subsidizes mail for remote areas.

If we want to subsidize the distribution of such material, we should do so openly and directly—by giving the originators of such mail a subsidy and letting them buy the services of distributing it as best they can. And we should finance the subsidy in accordance with the general canons of taxation, not by a special levy on the users of first-class mail.

Nonetheless, the argument is politically powerful. It explains why many a newspaper and periodical—even some staunch defenders of free markets in other connections—will defend the Post Office's monopoly. They will defend it because they favor subsidizing dissemination of information and educational matter—but doubt that they can persuade the public to do so directly and openly. They will be overimpressed by the importance of the subsidy to their pockets—because they will not allow fully for the improvements that competition would bring. It would be expensive for them to pay the full cost of the present inefficient delivery service—but the cost will be cut sharply by the more efficient service that would spring up.

In any event, I see no reason myself why readers of newspapers and periodicals, and distributors of junk mail, should not bear the full cost of distribution, whatever it may turn out to be—and I, for one, hope that it does not turn out to be so low as to encourage still more junk mail.

WHY NOT COMPETITION?

One obstacle to introducing competition is a lack of imagination. Our minds are not fertile enough to envisage the miracles that unfettered enterprise can accomplish, in mail service as in other areas—rapid delivery within a city by pneumatic tubes and between cities by facsimile wire, much more extensive use of traveling post offices instead of monuments to the political pull of the Postmaster General and the local congressman, and so on *ad infinitum*.

A more important obstacle to introducing competition is the nature of the political process. Competition would benefit the general public. But the general public has no effective lobby. It would benefit men and women who would find new business and employment opportunities. But few of them have any idea that they would be benefited, so they have no effective lobby. Competition might harm postal employees and big users of subsidized mail. As concentrated special-interest groups, they are well organized and do have an effective lobby. Their special interest, not the general interest, is therefore likely to shape the course of postal legislation. An oft-told tale.

MILTON FRIEDMAN ON THE PUBLIC BE DAMNED

A Presidential commission has just made official what you and I have long known from experience. The Post Office "each year . . . slips further behind the rest of the economy in service, in efficiency and in meeting its responsibilities as an employer."

The commission recommended that the Post Office be converted from a government department to a nonprofit government corporation. That might improve matters some, but since the Post Office would still be a monopoly and a government organization, it would remain high-priced and inefficient. A far better solution is one I suggested many months ago (*Newsweek*, Oct. 9, 1967)—simply repeal the present provision making it illegal for private enterprise to provide mail service. Competition would quickly set modern technology to work in the transmission of mail, and simultaneously lower the cost to the consumer. The government system would have to shape up or ship out.

PRESSURE GROUPS VS. . . .

But neither the one proposal nor the other will be adopted. The facts of political life that make this prediction a near-certainty were brought home to me when I was writing my earlier column on the Post Office. Why not, I thought, use it to persuade a congressman to introduce a bill to repeal the present prohibition on private delivery of mail? That would have started desirable legislation on its way, made the column more topical, and given the Congressional sponsor some publicity. So I spoke to a number of friends in Congress.

All were favorable to the substance of the bill, yet none was willing to introduce it. As one congressman said to me, "Can you suggest any unions we might conceivably persuade to testify in favor of it?" I could not do so.

Strong pressure groups will oppose changing present arrangements: the postal unions that have become experts in lobbying before Congress; the users of third- and fourth-class mail, who fear that the subsidy they now enjoy would be threatened if Congress no longer finances postal deficits.

No strong pressure groups will favor the proposed changes—which serve only the widespread general interest of the public. If the proposed changes were made—if, for example, private competition were permitted—pressure groups would emerge. Enterprises that succeeded in the new business and their employees and customers would become such groups. But these are only potential, not actual.

A congressman, has limited time and influence. It is wise for him to husband that time and influence to promote measures that have some chance of being adopted, or, at least, of bringing him some political support. What can he gain by the purely quixotic gesture of sponsoring a bill to introduce competition into the postal service? Only the active hostility of present special interests. True, many more persons would be benefited than would be harmed and the aggregate benefit would greatly exceed any transitional harm. *But*, and it is a big but, the few persons who believe that they would be harmed will be aware of that fact, and each will expect significant harm, so it will pay them to fight the bill. Most persons who would benefit will not be aware of that fact. Even if they were, the

benefit to most would be small. Hence, they are unlikely to devote much effort to promoting the bill—or even to have their vote influenced by its introduction. Their vote is likely to be determined by the matters with respect to which they are members of special interest groups.

DIFFUSED GENERAL INTEREST

Many citizens regard it as a paradox that a democratic government, supposed to promote the general welfare, should enact so many measures that promote special interests. It is not a paradox. It is the result to be expected when government engages in activities that have concentrated effects on small groups and widely diffused effects on the rest of the citizens. A majority rules in a political democracy, but the majority that rules is typically a coalition of special interests—not a majority promoting the general interest.

In the heyday of nineteenth-century capitalism, William H. Vanderbilt, a railroad tycoon, is said to have remarked, "The public be damned" to an inquiring reporter. That may have been his attitude but it was never an accurate description of how private enterprise behaved. Competition saw to that. Enterprises that damned the public did not survive for long. But however accurate it may have been then, today the phrase fits Washington to a T.

Question 3. I could not agree with you more that too often the government fails to let go of a program after the need for it has ceased to exist. Rent controls were initiated during World War II when there was a serious housing shortage, a sharp curtailment of housing starts, and an obvious need for government controls. Federal controls have lapsed, as you know. But why do you oppose their continuance in an area where the local government has made the judgment that they are still necessary? In my judgment, Washington, D.C. has one of the most serious housing problems in the Nation, probably exceeding that of New York, taking into account the relative sizes of the cities. And from what I have heard, there is a very serious housing problem in almost every major city in the Nation, not excluding Chicago. Why do you single out the rent controls that New York's local government has adopted?

