FEDERAL PRODUCTIVITY

HEARINGS

BEFORE THE

SUBCOMMITTEE ON PRIORITIES AND ECONOMY IN GOVERNMENT

OF THE

JOINT ECONOMIC COMMITTEE CONGRESS OF THE UNITED STATES

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FEDERAL PRODUCTIVITY

MONDAY, DECEMBER 17, 1973

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

The subcommittee met, pursuant to notice, at 10:10 a.m., in room 1202, Dirksen Senate Office Building, Hon. William Proxmire (chairman of the subcommittee) presiding.

Present: Senators Proxmire and Percy.

Also present: Loughlin F. McHugh, senior economist; and George D. Krumbhaar, Jr., minority counsel.

OPENING STATEMENT OF CHAIRMAN PROXMIRE

Chairman PROXMIRE. The work we are to review today and tomorrow—how to measure and enhance productivity in the Government sectors—is among the most important activities we as public servants can undertake.

I am pleased that we have as leadoff witness today the Comptroller General of the United States, Elmer B. Staats, who at my request, initiated the first comprehensive effort to survey the productivity of the Federal Establishment. For many years experts had been telling us that this was an impossible task. Because the Federal Government was not "market oriented," it was said we could not establish standards by which to measure productivity trends in the Federal Government.

The massive effort undertaken under the direction of Mr. Staats has shown this contention to be false. We now have a measure of productivity in the largest of all "industries" which covers at least 60 percent of the Federal Establishment, and an arrangement has been set up to provide the means by which this work will be continued and expanded on a regularized basis.

Measuring productivity can be the key toward translating the rhetoric of "efficiency in Government" into more than a campaign slogan. Here is a real beginning in literally giving the taxpayer more for his dollar.

We know that Government expenditures are essential to provide the many services that only Government can perform. We know that the U.S. Government has skyrocketed its spending from less than a billion dollars a year a couple of generations ago, to tens of billions a few short years ago. to hundreds of billion a year, today. Indeed,

we are on the verge of the first $300 billion Federal budget. Only a year or two away from a Federal Government that spends $2 billion every day.

There are two ways to restrain this mammoth increase in spending. One way is to cutback or eliminate Government services. Until now this has been the overwhelming objective of those who would hold down Government spending, and, of course, it must continue to be of prime importance. It is the virtually exclusive concern of economizers at the congressional and public reporting level.

The other way is to reduce spending while providing the same Government services; that is, getting more service for each tax dollar. This is what productivity is all about, simply put it is achieving more production for each hour of work every Government worker puts in.

We in Government have talked about this. We have claimed our opponents are not doing it and we have said that we are doing it. But those criticisms and promises mean little or nothing until we can measure productivity; that is, determine precisely what is the output for each hour of input in each segment of each department.

And once we do that, once we focus attention on it, once we get debate and criticism based on measurable production performance, then we will get real progress in the kind of efficiency that will begin to save the taxpayers money.

We will then know whether one agency is improving its efficiency or is not. We will know how much that improvement in output per hour or input is. We will be in a position to know from actual results what does and what does not improve efficiency, reduce cost, and ease the taxpayers' burden. We will be in a position to learn lessons that should be enormously useful in reducing the cost and burden of Government in the immediate future.

What works for the Defense Department may or may not help Housing and Urban Development or Health, Education, and Welfare. But don't be so sure, it may help quickly and significantly.

No genuine improvement in a Government the size of our Federal Establishment comes easily or quickly. But if we hammer away at this drive to measure efficiency, if we insist that thousands of agency managers and millions of workers stand up to the test of what they are giving the Government for what they and their departments receive in expenditures, then we will be well on our way.

I understand, Mr. Staats, that you will start off by giving us a brief summary of the current status of this project.

We will then hear short statements from representatives of two of the agencies which have assumed central responsibility in conducting this survey. If you will, before you conclude your opening remarks, I wish you would introduce these witnesses and also indicate the other members of the task force who are here today to answer any questions about their specific areas of competence.

Because of time limitations and other activities in Congress which will prevail this morning, I hope you and your associates will keep your remarks as brief as you can.

And we are so indebted to you for the fine work you have done in this area.

STATEMENT OF HON. ELMER B. STAATS, COMPTROLLER GENERAL OF THE UNITED STATES, GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY DWIGHT INK, DEPUTY ADMINISTRATOR, GENERAL SERVICES ADMINISTRATION, FORMERLY ASSISTANT DIRECTOR, OMB; BERNARD ROSEN, EXECUTIVE DIRECTOR, CIVIL SERVICE COMMISSION; THOMAS D. MORRIS, ASSISTANT COMPTROLLER GENERAL, GAO; JEROME A. MARK, ASSISTANT COMMISSIONER FOR PRODUCTIVITY AND TECHNOLOGY, BUREAU OF LABOR STATISTICS; JAMES A. CONLON, DIRECTOR, BUREAU OF PRINTING AND ENGRAVING; ECKHARD BENNEWITZ, DEPUTY ASSISTANT SECRETARY OF THE ARMY (FINANCIAL MANAGEMENT); AND FRANK ZARB, ASSISTANT DIRECTOR, OMB

Mr. STAATS. First of all, I would like to introduce my colleagues here.

Mr. Bernard Rosen, to my extreme right is the Executive Director of the Civil Service Commission.

To my immediate right is Mr. Dwight Ink, Deputy Adminstrator, General Services Administration, formerly Assistant Director, OMB.

Thomas Morris to my left is Assistant Comptroller General.

And they will all be participating in this hearing.

I would like to start out by saying, Mr. Chairman, that in order to preserve as much time as possible for questions and the participation of my colleagues I will go through the prepared statement and summarize it. I will be glad to stop at any point you like. This is a fairly long prepared statement. But I think we can save time if we do it that way.

Senator PERCY. Mr. Staats, may I comment that I have to leave. I may be able to come back. Mr. Sonnenfeldt is up for confirmation this morning in the Foreign Relations Committee and I have to be there. But I would like to express appreciation to the GAO for taking on a tremendous challenge once again. I would also simply say to the chairman that I am pleased we are having these hearings. I appreciate putting the emphasis of this committee on an increase of productivity. When we consider that approximately $149 billion in salaries are paid to Government officials, a small increase of productivity on the part of all employees, including those in Congress, would reap tremendous benefits for the Government. And once again I look on the expenditure of GAO's time in this area as an investment which can be repaid many, many times over. I think the start that you have made is exceptionally good.

I appreciate your colleagues being here with you this morning. I will stay for as long as I can.

Mr. STAATS. I am very pleased that you can be with us this morning.

Mr. Chairman, this is the first congressional hearing on this subject since we responded to your request in 1970, almost 3 years ago now. So that what we are presenting here today is essentially a report on 2½ to 3 years of effort in the area of productivity in the Federal Government.

The Joint Economic Committee, as you know, has had a longstanding interest in private sector productivity. It is important that the Congress have an equal concern with the public sector. And one of the reasons I particularly am pleased that you have called these hearings is that our hope would be that through the efforts of this committee and the report which may emerge from it that we will add the congressional interest dimension to what we think now is a very favorable climate within the Government and the whole public sector, for that matter, focused on productivity, as one way of reducing costs of Government and improving the services provided by Government.

So I will start by referring to the discussion of why productivity measures are important in the public sector.

Productivity in the public sector is beginning to receive the serious attention which it has deserved for a long time. We have come a long way from the once-held concept that productivity measurement and analysis is synonymous with the stopwatch and work measurement of employees. Appropriately there is growing recognition of the fact that improved output performance is a product not only of labor efficiency, but even more a product of improved capital equipment, technological changes, and improved supervision. In short, it is an indicator of output as effected by all of these factors. And here are a few reasons we have listed why it is so important.

First, the public sector either directly or indirectly buys about one-third of all the goods and services which make up the Gross National Product.

Second, the national indicators in the past have shown a zero productivity growth for the public sectors, and as one economist has estimated, there is not only a zero, but a negative productivity growth. So this kind of information is important.

Third, the Federal Government investment at the State and local level for the last 10 or 12 years has increased about 15 percent a year, to the point today where the Federal Government is supplying about 22 percent of the total revenues of all State and local governments. And that is another reason why we think the Federal Government should have an interest in productivity as it affects State and local governments.

Fourth, the Federal Government itself has devoted a great deal of attention to ways that we could increase productivity in the private sector. And important as this is, we think that there should be equal concern in connection with the productivity in the public sector.

And fifth, Senator Percy has already pointed out, the total payroll in the public sector, Federal, State, and local, is running about $149 billion a year. So even a slight improvement against that kind of a total can be tremendously important.

We point out that our objective has been to develop measures which can be consistently measured year after year.

For example, the Postal Service keeps detailed data on the numbers of pieces of mail and parcels of each class which it delivers. These are the final products of the work of its 700,000 employees.

Similarly, the Social Security Administration keeps precise data on the number of actions taken to provide payments and other serv-

ices to the millions of beneficiaries of its various programs. And these are the final outputs of its some 62,000 employees.

The Bureau of Engraving and Printing keeps complete records of currency, stamps, coupons, and other documents which are the final products of its 3,500-man work force.

We obtained reports from 187 organizational elements in some 45 agencies as part of this study. Our report covered over 1.7 million man-years of employment, representing 60 percent of the civilian man-years worked in fiscal 1972, accounting for $20 billion in civilian payroll costs.

The data which was developed as a result of this study identified 776 different work outputs. When this data was aggregated, using techniques such as those BLS employed in the private sector, the Federal agencies in the 6-year sample showed annual rates of productivity improvement which varied from 1.1 percent to 2.8 percent, with an average annual gain of 1.7 percent. Data for fiscal year 1973 is now being gathered, but it is too early to predict that year's trend. It is interesting to note, however, that each 1 percent improvement in productivity of the Federal sector equals a payroll savings of approximately $200 million.

An overall review of the data reveals that the Federal sector is undoubtedly the world's largest and most diversified conglomerate. It includes a number of organizations which have been increasing their productivity as much as 5 percent or more annually, which is an excellent record. But it also includes activities which have shown declining productivity, and others which have tended to remain constant in their output per man-year. In fact, between 1971 and 1972 the number of organizational elements showing increases and decreases was approximately equal.

We point out that we believe the most important use of productivity indices is in analyzing the causes of productivity change, and in taking management action where possible to correct conditions that are causing productivity to lag. It is also apparent that we should expect fluctuations both up and down among Federal activities from year to year as a result of numerous factors, only some of which are controllable by Federal managers. Because of these characteristics and the limitations of productivity indicators, we believe that the analysis of Federal productivity should deal with trends in crosscutting functions, rather than by agencies as a whole. The agencies themselves should use the individual data in assessing their own performances and reporting on that performance to the OMB and the Congress, as appropriate.

This brings me to probably the most important aspect of our project, and that is—what factors cause productivity change in the Federal sector? Productivity measurement would be rather meaningless if it consisted only of gathering statistics and adding up the results.