Answer. Because the kind of "housing problem" in the other major cities is very different in character from the "housing problem" in New York.

Only in New York is there a great waste of existing housing space because there is no incentive to economize space by persons lucky enough to have apartments at controlled rents that are far below the level that would clear the market.

I know myself persons who keep such apartments in New York for occasional occupancy, while living outside New York. Other major examples are persons whose children have grown up and left the family household yet who continue to occupy larger apartments than they now need or desire because they would have to pay market rents for the smaller apartments they would prefer.

Only in New York have large areas experienced major deterioration simply because at controlled rents it does not pay owners to maintain and improve them. The West Side area in upper Manhattan near Columbia University is a clear and depressing example.

Only in New York have property owners had their property effectively expropriated for the benefit of original tenants.

The housing problem in other cities reflects the growth of population plus the high costs of building—which is partly real, partly an artificial result of union power. The high costs are present in New York but the whole problem is there greatly exacerbated by the inequitable and wasteful effects of rent control.

In 1946, Professor George Stigler and I published a pamphlet entitled "Roofs or Ceilings" (ceilings referring to "rent ceilings") in which we argued that rent control, then Federal and nation-wide, was inequitable, wasteful, and undesirable and should be promptly repealed. Comparison of New York and other cities provides *ex post* support for our predictions about the evil effects of rent control.

Question 4. You are the third witness to testify before this Subcommittee who has recommended direct and open subsidies to intended beneficiaries rather than elaborately and often inefficiently administered government programs. In your judgment, is the administration moving closer or further away from this goal? Is it not true that the recent reduction in the role of the Office of Economic

Opportunity from a substantive, funding agency to a promoter of pilot programs, reflects the difficulties that public agencies get into when they try to work directly with intended beneficiaries?

Answer. In the welfare area, the Administration's proposal for a Family Security System seems to me clearly to be moving closer to the goal of direct payments to beneficiaries. This seems to me true also of some of the recommendations in the field of educational benefits. I do not know enough about the details of the changed role of the Office of Economic Opportunity to comment intelligently on the last sentence of this question.

Question 5. Several witnesses before this Subcommittee have emphasized that many public programs commonly thought of as providing widespread benefits have serious and adverse distributional impacts—they benefit the rich and well-to-do and not poor and middle-income citizens. How do you evaluate the distributional impacts of programs like the farm program, water policy, navigational policy, highway policy, pollution control policy, aviation policy, institutional aid to higher education, and maritime policy?

Answer. For all the programs you mention, much of the expenditure on them is simply waste and has no clearly discernible distribution effects at all. Of the others about which I have any knowledge, my impression is that the presumption is of benefits to middle- and high-income groups rather than to low-income groups. Let me comment briefly on those programs that I have some knowledge of.

1. *The farm program.*—Insofar as the expenditures on this program pay for fertilizer, machinery, labor, etc. that would not otherwise be used in agriculture, it is sheer waste. For the rest, the main effects are (a) to raise the price of farm land; (b) to raise the price of food products. Re (a), it seems clear that this benefits relatively well-to-do people. Re (b), it is certain that it harms most severely relatively poor people. A full analysis must also consider who pays the taxes that finance the program. It seems highly likely that, on average, the taxpayers are poorer than those who benefit from (a) and wealthier than those who are harmed by (b), so this consideration leaves the direction of the distribution effect unchanged.

2. *Highway policy.*—Insofar as particular highways are financed from taxes on the gasoline used in driving on those highways, a large part of the benefits are paid for by the users and there are no distribution effects. But (a) the distribution of expenditures on highways is very different from the distribution of taxes generated by them and (b) non-gasoline-tax funds are used for highways.

The major effect of both has been to benefit rural and suburban car-owners at the expense of city dwellers, whether car-owners or not. This on balance seems clearly to involve a transfer from low- to high-income groups. (Let me again stress that this is an over-simplified answer to a highly complex question. In particular, I am by-passing the difficult problems of allocating gasoline taxes paid by commercial vehicles.)

It would be far more equitable—and also efficient—to have tolls on specific roads geared to the cost and traffic on those roads.

3. *Aviation policy.*—(a) Control of air fares has kept them high and reduced service. This benefits the owners of airline stock, and of stock of corporations providing other means of transport (by train or bus) and harms all travellers, but especially low-income travelers.

(Column follows:)

MILTON FRIEDMAN ON UP IN THE AIR

This column was begun in a jet that had crossed the Atlantic in six hours but had now been circling Kennedy for an hour, stacked up awaiting permission to land.

What waste. A multimillion dollar jet, a marvel of modern technology, manned by a highly skilled and highly paid crew, occupied by nearly 200 passengers, many spending highly valuable time, serviced by a pleasant and attractive complement of hostesses, guzzling fuel as it circled aimlessly high in the sky. The cost was easily thousands of dollars an hour.

How is it that this waste occurs, not only occasionally, which is no doubt unavoidable, but regularly, so that experienced travelers, let alone the airlines, regard it as a routine matter? How is it that the large financial return from eliminating the waste is not an effective prod?

SOCIALISM VS. CAPITALISM

As I sat in the plane, I reflected that the airplane manufacturers seem to be able to turn out these marvelous mechanical miracles in ample number to meet the demand of the airlines for them. The airlines seem to be able to acquire the highly skilled flight crews in ample number (with a real assist, it is true, from the military services, which train most of them). They seem to be able to hire sufficient stewardesses to woman the cabins. Occasionally, a plane is delayed by mechanical trouble, but the airlines generally have been able to acquire the skilled maintenance and ground men to service the planes, so this is seldom a bottleneck. I have heard no stories of planes being delayed by the inability to get ample airplane fuel, or meals to feed the passengers, or liquor to befuddle them.

How is it that it has been possible to attend to all these matters—and yet not arrange things on the ground so that planes can generally be landed promptly and without delay? Is it somehow inherently more difficult to arrange space for landing planes than to build them and operate them in the aid? That seems very dubious indeed.

I believe the answer to the puzzle is much simpler. Every other activity described is mostly private and highly competitive—private enterprise builds the planes, private (or where governmental, highly competitive) airlines fly them, private firms produce and supply the fuel for man and machine. The airports, on the other hand, are a socialized monopoly—financed and run by government. As a result, there is no effective way that the waste involved in airport delays can be converted into effective pressure to eliminate them. The pressure must make its convoluted way through the FAA, the Administration, Congress and local governments.

There is no reason why this need be so. In the heyday of free enterprise, the railroads built and almost wholly financed their own terminals—even when they were “union” terminals servicing a number of lines—and still operate them. Why should airlines not be required to provide their own landing facilities—not necessarily directly but perhaps by paying fees to other private enterprises that run the airports? The airlines doubtless initially welcomed Federal subsidization of landing facilities. I wonder whether they now think they really got a bargain?

President Nixon has proposed a vast expansion of landing facilities to be financed by user charges but to continue to be operated by governmental agencies. The method of finance is the right one. The cost of landing facilities should be borne by those who use them. The method of operation is the wrong one. The right solution is to move toward private operation as well as finance.

TOO PAT?

Many a reader will regard my explanation as too pat—as simply a kneejerk reaction to an economic liberal (in the original sense of that much-abused term). Maybe so—but I urge them to see whether the shoe does not fit, not only here but elsewhere. Where are the long lines of frustrated drivers? At the doors of the automobile dealers selling cars produced by private enterprise—or on the highways and city streets provided by government? What are the problems plaguing education? A shortage of high-quality desks, chairs, and other educational equipment, including books, produced by private enterprise—or the inefficient organization and conduct of public schools? Where is technology backward and primitive? In the privately run telephone industry (albeit the existence of monopoly does occasionally produce delay and inefficiency)—or in the governmentally run Post Office?

(Statement by Representative Hechler, of West Virginia, submitted by Mr. Nader, follows:)

[Reprinted from Congressional Record, Washington, Sept. 3, 1968]

THE PEOPLE'S RIGHT TO KNOW

(Mr. Hechler of West Virginia asked and was given permission to extend his remarks at this point in the RECORD and to include extraneous matter.)

Mr. HECHLER. of West Virginia. Mr. Speaker, 2 years have passed since our able colleague, the Honorable John Moss, of California, spearheaded the passage

of the Freedom of Information Act. This landmark legislation furnished the basis for legitimizing the people's right to know. Representative Moss, acting in his official capacity as chairman of the appropriate subcommittee and also because of his great personal interest in freedom of information, has helped push forward the frontiers in many areas where resistance has been encountered.

And yet the narrow and encrusted bureaucratic resistance has hardened in some agencies, and among particular types of individuals who do not fully deserve to be labeled as "public servants." Among some agencies and individuals there appears to be misguided zeal for secrecy which has its roots in what the psychologists appropriately term "insecurity." This insecurity breeds an excessive, overkilling amount of security. Timidity or perhaps fear of what superiors might think frequently generates the overcautious suppression of information to which the public is entitled. Also, the source of an inquiry often dictates the generosity or the clamlike response to a request for information. Consumers and students, young people and newspapermen, liberals and labor sources somehow always have greater difficulty obtaining information than producers and industrial interests, staid conservatives and bankers, lobbies for the manufacturers and top-drawer firms with wealthy clients.

It is apparent that intention far exceeds performance when it comes to statements by public officials about freedom of information policy. Never has a theoretical consensus hovered around such a shambles of divergent reality. The Freedom of Information Act, designed to provide citizens with tools of disclosure, has been regressive forged into a shield against citizen access. It is important to remember that the FOIA is a unique statute. Its spirit encourages government officials to display an "obedience to the unenforceable." For insofar as the statute is enforceable, the duty devolves to the citizen. Few citizens are able to engage an agency in court—the only recourse afforded by the Act. Those who can afford judicial recourse are special interest groups who need the protection of the FOIA least of all. Consequently, as a practical matter, the attitude of agency officials toward the rights of the citizenry overwhelmingly determines whether the FOIA is to be a pathway or a roadblock.

After three months of exploring the frontiers of the Freedom of Information policy of several federal agencies, with one hundred students working in study groups coordinated by the undersigned, we have reached a disturbing conclusion: that government officials at all levels in many of these agencies have violated systematically and routinely both the purpose and specific provisions of the law. These violations have come so regularly and with such cynicism that they seriously block citizen understanding and participation in government. There is prevailing an official belief that these federal agencies will not stand for searching inquiries, or even routine inquiries that appear searching because of their rarity, from its citizens.

During this past summer, a group of public-spirited younger lawyers and students, led by Ralph Nader, Gary Sellers, Reuben Robertson, John Esposito, Harrison Wellford, James Turner, and Robert Fellmeth, compiled a "Status Report on the Responsiveness of Some Federal Agencies to the People's Right to Know About Their Government." This report was released on August 26, 1969, and because of its interest to all Members, it is useful to have the complete text of this report:

A STATUS REPORT ON THE RESPONSIVENESS OF SOME FEDERAL AGENCIES TO
THE PEOPLE'S RIGHT TO KNOW ABOUT THEIR GOVERNMENT

(By Ralph Nader, Gary Sellers, Reuben Robertson, John Esposito, Harrison
Wellford, James Turner, and Robert Fellmeth)

A well informed citizenry is the lifeblood of democracy, for in all arenas of government, information, particularly timely information, is the currency of power. The criticality of information is illustrated in the reply of the Washington lawyer to one who asked him how he prevailed on behalf of his clients: "I get my information a few hours ahead of the rest."