The important point is, what do we do about the indices after we obtain them? We discovered that this is the most important value of productivity measurement in the Federal sector. The relevant question is—is the change which occurred as a result of planned actions to improve either quantity or quality of performance, or is it simply a happenstance?

What are the positive and negative factors which produce the result?

How can we optimize productivity in relation to service to the public, the accuracy of output, or other essential quality criteria?

Which will be the trend, and what can we do about it now?

The joint group that made this study addressed questions of this type to a number of Federal managers. We grouped the 187 reporting organizations into the functional categories which have similar work processes or program missions. Altogether, 16 such functional categories were identified. The list is shown in attachment 2 of my prepared statement.

Now, we would like to refer briefly to a few of the categories to illustrate the kind of insights which productivity research is giving to the Federal managers.

The first one is computerization of clerical operations. In the table we show the analysis of some 62 organizational elements showing productivity increases in the 6-year period of 3.3 percent for citizen's records activities, 9.5 percent for those involved in loans and grants, and 5.7 percent for regulatory activities.

As an example, I would like to refer to the results of the work at the Social Security Administration.

And here, Mr. Chairman, if we may, we would like to refer you to a chart [1] which Mr. Morris will explain which I think will do it more briefly and better than I can by reading the text here.

Mr. MORRIS. Mr. Chairman, these charts are also attached to our prepared statement. But just very briefly, in the paperwork area, one of the principal impacts on productivity over the last decade has been computerization. And the Social Security Administration illustrates this perhaps better than any other organization. By improved productivity they have been able to save the equivalent of about 32,000 man-years. Their strength today is 62,000. But they estimate that it would have been 94,000 had they not been able to achieve an annual productivity increase averaging about 5 percent over the last decade. It has been 4 percent since fiscal year 1967, and it was actually greater in some earlier years.

The principal causes mentioned are the use of ADP for internal processing and by obtaining the reports of employee earnings from employers in tape form, so that they can be placed immediately upon their computers without the intervention of manual recordings.

Many other systems changes have contributed to this important result. But we wanted to stress this particularly at this point.

Mr. STAATS. Mr. Chairman, we next refer to the second of these categories, which is the mechanization——

Senator PERCY. Could I ask for an explanation of that chart, Mr. Staats?

Mr. Morris, do I understand that there were 93,700 people employed in 1964?

Mr. MORRIS. No; 93,700 is the number which would have been required in 1973 if productivity rates which prevailed in 1964 had continued.

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[1] See chart No. 1, p. 27.

Senator PERCY. I want to get a comparison of workloads actually covered by the different number of people. I am not sure I understand that.

Mr. MORRIS. That data is available, sir.

Senator PERCY. Were there actually 93,700 employees in 1964 and only 61,000 in 1973?

Chairman PROXMIRE. I understood if you had the same output per man-year in 1973 as you did in 1964 you would have had 93,700 employees.

Senator PERCY. I see. The output level is kept constant?

Mr. MORRIS. Yes; for purposes of showing the savings from improved productivity. Their workload has gone up every year, but they have been able to increase their manpower much more slowly by achieving a 4-percent greater output per man-year on the average since 1967.

Senator PERCY. There are actually more employees, today, but it is because of the increased workload?

Mr. MORRIS. That is correct, sir.

Senator PERCY. OK.

Mr. STAATS. The point is, if the productivity had not increased it would have required 93,700 instead of the 61,777.

Senator PERCY. That is somewhat comparable to A.T. & T.'s estimates that if it had not gone to automatic dialing, they would now employ every employable woman in the United States. This is the same sort of basis.

Have you ever compared, for example, the Social Security Administration with comparable types of work in insurance companies, A.T. & T. or wherever in the private sector, to see how we in Government compare with what the private sector has done?

Mr. MORRIS. We are endeavoring to do this at the moment, for a number of functions, this being one. We are going to submit for the record the full story on social security.

Chairman PROXMIRE. Unfortunately they have to have a quorum on the floor of the Senate. Because of the weather they are having a great deal of trouble getting one. So we will recess for about 6 or 7 minutes and come back.

[A short recess was taken.]

Chairman PROXMIRE. Go right ahead, Mr. Staats. I apologize.

Mr. STAATS. Mr. Chairman, the question Senator Percy just raised before the break is a very significant one, and we think a very important one, and one on which we would like to see more work, which is to try to compare the Government sector with those which may be comparable in the private sector. Not that these conditions may always be the same, but they can suggest areas where we can learn to improve productivity in the public sector. And we think, quite modestly, that industry can learn in some cases from what we are doing in the public sector. Part of our problem in making these comparisons is the lack of data on the private side. Mr. Mark, from the Bureau of Labor Statistics, was just telling me that in the private sector we have separate measurements for about 12 percent of the private economy, and this compares with the 60 to 65 percent that we have been able to identify

and measure in the Federal Government. But it is in a useful, interesting area for further analysis as we see it.

Chairman PROXMIRE. Are you quite positive that that estimate is correct, about 12 percent can be measured, you say, or is measured?

Mr. STAATS. It is measured.

Mr. MARK. The figure that I was referring to is the coverage of private sector for which we have separately published industry measures of productivity which we consider sufficiently reliable for publication.

Chairman PROXMIRE. What is the overall productivity statistic that the Government issues regularly which indicates—I think quarterly, is it not?

Mr. MARK. Yes.

Chairman PROXMIRE. At any rate, it is a regular measure it is supposed to be, of the private sector. And I thought it was comprehensive and complete, and if not based on an aggregate of individual judgments, based on some measure between the input and the production or the output.

Mr. MARK. The output measure for that is based on the Gross National Product as measured in the national accounts. And it has coverage for all sectors in that sense.

Now, some of those sectors separately measured in the national accounts have different degrees of reliability. It does represent, though, the overall activity of the economy as such.

Chairman PROXMIRE. One more question on this point, Mr. Staats. If the private sector has only about 12 percent actually measured, and the Federal Government has 60 percent, and there is an increasing amount—I don't know what it is—for the State and local governments, when would it be wise in your view to incorporate into our productivity measurements the Government? I understand presently you still have the statistics which are based only on the private sector and exclude Government, on the assumption that Government productivity is not significant.

Mr. STAATS. Eventually we think, Mr. Chairman, that this would be a desirable thing to do. Mr. Mark may wish to comment on this. And I would appreciate his thought with respect to it. But our main effort at this point has been to try to get reliable measures in the public sector, and the Federal sector particularly, with the idea that eventually we would have possibly a single national index.

Do you want to comment on that, Mr. Mark?

Mr. MARK. The decision to include the public sector measure in the total measure would really be dependent on the national accounts treatment of it. In the whole system of national accounts, for a variety of reasons, the measurement of Government output is based on wages and salaries expressed in base-year dollars. This, in turn, is derived by moving base year compensation by changes in Government employment. We have to stay with that measure in order to be consistent with the entire framework of the national accounts. In the eventuality that the national accounts would be modified to incorporate those, it is possible that the national accounts would give a better measure of Government output, and then we would include

them in the Bureau of Labor Statistics measures of productivity for the overall economy.

Chairman PROXMIRE. Have you been discussing that with them? Do you think they will make it in a year or so?

Mr. MARK. I don't know. We have had discussions with them.

Chairman PROXMIRE. Go right ahead, Mr. Staats.

Mr. STAATS. Next we refer to two examples where mechanization has played a large part in improving output, and I would like to ask Mr. Morris again if he would explain the charts. I think they bring this out very vividly.

Mr. MORRIS. One of the things we have learned about Federal activities is that industrial-type activities—those that manufacture and produce products for sale to others—have the same experience as their counterparts in the private sector in that mechanization and automation are very important ingredients of improved productivity.

One interesting illustration——

Chairman PROXMIRE. This is the area which is the most comparable to the private sector. Is that right?

Mr. MORRIS. This is the closest to the private sector.

Chairman PROXMIRE. You do some manufacturing and you do some distribution?

Mr. MORRIS. Yes, sir. This is the Topographic Division of the Department of the Interior. Just briefly, this is a group of 1,300 employees, and they produce topographic maps on about 100,000 square miles each year. The important story that this chart [1] tells is that the output per man-year has gone from 66.8 square miles to 84.9 in the last 5 years, with a 27-percent productivity gain. That has come about through the ingenuity of the management of this Division. Through modernizing its equipment and through research it has produced novel types of equipment, such as super-wide-angle cameras and stereotype equipment, to assist in map production. They have put in a nationwide ADP mapping system, including automatic ADP plotting equipment, as it is called; and they have greatly enhanced the training and stability of their work force.

Chairman PROXMIRE. This raises a question which would bother me at this point if you just left it there. It seems to me that in the private economy, when you measure productivity increases you have to include the cost of the equipment that you buy. You can't simply do it by comparing man-year with man-year. It may be less effective if the equipment is very expensive, or it wears out quickly, or something like that. Is that correct, even though the number of man-years may be less on that particular job?

Mr. MORRIS. The cost of equipment, capital investments, is not reflected in these indexes. It is not included in the Bureau of Labor Statistics indexes either.

Chairman PROXMIRE. So to take the 27 percent increase in 5 years and compare it with private industry would not be a proper comparison. Is that correct?

Mr. MORRIS. It would be a proper comparison with the data that the Bureau of Labor Statistics publishes quarterly, that you referred to

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[1] See chart No. 2, p. 28.

earlier. This data too is based on output per man-hour in the private sector.

Chairman PROXMIRE. What I am getting at, their output figures would also include the amount of man-hours that has to go into producing the machines which would make this particular department more efficient. Do you see my point? In the private sector you might buy the machine, for example, that would take just about as much in man-hours to produce as the man-hours it would save for the company that buys it. Normally that company wouldn't buy it because there wouldn't be sufficient economy in doing so.

Mr. MORRIS. That is correct, sir.

Chairman PROXMIRE. But in the Government picture if all you measure is the amount of manpower and not the cost of the machine, if that isn't cranked in in any way, it seems to me that the comparison wouldn't be apt.

Mr. MORRIS. Let me first say that we do in Government, as in the private sector, make cost-benefit analyses before we buy the equipment. We know it will pay for itself within 1 year, 2 years, or whatever. And there are illustrations we will come to in our testimony to that effect. We have not learned how to include those costs in computing productivity indexes. We are still working on that.

We have one illustration for you, if I may turn to it, where this is being done in the Bureau of Engraving and Printing, headed by Mr. James Conlon, who is with us this morning. They compute their productivity both with and without capital investment costs added in. This chart [1] shows their productivity on a straight manpower basis only. Their output in this 6-year period from 1967 to 1973 measured 54 percent, but their employment rose only 22 percent, with a consequent improvement in productivity per man-year of 26 percent.

Now, I would like, with your permission, sir, to ask Mr. Conlon to comment further on how he reflects capital costs, which are so important to him in achieving these results.

Chairman PROXMIRE. Then we are going to have to go very quickly to the floor again, because now there is a rollcall. Will this take 2 minutes or longer? Why don't we go, then, and come back?

Senator PERCY. Could I ask just one question? What attitude do you find on the part of Government officials in the various departments and agencies? Do you find a sense of the importance that this has, a desire to accomplish this goal? Are they able to set up goals as easily as the private sector?