In this Nation, where the ultimate power is said to rest with the people, it is clear that a free and prompt flow of information from government to the people is essential to replace the myth of democratic pretense with the reality of citizen access to a just governmental process. It was with these truths in mind that Congress passed, after a decade of temporizing, the Freedom of Informa-

tion Act (FOIA) in 1966. The Act became effective on July 4, 1967. When President Johnson signed the bill into law on July 4, 1966 he stated: "I have always believed that freedom of information is so vital that only the national security, not the desire of public officials or private citizens, should determine when it must be restricted."

The term "citizens" is used in this context to refer to any person or persons who are not regulated by the agency and who do not constitute an organized, special interest group. The distinction is important because most agencies have a two-pronged information policy—one toward citizens and one toward the special interest groups that form the agency's regulatory constituency. For the latter, a pattern has emerged of preferential access and treatment over the years. The lobbyists, the trade associations, and the corporations have made the contacts, have developed the institutions (e.g., industry advisory councils) and have generally compromised or intimidated the agency personnel into affording them entry into the early decisional process prior to public surfacing of rule-making, advanced rule-making, policy speeches, and the like. And it is during the inner council discussion stage, the draft-report or draft-standard stage that most of the decisions are made. The options for public impact at later, public stages narrow very rapidly when there is an established system of preferential access to industry or commercial groups. As is well known to the Washington press corps, this process occurs in the Department of Interior with the oil and coal industries, and with the federal banking agencies and the banking industry—to name two of the more egregious wedlocks.

The relationship between free access to information and responsible government is very direct. All of the agencies we have studied enjoy large discretionary power over the programs they administer. Under the agency's legal structure, they can go one way or another; they can delay action, decide what portions of the law to enforce or not enforce, and even adamantly refuse to carry out programs mandated by Congress. These agencies are more agencies of discretion than they are of law. Within limits, this is often necessarily the case, but without free and fast information to the public, discretion more easily becomes an absolutism or tyranny for the common citizen.

Professor Kenneth C. Davis defined discretion in this way:

"A public officer has discretion whenever the effective limits on his power leave him free to make a choice among possible courses of action or inaction. /D/iscretion is not limited to what is authorized or what is legal but includes all that is within 'the effective limits' on the officer's power. This phraseology is necessary because a good deal of discretion is illegal or of questionable legality. Another facet of the definition is that a choice to do nothing—or to do nothing now—is definitely included; perhaps inaction decisions are ten or twenty times as frequent as action decisions. Discretion is exercised not merely in final dispositions of cases or problems but in each interim step; and interim choices are far more numerous than the final ones. Discretion is not limited to substantive choices but extends to procedures, methods, forms, timing, degrees of emphasis, and many other subsidiary factors."

The Freedom of Information Act which came in on a wave of liberating rhetoric is being undermined by a riptide of bureaucratic ingenuity.

"The law was initiated by Congress and signed by the President with several key concerns," says a 1967 Attorney General's Memorandum. These are: "that disclosure be the general rule, not the exception that all individuals have equal rights of access; that the burden be on the Government to justify the withholding of a document, not on the person who requests it; that individuals improperly denied access to documents have a right to seek injunctive relief in the courts; that there be a change in Government policy and attitude."

The Act then explicitly provides for nine exemptions which offer a vast amount of discretion—so vast that to call these exemptions loopholes would be to indulge in the grossest kind of understatement. Exemptions for "internal communications," for material deemed to be compiled for investigatory purposes, for information "given in confidence," are agency favorites. Federal Trade Commission officials have discovered that merely instructing a secretary to open an investigatory file and dropping the item in it serves to take care of the FOIA. And as more people are learning, FTC investigational files have every potential of lying fossil-like, undisturbed by the concern of bureaucratic man.

The broad ambit of discretion, worked upon by agencies which differ in their degree of commitment to public and special interests, is also leading to differing

and inconsistent proliferation of practices and interpretations. Each agency has created its unique "common law" in interpreting the act and in developing a maze of confusing regulations. Information which is claimed to be exempt from disclosure in one agency is freely given in another agency. (For example, records of advisory council meetings—United States Department of Agriculture—no National Highway Safety Bureau—Yes. The Federal Extension Service (USDA) gave the students permission to ask the Inspector General to see the audits; the Farmers Home Administration did not.)

Agencies also differ in the depth of the "appeals tier" within the agency which a petitioner must exhaust before he can go to the courts for relief. Each appeals point on the tier increases the probability of exhausting the petitioner and mooting the quest, especially when each internal appeal takes weeks or months. Consumers Union's experience with the Veterans Administration is a good example of how much stamina and resources a petitioner requires to obtain test results of so mundane a product as hearing aids.

There is little doubt that if government officials display as much imagination and initiative in administering their programs as they do in denying information about them, many national problems now in the grip of bureaucratic blight might become vulnerable to resolution.

The particular intransigence characterizing refusals to provide requested information by various agencies studied this summer is noteworthy. These are not agencies in the "sensitive category." They do not deal with military or foreign affairs. They are entrusted with the most sympathetic missions in the governmental arena—health, safety, food purity and distribution and transportation. Yet even under daily approach and reasoned requests, these agencies refused to provide information, some of which is described below. One can imagine the chances of a citizen writing in from Kansas or Oregon.

What follows is a focus on those agency acts which violate or misinterpret the Freedom of Information Act. However, it is encouraging to take note of the many public servants in the federal government who have respect for the purpose of the FOIA and who frequently bridle under restrictions by their superiors that they believe wholly unjustified. The benefits of the openness of these civil servants, who have provided accurate information to the students as well as to any other interested persons, have been to further the interest in citizen involvement. Not only have the students been able to obtain a more comprehensive picture of the workings of their government, but agency personnel have in many cases received important insights and feedback from the dialogue they have established with the students. By a significant margin, the National Air Pollution Control Administration (HEW) has displayed the most open position on information access. Against this standard of performance, other agency restrictions become even more outrageous as to their ulterior purposes in protecting incompetence and cloaking regulatory surrenders to special interests—e.g., non-enforcement of the laws governing the behavior of corporations.

It is now appropriate to describe some of the concrete instances of government secrecy and the techniques used to exhaust petitioners from persisting in their quest.

1. The FOIA provides a specific exemption from mandatory disclosure for material which is an "investigative file." The text says: "[no disclosure is required of] investigative files compiled for law enforcement purposes, except to the extent available by law to a private party."

The intent of this exemption was to protect that kind of investigative material which if revealed would undermine law enforcement. Thus, in order for material to qualify as an "investigatory file," it must be both investigatory in nature and capable of being used in a law enforcement proceeding. That is, even "investigatory" parts of the file are only exempt for so long as they can be used in a law enforcement proceeding, i.e., if law enforcement is still possible, those investigative parts of the file which relate to that enforcement may also still be privileged. When any prosecution proceedings are completed or precluded by other factors, then the entire file should be open—unless other investigative files would be directly impaired by its disclosure. The fore-going is the broadest possible interpretation that can be taken of that provision in the Act.

Several agencies have not been satisfied, however, with even these broad limits on the "investigative file" principle, so they have expanded and transmuted its character by changing the definition of what is an investigatory file. For

example, the Department of Labor has denied public access to their records of past (5, 10, and 15 years old) violations of the Walsh Healey Act which sets minimum wages and safety standards for businesses which have more than \$10,000 worth of sales to the Federal Government. The only sanction for violators is a 3 year bar from further contracts. Thus the Department of Labor keeps secret the nature of past violations which have ceased and are two decades old on the theory that the Labor Department might still get around to using these violations in some future law enforcement proceeding. The Department of Labor also restricts even their *record* of corporate violations of these Walsh Healey standards (rather than the investigative reports within the files). These records and the records of violations filed by inspectors are analogous to records of traffic tickets and were denied to students. In the selected industry reports (showing what companies had been inspected) the Labor Department blocked out the names of all companies inspected before allowing the students access. These denials were then followed with a request for the students to sign a pledge of non-revelation in order to receive the documents.

Another illegal broadening of the "investigative file" exemption is invoked when other excuses fail. This is when the agency places public information in an investigatory file and then refuses to separate the two. For example, the Department of Labor has claimed that all material in all Walsh Healey files is "investigative" even when the requested material is non-investigative in nature. Thus, the Department secures secrecy by its own commingling and subsequent refusal to separate. The Department then completes its denial to the records of their enforcement of that Act.

2. The FOIA provides a specific exemption for internal governmental papers in order to preserve and encourage the freedom of internal communication within government and to prohibit premature disclosure. The text of that exemption says: "(no disclosure is required of) inter-agency or intra-agency memorandums or letters which would not be available by law to a private party in litigation with the agency."

The legislative history of this exemption makes it clear that, in judging whether nondisclosure was to be allowed, the prime criterion was to be the relative finality of resolution of the issue in any such document. The evil to be prevented by the exemption was, in the words of the House Report "premature disclosure."

In practice, several agencies have illegally broadened this exemption to deny access to matters relating to *past* decisions within the Executive Branch. The Department of Agriculture has gone further and denied access to the minutes of the National Food Inspection Advisory Committee and the Poultry Advisory Committee. Those committees are made up of non-federal personnel, including private members, and their alleged purpose is to suggest policy and discuss new hazards to the public interest. The Department wants to prevent the public from realizing what an impact private interest groups and their state satellites have on meat and poultry inspection policy and what conditions and new hazards exist.

The Interstate Commerce Commission has also invoked this exemption to deny public access in specific areas to records of Congressional correspondence with the ICC. Also the ICC has declined to release a six year old study of the ICC made for it by the Civil Service Commission. The ICC has also refused to make public the past evaluations of ICC performance which were prepared by ICC personnel. Thus, no information is released as to how the agency assesses its performance. The public usefulness of a contrary policy was seen a few weeks ago when an internal FDA evaluation report was made public. The Department of Labor has misused this exemption to deny public disclosure of their interpretations of the Walsh Healey Act—made in 1936—even though that Act has been amended several times since and the public need for this information is essential if any determination of how the law has been administered over the last 33 years is to be made.

Other illustrations reflect the variety of excuses for denials. The Department of Defense has denied access to information on the quantity of oil being pumped from the bilges of naval ships on the grounds that this data will be included in a report which contains operational data relative to military characteristics and will therefore be classified. The water pollution study group wanted information about oil dumping. The Defense Department makes no claim that the specific information requested is itself classified or in any way exempt from the

FOIA. DOD is a past master of the "contamination technique"—take several doses of unclassified material that may prove embarrassing and mix them with other doses of classified information and, lo and behold, the sum is entirely classified. Civilian agencies have been quick to deploy this method.

The Federal Water Pollution Control Administration has denied access to copies of research proposals made to but not accepted by FWPCA. The study group wanted this information to assess the research priorities at the agency, to determine whether there was any unfair preference by FWPCA and to see what reasons were given for denial of such proposals.