Mr. MORRIS. Senator, this varies to extremes. In the very highly automated production-type activities such as engraving and printing, I think we compare with the best in the private sector. In those that are more manpower oriented, very frequently the opportunity to measure productivity has not been present, and the awareness has not been there. This project, however, is causing managers in all agencies to give more attention to what causes productivity to go up, stay level or go down. We think the awareness factor is one of its most important benefits.

Mr. STAATS. You really can't do much about it until we have learned how to measure. Because that is really the first step. And we are going

[1] See chart No. 3, p. 28.

to touch on several points later on in our statement as to ways in which we can increase their incentive to use productive analysis. And one reason we welcome this hearing is because this will give another dimension of interest to this whole subject.

Chairman PROXMIRE. We will be right back. Apologies.

[A short recess was taken.]

Chairman PROXMIRE. Go right ahead.

Mr. STAATS. Mr. Chairman, Mr. Conlon, who is head of the Bureau of Printing and Engraving, is with us this morning. We would like to have him just take a few minutes to explain this chart. I think it will bring out also the point that you were asking about in terms of productivity in relation to total cost as well as to manpower input.

Mr. CONLON. Mr. Chairman, if I were to synthesize the factors that have permitted us to be what I objectively believe is a productive operation, it would be first of all the fact that we operate from a revolving fund established by the Congress in 1950.

Second, that we maintain a highly sensitive unit cost situation which identifies the increments of cost in every operation, every facet of the operations.

And third, that in the recent past, particularly 5 or 6 years, we have given a very high emphasis to our human resources.

And finally, the fact that because of the nature of our operations, its uniqueness and technology, we have to do a great deal of our own in-house designs and engineering work, and most of our equipment is pretty much custom designed.

I would say that our unit cost structure, and our unit cost identification, causes managers to be highly sensitive to the cost effectiveness of operations.

The accumulation of this kind of date and its identification of trends and specifics with regard to effectiveness has caused us to be able to identify the best areas for capitalization. In a highly labor intensive area, for example, we have found that the impact of inputs of cost can be quite serious. And accordingly, it has been the catalyst for our motivating innovations in these operations.

In the revolving fund structure, because of its being established in 1950, we found difficulties in acquiring sufficient funds through depreciation to be able to modernize at the rate that we would like to. And in the recent past we have asked and received from the Congress some additional moneys to that fund. However, we were directed by the Appropriations Committees last year to sseek new methods of financing. In pursuing that we have developed some new techniques for financing. Hopefully by July of this coming year we are going to institute a surcharge approach to customer agencies which will permit us to accumulate funds for further modernization.

We have also innovated a new potential in lease purchase. The usual lease purchase situation is not useful when we do not have funds, because of the Federal procurement requirements that we have sufficient funds in reserve to capitalize or finance the contingency situation of our cancelling equipment. So by working with highly competitive manufacturers we have developed a proposal for lease purchase without the contingency liability requirements. And we are about prepared to sign a contract for new major press equipment which will mean no

cash outlay to the Government in this respect. Our analysis of the long-range impact identifies, paradoxically, that the payback to Government will actually be better out of this new approach.

We have also worked with some of our customer agencies, notably the Postal Service, in identifying for them on cost benefit analysis where immediate capitalization would result in very fast payback. We had one situation relative to the packaging of coils of stamps, wherein we identified that for a capitalization of something like $550,000 we could get a payback of about $400,000 a year. The Postal Service worked with us and has agreed to advance us the funds to permit this kind of acquisition.

Similarly encouraged by this, we have looked at other facets of that operation for the same reasoning.

Chairman PROXMIRE. Are you saying that you get a payback in effect in about 16 or 17 months that covers the entire cost?

Mr. CONLON. In that instant situation, yes, sir. When we look at our major capitalization such as the press equipment I talked about, we would anticipate payback in something like 5 years.

Chairman PROXMIRE. Payback, does that mean it pays for itself?

Mr. CONLON. Yes, sir, it does.

Chairman PROXMIRE. If a private manufacturer industry decides to buy some equipment—say it is a printing company, and they buy the press, and they calculate the press will pay for itself, because it would return its full cost in a period of 4 or 5 years, this would be pretty much comparable, is that right?

Mr. CONLON. We use exactly the same criteria, I believe, in measuring the cost payback benefits. Consequently, as we look ahead we have to do our own modernization, as I mentioned.

Chairman PROXMIRE. Do you have any advantage in terms of the Government's ability to borrow money cheaper?

Mr. CONLON. No, sir. I wish we had that advantage. That is one of the longer range areas that we have identified. I think it is a viable situation.

Chairman PROXMIRE. How would you compare it with Western Printing Co. in Racine, Wis.? What difference would there be in their payback computations, or paying for itself computations, or their equipment compared to yours?

Mr. CONLON. I would say it would be identical because the cost of money would be the same for them as for us.

Chairman PROXMIRE. Why wouldn't it be less for you, inasmuch as the risk is zero for the lender?

Mr. CONLON. The risk is not zero. This has been part of the selling philosophy that we have had to use in the instant case that I described of being able to get a lease purchase without any contingency liability.

Chairman PROXMIRE. In the event that it didn't pay out you would still pay for it, wouldn't you? There is no conceivable circumstance in which the selling to you as an agency of the Government wouldn't be paid?

Mr. STAATS. It would be riskless as far as the persons lending the money is concerned.

Chairman PROXMIRE. I see. Then why wouldn't the interest rate be less than it would be for a private loan?

Mr. STAATS. If I may say so, it would be a little bit less. The experience that we have had in the Government, TVA and others who have the authority to go into the market, they have been borrowing for somewhat less than the commercial rate. It is still in excess of the Government Treasury rate, but it is lower, because of the consideration of the de facto guarantee that lies behind those borrowers.

Mr. CONLON. If I may amend that, Mr. Staats, in the instant case our custom designed equipment does not have a reusable value as compared to the commercial printing equipment. We operate primarily by the intaglio process. There is not a market outside of this in the United States——

Chairman PROXMIRE. The lender does not have to look to the resale value of the equipment you have, all he has to do is remember the fact that—it is guaranteed, and you forget how good the equipment is.

Mr. STAATS. That is the reason it is a lower rate of interest.

Chairman PROXMIRE. OK.

Mr. STAATS. Thank you very much, Mr. Conlon.

Chairman PROXMIRE. That is very helpful. I am delighted to get that comparison, because it is most useful. Because in discussing this with the people in the private sector one of the questions they raise, is that the Government has a big advantage here, and you are not comparing productivity properly. And I think you have answered that.

Mr. CONLON. I neglected to mention in response to your question earlier that we do include in our inputs the cost of equipment through depreciation. So it is reflected definitely in our productivity index.

Chairman PROXMIRE. Very good.

Mr. STAATS. If I may move on, we point out here that some of the most spectacular gains in productivity have been related to programs where the workload has increased very sharply. And we list several of these. But then we also have the reverse situation. In contrast to activities whose productivity benefits from workload increases, we have found that activities experiencing sharply declining workloads—or those with a highly uncertain pattern—tend to have productivity deterioration. We noted, for example, that the Government's inhouse printing plants had shown a steady drop in output since 1968, with no reduction in employment and a consequent decrease in productivity per man-year.

Chairman PROXMIRE. By and large that is true in the private sector, too. You will notice the whole private sector productivity either grows slowly or actually declines in a period of recession. In other words, when your activity is reduced you hold onto your work force, and employers are reluctant to fire people, and the result is that productivity declines.

Mr. STAATS. And your most productive laborers are kept on generally. And then the situation goes up in the cycle, the experience of the private sector, I think much like we have here in evidence in this prepared statement.

But in this case, and in the case of the printing plants, there is a special situation. A major contributing factor to this decline in productivity was the fact that more of the larger jobs and the easier work—longer runs, single-color jobs, work without short deadlines—

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was being contracted out, leaving the smaller jobs and the more difficult work to be performed inhouse.

Another example involves the large number of activities which purchase, store, and issue supplies to Federal users throughout the world. They employ 155,000 personnel and manage several million items. These supply activities are located primarily in the military services and in the General Services Administration. With the winding down of Vietnam, their workload dropped steadily—at a rate, recently, of 6 percent a year. Surprisingly, however, these agencies avoided an overall loss in their productivity per man-year by reducing personnel assigned at least as fast as workload decreased, as well as by comprehensive programs of mechanization in warehousing and inventory control activities.

Chairman PROXMIRE. You say it is surprisingly able to do this. I think that is most impressive.

Mr. STAATS. We think it is unusual.

Chairman PROXMIRE. I wonder if you could generalize on that basis? Do you think that this is common to primarily military oriented organizations, because they are used to cutting back in the event of the cessation of hostilities, and so forth?

Mr. STAATS. May I ask Tom Morris to respond to your question?

Chairman PROXMIRE. Yes.

Mr. MORRIS. Sir, we are not really sure. We think part of it is due simply to good management in obtaining responsive adjustment of work forces to workloads. Another factor seems to be that that class of employee, the blue collar class, is somewhat more accustomed to surges and declines in workloads, in shipyards, and warehouses and other functions. So what we have learned here is that it is more likely that we can keep an economic balance between staffing and workloads in this class of activity. But again, it seems to us an indication of good management, alert management.

Chairman PROXMIRE. Shouldn't that be one of the fallout benefits, the productivity measurement, to make management more sensitive to this, and as they find their productions down they ought to look for ways of reducing their costs?

Mr. STAATS. Not only for the manager directly, but for OMB and for the Congress as well.

Mr. Chairman, the next point relates to Senator Percy's question a few minutes ago as to the attitude within Government. In our discussions with several hundred Federal managers during the past 2 years, we have been told that the initiative to improve productivity is sharply reduced when:

Arbitrary personnel ceilings make it impossible to maintain adequate service standards or result in the accumulation of intolerable backlogs.

The requirement to reduce average salaries results in employing less qualified personnel who have higher attrition in the first year and less promotion potential.

Mandatory personnel cuts are applied equally to those who have achieved greater efficiency and to those who have not.

Such complaints have no easy solutions since they indicate the need for more skill in managing and in rewarding good performance. In

our future studies we plan to highlight good and poor experience through case examples.

It is obvious that good personnel practices here are a planned and important part. And Mr. Rosen will speak to this point in a few minutes. But we also point out here, I think maybe another good management example encountered during our work was the progress of the Treasury Department's Bureau of Customs, which has experienced a doubling in foreign mail parcels processed since 1967. This illustrates the importance of good management system.

And again we have a chart [1] here which I think will be helpful.

Mr. MORRIS. This was one of our case studies in the last year. What we discovered was that the Bureau of Customs in its processing of incoming foreign mail parcels had experienced almost a 100 percent increase in the 5-year period from 1967 to 1972. It has been able to accommodate this with only a 44-percent increase in man-years—growing from a staff of 511 to 735 assigned to this type of work. The result was a productivity gain of 34 percent.