Only under pressure from the study group and the New York Times did the ICC finally release information pertaining to the expense accounts of ICC commissioners which were assumed by industry groups when the commissioners visited trade meetings.

Before continuing on to discuss even more flexible techniques for information suppression, the point must be made that most of the exemptions in the FOIA are discretionary—that is, with the exception of other statutory restrictions and Executive Orders, the agency does not have to invoke the exemption. It is still expected to produce the information and not take advantage of the exemption without a strict shouldering of the burden. Instead, agencies are simply offering the particular exemption as a reason for denial and not producing the underlying facts which are entitled to invoke the exemption.

Agencies are developing ever refined ways to handle requests under FOIA. Here are some:

The typical tactic is to delay replying for several weeks and then state that the request for information was not specific enough. This tactic has enormous potential and agencies like it. First, if the agency does not permit the inquirer initial access to learn what specifics the agency has, he has no choice but to make a more general request. Any agency knows that one level of secrecy can lead to more requisite levels of secrecy. So the organization or filing of the information possessed by the agency is not revealed. Consequently, the citizen is exposed to a charge of non-specificity. The more knowledgeable and fraternally received lobbyists, on the other hand, have no such problems. The Department of Agriculture, especially its Pesticide Regulation Division, has perfected this dismal science to a degree that it may uproot itself by the excess of its success.

The Department of the Interior used the delay technique with all the arrogant presumption of the new Assistant Secretary of Interior, Carl Klein. He developed a hamstringing system of centralized appointments and a centralized room for interviews to be conducted under the watchful eye of his monitors. In the initial three weeks of the study, the Department repeatedly denied information by cancellation or delay of scheduled meetings and by this monitoring device. An appeal to Herbert Klein, Director of Communications and Secretary Hickel was necessary to instruct Mr. Carl Klein in his duties to the public. He withdrew his edicts promptly. But other delays emerged. For example, the memo of FWPCA's assistant commissioner for enforcement (which outlined the enforceability of water quality standards) was released only after a 10-14 day delay after the initial request and an appeal to the DOI's information officer. The reason given for the delay was the assertion that this document was still in the working paper stage; however, the paper had already been completed and circulated. Since any work of man can always be perfected, the designation of "working paper" can have no discretionary limits which is another way of saying that the agency who exploits this technique becomes a law unto itself.

A closely related response to the "working paper" one is that the information is still not verified or is in incomplete form. The FWPCA gave the latter as the reason for refusing, following a ten-day delay, a student permission to see reports on the status of water pollution abatement programs at 20 federal installations. There is a written demand pending to see the information in whatever form it exists since we have taken the position that the agency's laxity in compiling this information is a self-serving and illegal basis for denial of access.

This request for the status reports on 20 installations was made after FWPCA denied more detailed information about the entire problem on the ground that this general information would give the researcher a "warped impression." (At another time this same researcher was told that release of information would endanger Interior's relationship with DOD "because DOD is finicky about releasing figures on total sewage." Presumably, the enemy could then rush back to its abacus and calculate the manpower strength of the base. Sewage from domestic military bases is a national security matter, according to FWPCA.

It could co-incidentally be a national pollution matter that is the basis of the reluctance.

More primitive responses come forth as an agency loses its last reedy rationalizing props for withholding information. Relevant materials on pesticides in the Department of Agriculture* disappeared, on the action of a high official, after the students began researching them with permission at the Pesticides Regulatory Library. Outright lies are not unknown as shown by the attached appendix II describing in greater detail the Civil Aeronautics Board experience. The National Highway Safety Bureau has denied any knowledge of preferential release to General Motors in late June of an Army medical team report on off-base accidents involving servicemen in Europe. But it was sent to GM privately. Since the company has recalled several million cars for a carbon monoxide hazard, GM can be forgiven its urgent interest in a medical report showing high CO levels in the automobile crash victims' blood. But why not let all the people know at the same time? The report is being released today.

The Food and Drug Administration, which has been more cooperative than some of the other agencies in releasing information to the study group about food purity regulations (perhaps because it has so little to reveal) claimed through an official spokesman that it maintained no brand name list of beverages containing cyclamate. Such a list, however, had been used repeatedly to answer specific inquiries about specific brand names. On learning that the inquirer was part of the summer study group, the agency made the list available. This illustrates that whatever difficulty we may be having, the lone citizen making inquiry by mail from afar or even by visiting the agency is subjected to more government secrecy.

Another generic technique of preferential treatment is to compile the kinds of information that industry desires but decline to compile the information that a consumer or laborer could use. The Department of Interior compiles much information of use for the minerals industry but very little benefits consumers or workers. The Interior Department had to be pushed and prodded to develop a report on environmental depletions of the coal industry, after half a century, and then was reluctant to make it public. Consumer-related information about federal oil policy—from quotas to offshore leases—have been most hard to elicit from Interior. The same imbalance prevailed for hazards in off-shore drilling.

Search costs and reproduction costs can daunt a citizen after he has secured access to agency information. Copying fees range from no charge in some agencies to \$1.00 a page in other agencies. Similarly, some agencies charge no search fees, others charge up to \$7.20 an hour. Why the difference?

In conclusion, what are some lessons to be learned? First, the Freedom of Information Act is not being used by the public to secure relief in the courts. Since the effective date of the FOIA on July 4, 1967, court records reveal that 40 cases were brought under the FOIA (to March, 1969). Thirty-seven of these cases involved actions by corporations or private parties seeking information relating to personal claims or benefit. In only three cases did the suits involve a clear challenge by or for the right of the public at large to information. Even more significant, no records have come to our attention of any court actions initiated by the news media who should be the prime public guardians and litigators under then FOIA. Patently, the effect of the FOIA cannot be measured by court cases. But just as patently, a mere 40 cases in the first 20 months of the Act's history are shocking. There need to be institutions, be they public interest law firms, Universities, Law School Law Reviews, newspapers, magazines or the electronic media, who systematically follow through to the courts on denials of agency information. The individual citizen just does not have the resources.