We found that many changes had occurred to make this possible—better facilities, specialized facilities for different types of mail, better systems, but most important, specialized personnel opportunities. With the growing workload they were able to offer better career and upward mobility opportunities to their staff, and better performances resulted because of the better personnel practices. We think about half the benefits here could be attributed to that.

Mr. STAATS. If I may, I would like to turn now to the importance of capital investment in productivity improvement.

In some ways I think this could well be the most important point of all resulting from our study.

Authorities have concluded that improved technology and the availability of more capital per worker have been the major sources of productivity growth in the private sector over a long period of time. In light of this finding, the joint project team studied ways in which Federal agencies now select capital investment items for inclusion in their annual budgets. The team found that Federal managers sometimes lack the incentive and opportunity to seek funds for cost-reducing capital investments. Such projects tend to drop out of tight budgets when they have to compete with items related to program requirements or current priorities, such as pollution abatement, health, and safety. This contrasts sharply with the experience in the private sector, where top management and boards of directors keep the spotlight on productivity investments.

To document opportunities for more timely financing of productivity-improving investments, the joint team obtained data on unfunded projects from 14 agencies and selected a number for analysis.

There is a special report on this, Mr. Chairman, which I believe you have before you. But in this sample the team identified 392 projects which would be self-liquidating in less than 3 years—with one time savings of $62 million and recurring annual savings of $66 million. The team believed that this sample covered only about half of the opportunities which might have been discovered in a complete inven-

[1] See chart No. 4, p. 29.

tory. Examples of the investment possibilities are modern materials-handling equipment, tape-driven machine tools, automated laboratory equipment, mechanized warehouse equipment, consolidation of facilities, and others.

Concurrent with the team's study, the Army conducted its own test by allocating a $500,000 fund, available only for fast payback capital investments, to its Ammunition Procurement and Supply Agency (APSA) in Joliet, Ill. APSA was allowed to make immediate decisions on proposed investments by the Government Owned Contractor Operated (GOCO) ammunition-loading plants where the payback could be achieved in 2 years or less. In a few months, 24 projects were approved which would return $1.8 million in annual savings. The majority of these projects have paid or will pay for themselves in less than 180 days following installation. Illustrations are:

An automatic nailing machine costing $38,185 saved 20 men in constructing pallets for bombs. The annual savings of $240,000 resulted in an amortization period of 57 days. And there are other examples here. We have charts [1] which again Mr. Morris will explain to you, which I think illustrates very graphically what savings are possible.

Chairman PROXMIRE. That first example you gave, an automatic nailing machine costing $38,000 and saving 20 men, that would pay for itself in less than a year, wouldn't it?

Mr. MORRIS. In less than 3 months.

This is the startling thing about what this study has revealed, that there are many, many investments at activity locations which are passed up——

Chairman PROXMIRE. Have the newspapers picked up this at all? Has this story been released or handled in such a way that the newspapers have let the success story be known.

Mr. MORRIS. No, sir.

Chairman PROXMIRE. I am as guilty as anybody, or more so, for criticizing the Defense Department for wasting money and for all their failures. I think something like this—you ought to let this one read as something that is an example of the success of the military.

Mr. STAATS. That is a very good point you are making, Mr. Chairman, because we ought to be in a position to give more recognition to people who are willing to make these kinds of decisions.

Mr. INK. Mr. Chairman, if I might just add a note, there have been several instances in which this type of thing has been released to the press. But frankly, we have had great difficulty in interesting the press in picking it up.

Chairman PROXMIRE. Mr. Ink, could you give me, when you get a chance, maybe in the next couple of days write me a letter giving me the instances that you have in mind. Maybe if I put them all together I could get together with some press people and see if we can give that a ride.

Mr. INK. I don't have a complete listing, but I will supply it for the record.[2]

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[1] See charts Nos. 5 and 6, p. 29 and p. 30, respectively.
[2] See Mr. Ink's letter, dated Jan. 4, 1974, beginning on p. 69.

Chairman PROXMIRE. Just give whatever number of examples you think would be most impressive. I think this one right here if presented in the right way—if you can pay for an investment in 3 months, that is fantastic. Anybody who didn't do that in private industry would be out on his tail if he had any kind of board of directors.

I am sorry to interrupt you, Mr. Morris.

Mr. MORRIS. That is all right, sir. You made the point so quickly that I didn't feel it necessary to proceed.

What we have learned is that our appropriations process and our budget planning process just simply isn't geared to permit this kind of expenditure to take place in a timely way. The appropriation process may run 18 to 20 months for that $38,000 item. We not only lose the saving during that time, but when we have got to the point of finally buying it there is probably something else that we should do with those dollars. So we have discovered through this study that we need much better procedures for allowing people to proceed quickly to make investments that are going to pay back in a few months' time. Out of 24 cases one paid back in 30 days, five in 2 months, four in 90 days, six in 180, and only eight went over 6 months. The Air Force and the Navy are planning similar tests now, we are advised.

Mr. STAATS. Why don't you go ahead and present the other charts while you are there?

Chairman PROXMIRE. Only eight went over 6 months, and in 6 months to 2 years they had all paid for themselves?

Mr. MORRIS. Yes, sir. Altogether there were 24 cases. Those are just illustrations. And we have all 24 which will be submitted for the record.[1]

Mr. Bennewitz of the Defense Department, who is with us, is responsible for this program. As you see, we have cases where expenditures of $50,000 were paid back in 41 days. So it is obvious that there are many opportunities that we have never known about, that have been buried.

Chairman PROXMIRE. That automatic loading and small arms ammunition pays for itself in 41 days. It is astonishing.

Mr. MORRIS. That is right, sir, saving 42 people who were engaged in packing operations.

Chairman PROXMIRE. That is $435,000 a year. That is not peanuts.

Mr. STAATS. We could cite many other examples, Mr. Chairman, but these are just a few that help bring out the basic point. We cite a couple of others here, and there are many more in the document which we have given to you.

Chairman PROXMIRE. Maybe, Mr. Ink, if I just go through this a little more carefully than I have had a chance to I can get them out of here. This chart itself gives me great success stories.

Mr. STAATAS. We are advised that the Air Force and the Navy are considering similar tests to the ones we have just referred to here. The experiences revealed here are of such value that we are submitting a more detailed writeup on it for inclusion in your hearing record.[2] We think it is very important.

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[1] See table entitled "Self-Amortizing Equipment Investments," in Mr. Bennewitz' prepared statement, p. 34.

[2] See Mr. Ink's letter, dated Jan. 4, 1974, beginning on p. 69.

Mr. Chairman, I might digress here to say that one of the most encouraging things about this whole study that we have done is to get people to be thinking in terms of productivity analysis, capital investment decisions, personnel management, and so forth. So that this is one of the fallouts or byproducts that we are getting, from the very fact that we are beginning to focus now on productivity and output measures.

After considering these findings, the joint team concluded that several actions were necessary to insure timely capital investments in support of future productivity improvements:

First, the need for clear visibility in the Federal budget process, through a separate declaration to OMB and the Congress, of capital items with productivity-enhancement potential.

Second, expert attention to developing high-payoff capital investment opportunities. This means adding to agency organizations personnel trained in identifying such opportunities.

Third, better audits of actual results obtained to insure credibility and achievement of the results anticipated.

Fourth, timely financing. A study of ways to achieve this objective is continuing. It may be that legislation may be necessary to allow certain activities, particularly those operating under industrial or revolving funds, the authority to borrow or otherwise establish reserves for new equipment purchases.

Chairman PROXIMIRE. Could I interrupt at this point and say that I think it would be very helpful—I don't know if you can do it, if you are in a position to do it—if we could work in the direction of trying to determine just some examples for each subcommittee chairman, the House and Senate Appropriations Committees. For example, I am chairman of the subcommittee that handles the money for HUD, the Veterans' Administration, and for Space, and so on. If I could show some examples of some savings there in each of these agencies, any three or four of those agencies, I am sure that my opposite number in the House, Congressman Boland, would be just as interested as I am, or more so. And I think this is true right down the line of all the subcommittee chairmen of the House and Senate. And I would think that the agency heads would also be very interested in this kind of thing if it is called to their attention.

Mr. STAATS. You have anticipated me a little bit here, because in our future plans we say in the prepared statement that the joint financial management improvement program task force, in which GAO will actively participate, has been assigned the responsibility of analyzing the factors which have caused productivity changes and preparing an annual report to the President and the Congress. The report will analyze productivity trends and present case studies to illustrate factors contributing to productivity increases and decreases. The task force will also continue to seek opportunities for expanding the coverage of the indexes.

Now, here is something that is relevant to your question, Mr. Chairman.

In addition, GAO plans to report annually to the Congress on the agencies' progress in, (1) identifying opportunities for using labor-saving equipment, and (2) acquiring it. We believe such visibility is necessary to insure attention to such investments, without which the

Government will fall short of achieving its full potential for improved productivity.

You have made a good suggestion, I think, here, that we could bring this down by agencies and by subcommittees of the Appropriations Committees.

Chairman PROXMIRE. I think we would all be enormously grateful. We are all looking for these things, and we want to do something that will enable us to get more for the taxpayers' dollars.

Mr. STAATS. We are very enthusiastic about this approach, and we think it should be extremely helpful to both the agencies and the Congress.

[The prepared statements of Mr. Staats and Mr. Bennewitz, together with a report from the Department of Health, Education, and Welfare follow:]

PREPARED STATEMENT OF HON. ELMER B. STAATS

Mr. Chairman and members of the subcommittee, I am pleased to appear with my colleagues today to report to you on a joint effort—begun at the request of this Committee in the fall of 1970—to assess the feasibility of measuring and enhancing Federal productivity.

In making the request, Chairman Proxmire said:

> "In view of the impotrance of the Federal sector to the economy as a whole, and in view of the responsibility vested in Congress for controlling Federal expenditures, I find it distressing that we have no real measures of efficiency for the Federal sector."

After receiving this request, I suggested to the Director of the Office of Management and Budget (OMB) and to the Chairman of the Civil Service Commission (CSC) that we conduct a joint review of the feasibility of measuring the Federal sector productivity. They readily agreed.

I am accompanied this morning by the three Directors of this joint effort.

Mr. Dwight Ink, Deputy Administrator, General Services Administration (formerly Assistant Director, OMB).

Mr. Bernard Rosen, Executive Director, Civil Service Commission.

Mr. Thomas D. Morris, Assistant Comptroller General.

I am also pleased to be joined this morning by Mr. Frank Zarb, Assistant Director of OMB, and Mr. Jerome A. Mark, Assistant Commission for Productivity and Technology, Bureau of Labor Statistics, and several agency officials. We have also had excellent cooperation from the National Commission on Productivity.

On behalf of all those who have been concerned with this effort, we should like to express our appreciation for the initiative which the Joint Economic Committee has taken in this area. Your Committee has had a long-standing interest in private sector productivity. It is important that the Congress have an equal concern in the public sector. Your hearings should be most helpful in highlighting this important effort, the progress which it has made, and the work which lies ahead.

I will cover four points today:

First, why is productivity measurement an important tool for managers in the Federal sector and in the public sector in general?

Second, what have we learned about the measurability of the Federal sector?

Third, what are the factors which cause change in Federal productivity, and how can we influence such changes in the future? To illustrate this point, I will cite several case examples.

Fourth, how are we planning to perpetuate the lessons we have learned to date?

A. WHY ARE PRODUCTIVICY MEASURES IMPORTANT IN THE PUBLIC SECTOR?

Productivity in the public sector is beginning to receive the serious attention which it deserves. We have come a long way from the once-held concept that productivity measurement and analysis is synonymous with the stop-watch and work measurement of employees. Appropriately, there is growing recognition of

the fact that improved output performance is a product not only of labor efficiency but, even more, a product of improved capital equipment, technological changes, and improved supervision. In short, it is an indicator of output as affected by all of these factors.

Here are a few reasons why we stress the importance of public sector productivity:

Over the past decade, the public sector expenditures at all levels of government have increased at a faster rate than any other major category of expenditures which make up the Gross National Product. Governments, either directly or through others who receive government funds, now buy approximately one-third of all the goods and services which make up the Gross National Product.

At the same time, official national indices in the past have shown a zero growth in public sector productivity. As one economist has put it, past studies have assumed a "regrettable negative productivity rate in local, State, and Federal governments."

The Federal Government has an obvious interest in the performance and productivity of State and local government, highlighted by the fact that there has been an increase of about 10 percent a year in Federal assistance over the past decade. Currently, the Federal Government provides over 20 percent of the total revenues of State and local government through various forms of grant assistance and through revenue sharing.

The Federal Government has devoted a great deal of attention and effort to steps to increase productivity in the private sector as one way of improving the United States competitive position in world markets and to reduce inflationary pressures. We believe that Government should apply the same admonitions and efforts to its own operations and hopefully even set an example in its efforts to improve productivity in the public sector.

The potential for savings through increased productivity is highlighted by the fact that Federal, State, and local payrolls now approximate $149 billion. Thus, even a small change in productivity has tremendous potentials for savings or offsets to increased costs.

B. TO WHAT EXTENT IS FEDERAL PRODUCTIVITY MEASURABLE?

The challenge to the joint project team in the past 2½ years has been to identify those Federal activities for which quantitative outputs can be consistently counted from year to year and can be related to the manpower resources consumed in their production. We are interested not in the profusion of statistical data, such as one finds in budget appendixes, but in the significant indicators which reflect the overall output of orgnizational units. For example:

The Postal Service keeps detailed data on the numbers of pieces of mail and parcels of each class which it delivers. These are the final products of the work of its 700,000 employees.

Similarly, the Social Security Administration (SSA) keeps precise data on the number of actions taken to provide payments and other services to the millions of beneficiaries of its various programs. These are the final outputs of its 62,000 employees.

The Bureau of Engraving and Printing keeps complete records of the currency, stamps, coupons, and other documents which are the final products of its 3,500-man workforce.

After a period of trial and error, and with valuable guidance from the staff of the Bureau of Labor Statistics (BLS), we began the first Government-wide collection of productivity data in September 1972. We requested the best available data for the 6 years 1967–72 from all agencies with 200 or more employees. We asked for the actual quantitative information, in consistent terms, on (1) outputs, (2) man-years, and (3) wages consumed in producing these products.[1]

As a result:

We obtained reports from 187 organizational elements in 45 agencies. A list of these agencies appears as Attachment 1.

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[1] The detailed findings of this study are contained in a report entitled "Measuring and Enhancing Productivity in the Federal Government—Phase III Summary Report" and published June 30, 1973.

The reports cover over 1.7 million man-years of employment, representing 60 percent of the civilian man-years worked in fiscal year 1972 and accounting for $20 billion in civilian payroll costs.

The data identified 776 different work outputs. When this data was aggregated, using techniques such as those BLS employed in the private sector, the Federal activities in the 6-year sample showed annual rates of productivity improvement which varied from 1.1 percent to 2.8 percent, with an average annual gain of 1.7 percent. Data for fiscal year 1973 is now being gathered, but it is too early to predict the year's trend. It is interesting to note, however, that each 1 percent improvement in productivity of the Federal sector equals a payroll savings of approximately $200 million.

An overall review of the data reveals that the Federal sector is undoubtedly the world's largest, most diversified conglomerate. It includes a number of organizations which have been increasing their productivity as much as 5 percent or more annually—an excellent record. It also includes activities which have shown declining productivity and others which have tended to remain constant in their output per man-year. In fact, between 1971 and 1972, the number of organizational elements showing increases and decreases was approximately equal. Thus, one must observe that a simple overall index of Federal productivity change, like trends in the productivity and profits of business enterprise as a whole, includes wide extremes. Although it is incorrect to assume that past trends can be automatically projected into the future, they are nevertheless important in analyzing individual sectors of the total.

We conclude that productivity indices should be used primarily as trend indicators and are not conclusive as to overall management or program performance. The numbers require considerable interpretation along with other indicators of performance—especially those concerned with program results, effectiveness, and quality. We believe that the most important use of productivity indices is in analyzing the causes of productivity change and in taking management action, when possible, to correct conditions that are causing productivity to lag. It is also apparent that we should expect fluctuations both up and down among Federal activities from year to year as a result of numerous factors, only some of which are controllable by Federal managers. Because of these characteristics and the limitations of productivity indicators, we believe that the analysis of Federal productivity should deal with trends in cross-cutting functions rather than with agencies as a whole. The agencies themselves should use the individual data in assessing their own performance and in reporting on that performance to OMB and the Congress, as appropriate.

This brings me to the most important aspect of our joint research project:

C. WHAT FACTORS CAUSE PRODUCTIVITY CHANGE IN THE FEDERAL SECTOR?

Productivity measurement would be rather meaningless if it consisted only of gathering statistics and adding up the results.

The important point is: What do we do about the index after we obtain it? We have discovered that this is the most important value of productivity measurement in the Federal sector.

The relevant questions are:

Is the change which occurred the result of planned actions to improve either quantity or quality of performance? Or is it simply a happenstance result?

What are the positive and negative factors which produced the result?

How can we optimize productivity in relation to service to the public, accuracy of output, or other essential quality criteria?

What will be the trend? What can we do about it now?

The Joint team has addressed questions of this type to a number of Federal managers. We grouped the 187 reporting organizations into functional categories which have similar work processes, or program missions. Altogether, 16 such functional categories were identified, a list of which appears as Attachment 2.

Let me select a few of the categories to illustrate the kinds of insights which productivity research is giving to Federal managers.

1. Computerization and paperwork systems improvements have been significant factors in raising the productivity of the Federal Government's massive clerical operations

Several of the functional groups analyzed fall into this category:

Function	Man-years	Organizational elements	Annual increase 1967–72 (percent)		
			Output	Man-years	Productivity
Citizens records	108,000	14	5.6	1.9	3.3
Loans and grants	26,000	12	14.1	3.1	9.5
Regulatory activities	68,000	36	5.7	0	5.7
Total	202,000	62			

These activities are characterized by steadily increasing workloads accomplished with only small changes in manpower. In every case, computerization has been the major factor in improved productivity, along with associated systems improvements.

One of the most dramatic case studies is improvement in SSA, which services 30 million retirement survivors and disability beneficiaries and provides health insurance protection for 20 million individuals. SSA has measured its productivity since the mid 1950s and has been among the Federal leaders of better management. A detailed discussion of its productivity trends is contained in a separate statement which I am submitting for the record. In summary, this review indicates that:

In fiscal year 1973, SSA required 61,777 man-years to service its beneficiaries. At productivity levels prevailing in 1964 SSA would have required 31,919 additional man-years to perform this work.

These gains are attributed to:

Automation.

Systems improvement, including assisting beneficiaries by telephone rather than requiring office visitations.

Statistical analysis to eliminate or short-cut reviews of claims which have minimum errors.

Use of new techniques to measure and foster improved service to beneficiaries.

In reviewing the experience of the organizational elements which are involved in these functional areas, one is impressed with the fact that the lead-time between initiating the improvement and finally realizing it in terms of greater productivity may be 2 or more years and that forward planning is essential for continued productivity improvement.

2. Mechanization has been the dominant factor behind productivity gains in industrial and manufacturing-type operations

What the computer has done for mass paperwork activities, other forms of mechanization and automation are doing for the Government's numerous manufacturing and industrial-type activities. Examples are:

Function	Man-years	Organizational elements	Annual increase 1967–72 (percent)		
			Output	Man-years	Productivity
Power	29,657	5	18.4	7.7	7.7
Specialized printing	7,911	4	7.8	2.3	4.9
Transportation	111,458	4	5.7	2.2	3.6
Overhaul and repair	94,808	5	4.3	−2.0	7.0
Total	243,834	18			

These activities have enjoyed a high workload growth and possess a high potential for automation which its managers have provided in a timely manner. The power group is led by Tennessee Valley Authority (TVA), transportation by the Federal Aviation Administration (FAA), overhaul and repair by the military services.

Two very revealing case studies were made of agencies in the specialized printing function:

The Department of the Interior, Geological Survey, Topographic Division, each year maps over 100,000 square miles. Since 1967 the Division has steadily reduced its personnel while maintaining a relatively constant output. The result is that the number of square miles mapped per man-year has risen from 67 in 1967 to 85 in 1972—an annual gain of better than 5 per cent. The reasons for this improvement are:

20-year-old plotting instruments were replaced by new and more versatile equipment which is more accurate and productive since it permits the use of superwide-angle cameras.

Improved stereo-projection equipment was developed as a result of the Division's own research program.

A nationwide system of computers was installed to service the four mapping centers in performing intricate computations needed for precision mapping, as well as to substitute computer plotting for manual plotting.

Visual aids were developed to assist individual workers and to prevent deterioration in their eyesight, thus prolonging their years of high productivity.

The Bureau of Engraving and Printing (BEP) has increased its output of currency, stamps, and other instruments by better than 50 percent since 1967—achieving volumes of 3 billion items of currency and 26 billion stamps. To support this expansion, it has had to increase manpower by less than 25 percent, thus achieving an annual productivity growth exceeding 5 percent a year. This represents a savings of 1,000 employees. The most significant increase has been in currency production; former wet-printing-process equipment which turned out sheets of 18 subjects has been replaced by a faster dry-process printing which produces sheets of 32 subjects.

As will be discussed later, timely capital investment in labor-saving devices is an essential requirement for sustained productivity improvement in the Federal Government.

3. Fluctuations in the volume and complexity of work are a significant factor in productivity change from year to year

Our studies reveal that activities experiencing continuous growth in workload—such as those involved in maintaining citizens records, grant programs, power-generating activities, transportation, and the Postal Service—have improved steadily in their output per man-year. The pressure of continuous growth appears to foster systems improvements and to provide incentives for innovation which increase the output per person. However, we find real concern among these activities that standards of service to the recipient, or minimum levels of quality, not be reduced at the expense of achieving efficiency gains. We encountered excellent techniques for measuring quality being developed by SSA, IRS, and the Postal Services, among others.