The FOIA will remain putty in the hands of narrow-minded government personnel unless its provisions are given authoritative and concrete interpretation by the courts. Such litigation then feeds back a deterrence that radiates throughout an agency. Many general counsels of agencies are straining the Act to its utmost and beyond because of the improbability of judicial review. The new General Counsel of the Federal Highway Administration, David Wells, has already begun to apply the Byzantine secrecy that he learned from his former railroad and trucker employers. He now wants to prevent disclosure of violations of automotive safety standards to the public. Yet these violations are relayed quickly to the manufacturer involved. The corporation has the right to receive them but not the motorist who may become a casualty because of not knowing about the safety violations in his car or tires. David Wells will have much to

*See Appendix I for additional USDA denial.

learn and like his mentor, Francis Turner will probably have to learn it all in public.

Second, Congress is not exercising adequate oversight over the way the FOIA is being observed. There have been no Congressional hearings since the Act was passed, although there is abundant material for a most worthwhile public hearing series. Two reports, one from the House and one from the Senate, have been published compiling the regulations and containing responses to some inquiries from the respective committees. Comprehensive Congressional hearings are a must.

Third, a Presidential review group should be constituted to eliminate the inconsistencies which now exist, and are increasing, among the FOIA compliance regulations of the various federal agencies. This group should also establish uniform ground rules which will make it exceedingly difficult to achieve devious and illegal circumventions of the FOIA. For example, there should be a clearcut injunction against the commingling tactic and agencies should be required to separate or segregate the public information from what information may be legitimately withheld. For another example, there should be a one-stop appeal in the agency before judicial review. Stacking layers of appeals within the agency is a strategy of attrition and facilitates divergent policies within the department or agency.

Fourth, each agency should be specifically required to (a) respond in some manner to all information requests within 7 days of receipt of such request or a specific reason given to justify further delay; (b) have available in the Washington office, and elsewhere as needed, a public information reading room with access to copying machines; (c) prepare in advance and have available in the public reading room that data most typically requested of the agency and all relevant data showing workload, productivity, law enforcement activities and similar agency evaluation information, as well as agency-Congress and agency-public records. Such a system will not only encourage more citizen interest—which should be a frontline policy of all agencies—but also will improve the efficiency of response to citizen requests.

Fifth, specific procedures should be developed for taking corrective actions when federal officials resort to harassment techniques or other actions contrary to the FOIA. The establishment of a Director of Communications earlier this year offers the opportunity to develop effective sanctions on agency leaders who generate or condone such secrecy. Without such review and sanctions from the White House, agencies will continue to thwart or violate the Act with impunity. The most important distinction between agency responses toward information requests is the distinction between the agency's leadership. Clearly then, the most important factor in the Executive Branch for freedom of information is the President himself. And it is up to you, ladies and gentlemen of the fourth estate, to remind him continually of this first imperative.

APPENDIX I: SOME INFORMATION EXPERIENCES WITH THE U.S. DEPARTMENT OF AGRICULTURE

1. Racial hiring charts for individual electric cooperatives financed by REA loans: although the REA's information office decided to give the information, the Department's Office of General Counsel removed it without telling REA. On appeal to the REA administrator, the charts were made available.

2. Information on the fat content of various brand name frankfurters tested by the Department since 1955. Denied.

3. The Farm Credit Administration's record on the recipients of FCA-approved loans. The FCA must approve loans of more than \$100,000 made by federal land banks, and other large loans made by the production credit boards. The FCA has refused several times to reveal the names or locations of the recipients, or the sizes of terms of the loans.

4. Results of the Federal Extension Service's study of its program operations in 60 counties, done in 1965 and 1966. Denied.

5. Lists of specific pieces of information that agencies consider exempt from disclosure under the Freedom of Information Act. Denied.

6. Minutes of meetings of the National Food Inspections Advisory Committee and the Poultry Advisory Committee. Denied.

7. Minutes of meetings of the Citizens Advisory Committee on Civil Rights, whose members were private citizens. Denied.

8. Records of any civil rights complaint—concerning either hiring problems or program discrimination—made against the Department. Each one of the

agencies, as well as the Department's civil rights staff, has refused to tell us who has complained, how the complaints were investigated, and what the Department has done to correct any violations it found. Denied.

9. Audits done by the Department's Inspector General on various agencies. After all our requests for audits were routinely turned down, we asked to see summaries of some of the audit findings. This was refused. In one case, both the audited agency (the Federal Extension Service) and the state director whose program was under study (Dr. Marshall Hahn of VPI) gave us permission to see the OIG audit of extension programs in Virginia. Even so, the OIG refused.

10. Copies of memoranda or directives circulated in the Department to tell employees how to handle information requests in general and our summer study in specific. Denied.

11. The Pesticide Regulation Division's registration records for specific pesticide products, for instance the Shell Vapona No-Pest Strip. Denied.

12. Copies of a proposal by the Department's Program Review and Evaluation Committee for a new system to keep track of civil rights progress. After the Department refused to give us the chart, we informally asked an administrator and got the chart immediately.

13. Copies of civil rights compliance plans that state universities and land grant colleges have sent to the Federal Extension Service. FES regulations required the state colleges to prepare adequate plans in order to keep getting federal money for state extension programs. The FES has refused to reveal any details of the plans it has approved.