In contrast to activities whose productivity benefits from workload increases, we have found that activities experiencing sharply declining workloads—or those with a highly uncertain pattern—tend to have productivity deterioration. We noted, for example, that the Government's in-house printing plants had shown a steady drop in output since 1968, with no reduction in employment and a consequent decrease in productivity per man-year. A major contributing factor to this decline in productivity was the fact that more of the larger jobs and the easier work (longer runs, single-color jobs, work without short deadlines) were being contracted out leaving the smaller jobs and the more difficult work to be performed in-house.

Another example involves the large number of activities which purchase, store, and issue supplies to Federal users throughout the world. They employ 155,000 personnel and manage several million items. These supply activities are located primarily in the military services and in the General Services Administration. With the winding down of Vietnam, their workload dropped steadily—at a rate, recently, of 6 percent a year. Surprisingly, however, these agencies avoided an overall loss in their productivity per man-year by reducing personnel assigned at least as fast as workload decreased, as well as by comprehensive programs of mechanization in warehousing and inventory control activities.

D. ENLIGHTENED MANPOWER MANAGEMENT IS A KEY FACTOR IN PRODUCTIVITY CHANGE IN THE FEDERAL SECTOR

I am sure we all agree that productivity improvement will not succeed if it is simply and primarily aimed at driving employees to work harder. Richard Gerstenberg, Chairman of General Motors, captured this very important point in the following statement:

> "I regard productivity as a measure of *management's efficiency*, or lack of efficiency, in employing all the necessary resources—natural, human, and financial."

In our discussions with several hundred Federal managers during the past 2 years, we have been told that the initiative to improve productivity is sharply reduced when:

> Arbitrary personnel ceilings make it impossible to maintain adequate service standards or result in the accumulation of intolerable backlogs.
>
> The requirement to reduce average salaries results in employing less-qualified personnel who have higher attrition in the first year and less promotion potential.
>
> Mandatory personnel cuts are applied equally to those who have achieved greater efficiency and to those who have not.

Such complaints have no easy solutions since they indicate the need for more skill in managing and in rewarding good performance. In our future studies we plan to highlight good and poor experience through case examples.

Another source for future productivity improvement will arise from providing employees broader opportunities to be involved in the final products of their organization—through such techniques as job enrichment, job restructuring, upward mobility, and participative management. We have noted that the organizations which are successful in improving productivity are also emphasizing better working conditions or better opportunities for their employees. Each such agency cited thus far (SSA, BEP, and Geologic Survey, Topographic Division) has had a significant program or project devoted to this objective.

Another good management example encountered during our phase III work was the progress of the Treasury Department's Bureau of Customs, which has experienced a doubling in foreign mail parcels processed since 1967. The Bureau has been able to assimilate this increase with an addition of only 44 percent in staffing by having better management systems and, particularly, by offering its employees opportunities to develop specialties in this function. This has afforded upward mobility to personnel who formerly were blocked in dead-end jobs.

E. THE IMPORTANCE OF CAPITAL INVESTMENT IN PRODUCTIVITY IMPROVEMENT

Authorities have concluded that improved technology and the availability of more capital per worker have been the major sources of productivity growth in the private sector over a long period of time. In light of this finding, the joint project team studied ways in which Federal agencies now select capital investment items for inclusion in their annual budgets. The team found that Federal managers sometimes lack the incentive and opportunity to seek funds for cost-reducing capital investments. Such projects tend to drop out of tight budgets when they have to compete with items related to program requirements or current priorities, such as pollution abatement, health, and safety. This contrasts sharply with the experience in the private sector, where top management and boards of directors keep the spotlight on such investments.

To document opportunities for more timely financing of productivity-improving investments, the joint team obtained data on unfunded projects from 14 agencies and selected a number for analysis.[2] In this sample the team identified 392 projects which would be self-liquidating in less than 3 years—with one time savings of $62 million and recurring annual savings of $66 million. The team believed that this sample covered only about half of the opportunities which might have been discovered in a complete inventory. Examples of the investment possibilities are modern materials-handling equipment, tape-driven machine tools, automated laboratory equipment, mechanized warehouse equipment, consolidation of facilities, and others.

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[2] The detailed finding of this study are contained in a report entitled, "Analysis of Productivity Enhancing Capital Investment Opportunities (Special Report #4)" and published September 1973.

Concurrent with the team's study, the Army conducted its own test by allocating a $500,000 fund, available only for fast payback capital investments, to its Ammunition Procurement and Supply Agency (APSA) in Joliet, Illinois. APSA was allowed to make immediate decisions on proposed investments by the Government Owned Contractor Operated (GOCO) ammunition-loading plants where the payback could be achieved in 2 years or less. In a few months, 24 projects were approved which would return $1.8 million in annual savings. The majority of these projects have paid or will pay for themselves in less than 180 days following installation. Illustrations are:

An automatic nailing machine costing $38,185 saved 20 men in constructing pallets for bombs. The annual savings of $240,000 resulted in an amortization period of 57 days.

A machine for automatically loading small-arms ammunition costing $50,000 saved 42 personnel engaged in packing ammunition rounds into ball clips. A savings of $453,000 amortized the cost in the first 41 days of operation.

An automatic laundry clothes dryer costing $25,000 saved five people amounting to annual savings of $50,000. This project repaid the investment in 180 days.

An automatic scrap compactor costing $29,000 increased the recovery price for scrap brass and reduced storage space, saving over $47,000 and repaying the investment in 160 days.

We were advised that the Air Force and the Navy are considering similar tests.

The experience revealed here is of such value that we are submitting a more detailed writeup on it for inclusion in your hearing record.[3]

After considering these findings, the joint team concluded that several actions were necessary to insure timely capital investments in support of future productivity improvements:

First, the need for clear visibility in the Federal budget process, through a separate declaration to OMB and the Congress, of capital items with productivity-enhancement potential.

Second, expert attention to developing high-payoff capital investment opportunities. This means adding to agency organizations personnel trained in identifying such opportunities.

Third, better audits of actual results obtained to insure credibility and achievement of the results anticipated.

Fourth, timely financing. A study of ways to achieve this objective is continuing. It may be that legislation may be necessary to allow certain activities, particularly those operating under industrial or revolving funds, the authority to borrow or otherwise establish reserves for new equipment purchases.

F. FUTURE PLANS

On July 9, 1973, the Director of OMB issued a memorandum to heads of departments and agencies, directing the continuation of the productivity measurement and enhancement efforts and spelling out roles and responsibilities.

The Joint Financial Management Improvement Program task force, in which GAO will actively participate, has been assigned the responsibility of analyzing the factors which have caused productivity changes and preparing an annual report to the President and the Congress. The report will analyze productivity trends and present case studies to illustrate factors contributing to productivity increases and decreases. The task force will also continue to seek opportunities for expanding the coverage of the indices.

In addition, GAO plans to report annually to the Congress on the agencies' progress in (1) identifying opportunities for using labor-saving equipment and (2) acquiring it. We believe such visibility is necessary to insure attention to such investments, without which the Government will fall short of achieving its full potential for improved productivity.

We are most appreciative of the continued interest and support of this Committee in this effort and hope that these hearings will stimulate still greater progress in measuring and enhancing Federal productivity.

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[3] See Mr. Ink's letter, dated Jan. 4, 1974, beginning on p. 69.

At this time, Mr. Chairman, I would like to suggest that Mr. Dwight Ink and Mr. Bernard Rosen elaborate on the future plans and roles of their respective agencies.

We will then welcome an opportunity to answer your questions.

Attachment I

LIST OF AGENCIES PARTICIPATING IN PHASE III STUDY

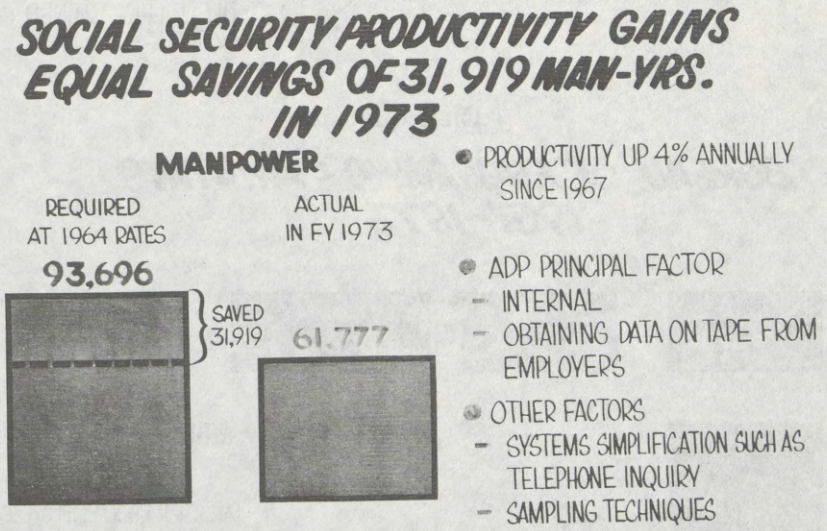
Agency	In thousands		Percent measured	Number of elements
	Total man-years	Measured man-years		
Postal Service	707.7	707.7	100.0	1
Defense	1,169.2	365.2	31.2	30
Agriculture, Department of	103.8	34.3	33.0	14
Atomic Energy Commission	7.3	.1	1.4	1
Civil Aeronautics Board	.7	.08	11.4	1
Civil Service Commission	5.7	4.4	77.2	6
Commerce, Department of	32.8	6.6	20.1	7
Export-Import Bank	.4	.15	37.5	1
Farm Credit Administration	.2	.02	10.0	1
Federal Communications Commission	1.6	.1	6.3	2
Federal Maritime Commission	.3	.3	100.0	1
Federal Mediation and Conciliation Service	.4	.4	100.0	1
Federal Power Commission	1.1	.8	72.7	1
Federal Trade Commission	1.4	1.4	100.0	1
General Accounting Office	4.5	.6	13.3	2
General Services Administration	39.7	33.1	83.4	12
Government Printing Office	8.7	8.7	100.0	1
Health, Education, and Welfare, Department of	108.4	79.0	72.9	11
Housing and Urban Development, Department of	17.1	9.3	54.4	3
Interior, Department of the	72.7	35.8	49.2	19
Interstate Commerce Commission	1.7	1.7	100.0	4
Justice, Department of	44.8	14.3	31.9	11
Labor, Department of	12.6	8.3	65.9	5
National Aeronautics and Space Administration	29.8	.03	.1	1
National Credit Union	.3	.3	100.0	1
National Foundation on the Arts and the Humanities	.2	.2	100.0	1
National Labor Relations Board	2.4	2.4	100.0	1
National Science Foundation	1.1	1.1	100.0	1
National Transportation Safety Board	.3	.3	100.0	1
Office of Economic Opportunity	2.4	2.4	100.0	1
Office of Emergency Preparedness	.4	.07	17.5	1
Panama Canal Company	15.7	15.7	100.0	2
Railroad Retirement Board	1.9	1.9	100.0	1
Renegotiation Board	.2	.2	100.0	1
Securities and Exchange Commission	1.4	1.4	100.0	1
Selective Service System	6.2	6.2	100.0	1
Small Business Administration	4.7	4.7	100.0	1
Smithsonian Institution	2.8	.7	25.0	1
State, Department of	25.1	2.7	10.8	4
Tariff Commission	.3	.04	13.3	1
Tennessee Valley Authority	26.1	26.1	100.0	3
Transportation, Department of	109.2	95.8	87.7	3
Treasury, Department of	104.9	80.1	76.4	18
United States Information Agency	9.8	2.3	23.5	3
Veterans' Administration	177.5	169.8	95.7	3
Total	2,865.5	1,726.8	60.3	187
Nonparticipating agencies	18.1	0	0	
Total	2,883.6	1,726.8	59.9	187

Attachment II

SIXTEEN FUNCTIONAL CATEGORIES SELECTED FOR ANALYSIS

Function	Number of man-years (thousands)	Percent of estimated coverage
Public services, by process:		
1. Citizens records	108	100
2. Hospitals and clinics	192	94
3. Loans and grants	26	43
4. Postal service	708	100
5. Power agencies	30	100
6. Printing, specialized	8	45
7. Reference services	7	20
Public services, by program:		
8. Agriculture and natural resources	34	34
9. Educational assistance	49	60
10. Regulatory activities	68	52
11. Transportation	111	80
Internal support services:		
12. Maintenance of facilities	73	82
13. Overhaul and repair of heavy equipment	95	55
14. Procurement and supply	153	80
15. Printing, standard	13	88
16. General support	53	18

Chart No. 1



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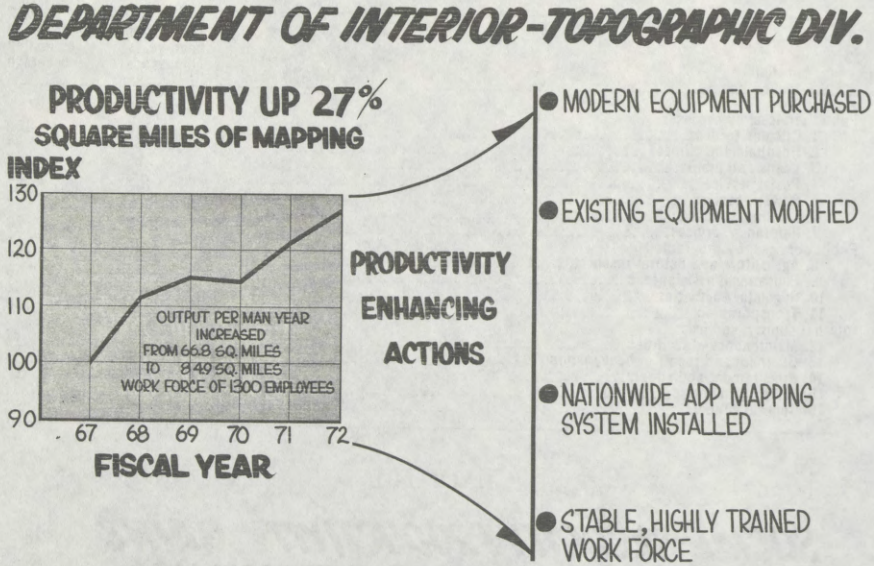

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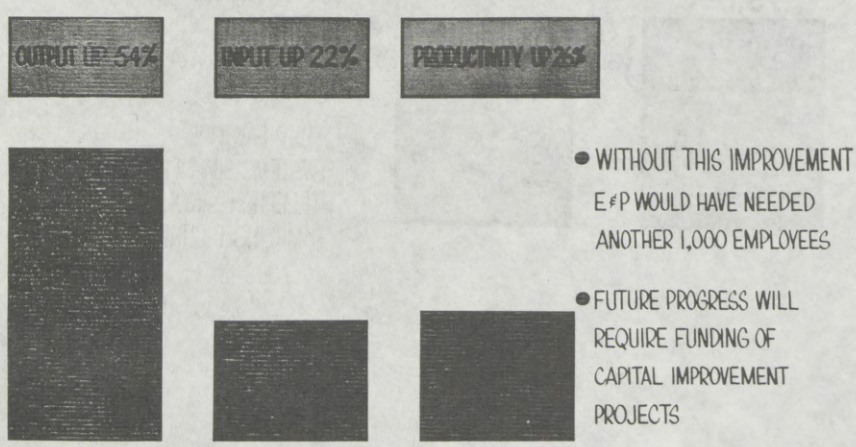

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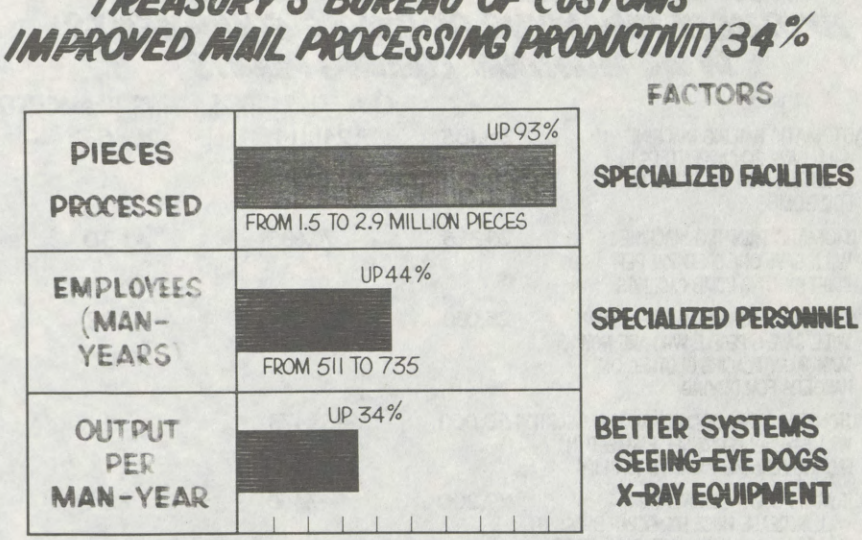

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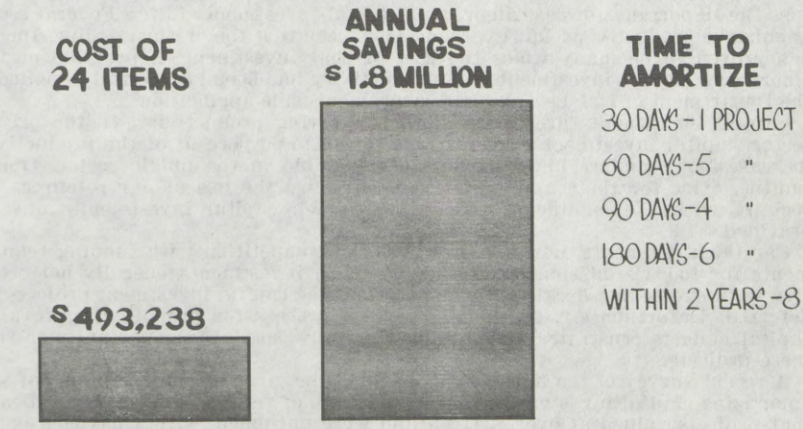

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CHART NO. 6

HOW ARMY SAVED $1.8 MILLION ANNUALLY BY TIMELY FINANCING OF SIMPLE EQUIPMENTS IN AMMUNITION LOADING PLANTS

ITEM	COST	ANNUAL SAVINGS	DAYS TO AMORTIZE
AUTOMATIC NAILING MACHINE WILL SAVE 20 CARPENTERS IN CONSTRUCTION OF PALLETS FOR BOMBS	$38,185	$241,114	57
AUTOMATIC PAINTING MACHINE WILL SAVE ONE OPERATOR PER SHIFT PAINTING BOMB CASTINGS	25,325	70,685	130
AUTOMATIC LAUNDRY CLOTHES DRIER WILL SAVE 5 PEOPLE WHO ARE NOW MANUALLY PLACING CLOTHES ON HANGERS FOR DRYING	25,000	50,071	182
AUTOMATIC LOADING OF SMALL ARMS AMMUNITION WILL SAVE 42 PERSONNEL ENGAGED IN PACKING 5.56 MM ROUNDS INTO CLIPS	50,000	453,473	41
AUTOMATIC SCRAP COMPACTOR WILL INCREASE PRICE FOR SCRAP BRASS BY 5¢ PER LB. AND REDUCE STORAGE SPACE	29,300	47,450	224
19 OTHERS	326,018	969,967	75
	$493,828	$1,832,760	

PREPARED STATEMENT OF HON. ECKHARD BENNEWITZ

IMPORTANCE OF TIMELY CAPITAL INVESTMENTS TO PRODUCTIVITY

Mr. Chairman, I want to express my appreciation for this opportunity to discuss the importance of fast amortizing capital investments in the Federal sector to enhance productivity. Our experience has been that the "return on investment" has proven to be many times the cost of that investment. A program of fast amortizing capital investments for productivity has been successfully applied in the Department of Defense, and has government-wide application.

Capital investments are essential for improving productivity. In the private sector, capital investment is responsible for 40 to 60 percent of the productivity increases and similar improvements are possible in the public sector. Opportunities exist for their application. To maximize the use of our resources, especially with the significant cost of personnel, capital investments must be provided.

Capital investments, however, are in direct competition with funding requirements for today's mission. With the return on investment generally not occurring until succeeding fiscal years, many promising capital investment projects are deferred. Unfortunately, the lengthy review process for providing approval of capital budgets frustrates and negates, in many cases, the opportunity to fund these projects.

A recent survey of ten agencies highlighted the large unfunded volume of self-amortizing capital investments with a high rate of return. This survey indicated that projects valued at over $241 million were unfunded, with a payback potential within five years. These projects would increase the annual productivity index by at least one-half percent. In addition, there are many smaller projects where opportunities for fast amortization exist.

To illustrate the potentials of such savings, the Army initiated a test program at the Army Materiel Command Ammunition and Procurement Supply Agency (APSA) at Joliet, Illinois, for the ammunition producing government-owned contractor-operated (COGO) facilities. Approval authority for productivity-improving capital investment projects was decentralized to APSA, with the authority to administer the capital investment program. APSA approved each project under the following conditions:

1. A firm economic justification verified the savings potentials to permit a return on investment within two years;
2. The cost of the project did not exceed $75,000;
3. The equipment to be procured was available off the shelf.
4. The workload forecast indicated that work was present in the future.

$500,000 was allocated to APSA to finance this program in FY 1973.

APSA initiated a review of opportunities for fast self-amortizing projects with a high rate of return and these opportunities were quickly identified. Out of a total of 54 projects submitted in 1973, 24 were approved, costing $493,828. The annual savings were estimated to be about $1.8 million, a $3.72 return on every dollar invested. Of these 24 approved projects, five had paid back their costs before the end of FY 1973 and 12 more will be paid back before the end of CY 1973. With one exception, all 24 projects will have paid back their cost by the end of CY 1974. One project was amortized in 29 days. To assure that the claimed savings would materialize, an audit trail was established to follow-up on the actual savings, based on reductions of labor and materials.