14. Records of any action the Department has taken to correct problems pointed out by a number of groups—the U.S. Civil Rights Commission, the Department of Justice, private citizens, and the Department's own Inspector General and Citizens Advisory Committee on Civil Rights. Denied.

15. All records of action the Pesticide Regulation Division has taken in a number of areas: seizing unsafe pesticide products; recalling products from the market; issuing citations to manufacturers of unsafe pesticides; and recommending prosecution of pesticide manufacturers. Denied.

16. Information about the Pesticide Regulation Division accident reporting system. The PRD refused to tell us how it evaluates accident reports and what action it has taken in response to the information.

17. Data that manufacturers submit to PRD when they have their products registered. The PRD claimed that all the information in the registration file is covered by the "trade secret" option, even though the specific product formula is contained in a brown envelope marked "confidential" and can be easily separated from the rest of the file.

18. Records of PRD's pesticide sampling program, which analyzes samples of pesticides from the market. We asked only for those files where no enforcement was planned, but PRD denied all the files, claiming they were exempt under the clause protecting enforcement records.

19. A Department of Agriculture report revealing health hazards in Talmadge-Aiken Act meat plants has been denied Congressmen Thomas Foley and Benjamin Rosenthal and United Press International. This denial has no time limit, as USDA admits that their investigation is closed in this matter.

APPENDIX II: THE CIVIL AERONAUTICS BOARD, A CASE STUDY OF INFORMATION POLICY AND THE PUBLIC INTEREST

The study of the CAB took as one of its primary areas of concern the ways in which the Board and the airlines industry deal with or fail to deal with complaints from members of the public. At the outset, statistical information was requested (in writing) as to the total number of complaints received by the CAB, the volume of complaints lodged against the various airlines, and the major categories and sources of complaints. The CAB refused to give this information on the grounds that it had inadequate personnel to keep any records of this sort. Not until the very end of the summer did we learn, from another source, that the Board had made detailed studies of precisely the kind of information requested. The CAB lied.

Similarly, data was requested on the CABs backlog of consumer complaints. The board took four weeks to respond to this single request for the most basic kind of information as to how well it is performing its duties. When that information was finally provided, we learned that the backlog—number of complaints on which the CAB has taken no action—has risen by over 600 percent over the last five years!

Frustrated by this inability to get the basic statistical information from the CAB, we requested an opportunity to inspect the complaints filed by citizens with the CAB against the airlines. This request under the Freedom of Information Act was arbitrarily denied on the astonishing theory—articulated and repeated by Charles Kiefer, Executive Director of the CAB—that if the public complaints were made available for inspection, the airlines would find out the complainants' identities and retaliate against them. Finally, after weeks of delay, the Board agreed to permit inspection of a few complaints, *but only if the student agreed not to write down the names or sources of the complaints.* This meant, for practical purposes, that we could not correspond with citizens filing serious complaints to see whether they were disposed of satisfactorily by the airlines or the CAB.

Late in the summer, we learned of a recent report by the CAB of the causes and handling of customer complaints received by the airlines industry. This important study, made at substantial public expense, demonstrated that citizen discontent with the airlines industry has hit a critical level, and cited specified airlines for their apparent complete lack of interest in the problems of inconvenienced air travelers.

Nevertheless, the CAB has suppressed this report from the public, which has every right to know which airlines are concerned with resolving legitimate complaints—and which ones are not. The report was denied to us on the specious reasoning that it "mentions names of airlines", gives numbers of complaints received by some of the airlines and was compiled from the records of the airlines regulated by the CAB. For these reasons, and because the CAB feared that the findings might be competitively detrimental to the deficient airlines, the CAB officials concluded—apparently without the benefit of legal advice from the CAB legal staff, it should be noted—that release of the survey to us, or even the names of the airlines considered to be deficient, was precluded by a statutory section prohibiting the Board from divulging certain classes of confidential financial and commercial data obtained in CAB audits of the airlines' books. This argument, however, utterly ignores the fact that much of the information requested had already been released to several of the airlines as well as to their trade association. The legitimacy of the CAB's rationale is further shattered by the fact that detailed information on the number and types of complaints is readily exchanged among the airlines themselves, which destroys the shibboleth of pretended confidentiality.

The fact of the matter is that the CAB officials have been regularly providing business management and public relations advice, at public expense, to private interests in the airline industry, and have been withholding critical information on the industry which is needed by the public. The dangers of governmental secrecy are manifest in this episode of patent disregard by an important regulatory agency for its responsibilities to the public. For while the CAB is busy providing services for special corporate interests, it has no time or resources for its basic mission of regulations. For example, during the summer numerous requests for basic statistical data which we requested were denied by the CAB on the grounds that it has inadequate staff and accordingly could not assemble such information or provide it for our study. Some of the records the CAB told us it does not bother to keep include the following statistics:

Speeches and personal appearances made by members of the CAB.

Records of the costs of investigations conducted by the CAB.

Travel allowances and budgetary allocations for individual Board members, the Executive Director and the Director of Community and Congressional Relations of the CAB.

Enforcement actions by the CAB's Bureau of Enforcement against air carriers for violations of the law.

Complaints charging racial discrimination by the airlines.

The number of initial decisions of CAB hearing examiners appealed to the Board in accordance with its regulations.

The number of interested parties seeking to intervene in CAB proceedings pursuant to its rules of practice.

We frankly find it beyond belief that an agency can effectively protect or advance the public interest without establishing for itself basic priorities and keeping certain basic records of its work. In the atmosphere of openness and public scrutiny contemplated in the freedom of information philosophy we submit, such contempt for the rights and needs of citizens and such patronizing solicitude for the business interest and image of private industry cannot thrive.