Some specific examples of the productivity enhancing capital investment projects which are underway include:

Acquisition of an automatic carton feed machine for $4,000 to replace manual feeding is estimated to save over $22,000 annually by reducing the need for two packers.

Acquisition of a heavy-duty nailing machine for making pallets at a cost of $38,200 is projected to permit a 20-man reduction in carpenters and to save an estimated $241,000 annually.

Acquisition of a $25,000 dryer to replace the manual drying tunnel procedure. This will save over $50,000 annually by reducing the need for laundry employees from 12 to 7.

Attached to this statement is a complete list of the items funded in FY 1973 and the nature of the earnings. This illustrates the varied nature of the projects and the opportunities for rapid self amortization of the cost of capital investment.

This decentralized approach of providing support for productivity enhancing capital investment has been outstanding. The GOCO's, knowing that funds were available and their requests would be met quickly, have placed increased emphasis on identifying opportunities. The program has been increased in FY 1974 to $1.9 million level and is continuing to provide a high rate of return. Opportunities for application to other areas, such as depot maintenance and supply, are being explored.

The Air Force has initiated a similar program for depot maintenance and the Navy is reviewing the possibility of utilizing one. If this approach had not existed, many of these projects with a high rate of return and increased productivity would never have been surfaced.

For a successful productivity enhancing capital investment program, the following are essential:

Top management interest, involvement and emphasis.

Productivity projects given visibility.

Qualified industrial engineering personnel to seek out investment opportunities to increase productivity.

Productivity enhancing capital investment projects which are designed to make process changes and method improvements as well as replacing deteriorated and obsolete equipment.

Sound project justification, backed by cost-benefit analysis, to provide a credible economic analysis with reasonable and reliable anticipated cost savings.

Feedback system to determine the effect of capital investment on productivity and unit cost, with review made by independent auditors.

These criteria are being followed and largely responsible for the success of the APSA effort to increase productivity.

Financing of the capital investment projects is one of the major problems. The success of the APSA approval—an omnibus funding technique—was the ready availability of procurement funds at the point of authorization. Funding approval for individual projects was accomplished at the local level—APSA—on the basis of a vigorous economic analysis, with processing time no more than 15–30 days. This compares with the normal time of 12–18 months or longer, requiring both budget and authorization approval. There was no provision for repayment, but procedures existed for indirectly recoveing savings through reduced costs.

Other possible approaches to overcome the large deferred level of productivity enhancing projects, $241 million previously mentioned, are as follows:

(1) *Agency Revolving Funds.*—Revolving funds such as Industrial funds were established to permit operations of industrial activities on a business-like basis. This means providing for depreciation of capital equipment and establishing a reserve within the industrial fund to procure replacement production equipment. The fund could provide a ready source of financing, with the depreciation cost recovered in the charges to the customer. However, the funds are precluded from acquiring major items of equipment.

The revolving funds operate on a cash basis, which, even if they could acquire major items of equipment, the flexibility in making desired investments is limited by the amount of unencumbered working capital available at any given time. Further, the revolving fund is precluded from procuring replacement equipment. For the revolving fund to be effective as a means of procuring productivity enhancing capital investments with a high rate of return, this limitation should be removed. This would enable the revolving fund to accumulate a reserve for replacements. It could charge depreciation to its customers on the basis of replacement costs or accelerated depreciation, or add a surcharge to customer products, or receive advance payments from customers. Further, borrowing authority might be given to the revolving fund. This would permit full establishment of a business-like approach, including charging interest as a real cost in capital acquisition and costing.

(2) *Productivity Bank.*—It is not in existence today. It would permit borrowing by agencies who are unable to fund capital investments from within their resources. It would be the same as a private corporation borrowing for capital investment from a bank. This would involve establishing a self-sustaining financial corpus in Treasury, OMB, or a separate agency to which agencies requiring investments with high productivity potential would go. Bank approval would be on a project basis with examination similar to that of a private bank. Repayment would include cost plus interest and bank administration. Repayment would be on a schedule based on projected savings, with the Productivity Bank having a lien on the agency's future funds for repayment. This is a self-policing mechanism and is ideally suited for large-dollar investments.

(3) *Capital Budget.*—Self-amortizing capital investments would be separately identified in the Budget and be financed by borrowing. It would follow the universally accepted method used by industry for financing long-term capital investments.

(4) *Lease or Lease Purchase.*—This permits an immediate means of financing and an opportunity to hold down the investment cost. Generally for items which will be used over many years, this is a more costly approach, especially if there are no technological obsolescent considerations. Extensive budget leadtime is involved.

These are alternative approaches. The agency omnibus funding approach is the most practical means today of providing prompt financing for small-dollar return on investment projects. If authority is provided to permit procurement of capital investment equipment from revolving funds, this is an acceptable approach. This is especially so, if depreciation can be charged, or surcharge allowed, or profit retained, or if borrowing authority is given the revolving fund.

The Productivity Bank is ambitious, requiring legislative authority, but for large dollar investments provides the most reasonable approach. The capital budget requires some modification to budget presentation, but, if authorized, would provide a means of obtaining large dollar capital investments. The lease or lease purchase is a method, which can be used today, but, of course, is in direct competition with funds required for today's missions but not tomorrow's savings.

In summary, productivity enhancing capital investments are necessary to provide significant savings in scarce resources. The Army APSA effort highlights the opportunities that can materialize from a program which has top management interest and funds which can be provided quickly to projects meeting rigid economic analysis criteria. There are many deferred capital investment projects with a high rate of return, which are not funded due to the competition with today's operating requirements. Thus other approaches must be developed such as permitting industrial funds to set aside depreciation allowances for capital investments or to permit borrowing, establishment of a Productivity Bank, or earmark within appropriated funds separate capital investment funds for the support of productivity enhancing self-amortizing projects.

With the availability of funding for productivity capital investment, the Federal sector can attain significant increases in productivity.

GOCO CAPITAL EQUIPMENT INVESTMENTS, FISCAL YEAR 1973

Goco plant and item	Cost	Funds obligated	Yearly savings	Self amortizing (Dec. 1, 1973)
Lone Star—Sealant dispenser	$7,000	Oct. 31, 1972	$24,509	Paid.
Indiana—Laundry clothes dryer	25,000	Sept. 2, 1972	50,071	Do.
Twin Cities—Scrap metal compactor	29,300	Oct. 6, 1972	47,450	Do.
Twin Cities—Automatic carton feed	4,000	do	22,287	Do.
Twin Cities—Point protector applicator	50,000	do	453,473	Do.
Milan—Firing pin seat and gage machine	24,000	Nov. 24, 1972	55,805	Do.
Lake City—Ultrasonic test equipment	27,000	Dec. 1, 1972	116,670	Do.
Milan—Auto tape lead charge	15,000	Dec. 29, 1972	29,717	Do.
Lone Star—X-ray film processor	14,000	Dec. 18, 1972	59,063	Do.
Cornhusker—Heavy-duty nailing machine	38,185	Jan. 30, 1973	241,114	Do.
Cornhusker—Paint machine	25,325	do	70,685	Do.
Kansas—Automatic addressing machine	2,365	Dec. 18, 1972	3,943	Do.
Joliet—Equip and relocate melt-mix	24,266	Feb. 27, 1973	49,362	Dec. 28, 1973.
Badger—Mix bag and weigh equipment	37,200	May 31, 1973	42,966	July 20, 1974.
Radford—TNT trailer yard	22,100	June 28, 1973	123,966	Dec. 15, 1973.
Lake City—Brass turnings compactor	30,500	May 18, 1973	111,127	Dec. 3, 1973.
Milan—Bomb stencil machine	5,663	Apr. 18, 1973	16,743	Feb. 2, 1974.
Lake City—Grain size inspection equipment	3,900	June 25, 1973	4,693	May 27, 1974.
Kansas—Power conversion units	2,100	June 22, 1973	2,381	May 14, 1974.
Milan—Paper shredder baler	39,704	do	26,521	Mar. 27, 1975.
Long Star—Automatic jungle wrap	7,000	June 20, 1973	34,804	Paid.
Milan—Automatic press lead	49,220	June 27, 1973	176,192	June 15, 1974.
Indiana—Automatic cutter counter	4,000	June 29, 1973	51,578	Paid.
Long Star—Grenade funnel puller	7,000	do	17,612	Feb. 19, 1974.
Total	493,828		1,832,760	

SELF-AMORTIZING EQUIPMENT INVESTMENTS

Goco plant and description	Acquisition cost and installation	Days to amortization of cost	Date amortized	Annua savings
1. Lone Star—Sealant dispenser: Apply sealant to threaded portion of fuze body.	$7,000	105	May 19, 1973	$24,509
2. Indiana—Laundry clothes dryer: Additional clothes dryer for laundry.	25,000	182	Mar. 26, 1973	50,071
3. Twin Cities—Scrap materiel compactor: Compact scrap brass cuttings and turnings into 15-in cubes.	29,300	224	May 1, 1973	47,450
4. Twin Cities—Automatic carton feed: Automatically inserts 20 round cartons in carton packing machine.	4,000	41	Feb. 22, 1973	22,287
5. Twin Cities—Point protector, applicator and conveyor: 10 round ball clips of 5.56 mm ammo are automatically inserted into the point protector.	50,000	41	Feb. 27, 1973	453,473
6. Milan—Firing pin seat and gage machine for M525 fuze: Automatically seats and gages firing pin in the M525 fuze.	24,000	154	Sept. 5, 1973	55,805
7. Lake City—Ultrasonic test equipment for 5.56 mm ammo: Inspection of 5.56 mm cartridge cases for flaws.	27,000	122	do	116,670
8. Milan—Automatic tape lead charge in M525 fuze: To apply tape over lead charge in M525 fuze.	15,000	183	July 13, 1973	29,717
9. Lone Star—X-ray film processor: To process paper base film in lieu of polyester base film.	14,000	81	Apr. 4, 1973	59,063
10. Cornhusker—Heavy-duty nailing machine: Assemble pallets in jig and automatically nail pallet together.	38,185	57	Aug. 30, 1973	241,114
11. Cornhusker—Paint machine for M117 casing: To apply red primer coat in the same paint booth that the O.D. paint coat is applied.	25,325	130	Aug. 6, 1973	70,685
12. Kansas—Automatic addressing machine: Exercise purchase option for machine used by plant accounting department.	2,365	218	Aug. 4, 1973	3,943
13. Joliet—Relocation of 105 mm melt-mix equipment: Modify supply hopper, feed and exhaust system to permit single operation to control melt-mix kettles.	24,266	180	Dec. 28, 1973	49,362
14. Badger—Final mix bag and weigh equipment: Install vibrating feeder to automatically feed and weigh canvas bag with fibrous rocket paste.	37,200	308	July 20, 1974	42,966
15. Radford—TNT trailer holding yard	22,100	46	Dec. 15, 1973	123,996
16. Lake City—Scrap metal compactor: To compress scrap brass cuttings and turnings into 15-in cubes.	30,500	71	Dec. 3, 1973	111,127
17. Milan—Bomb stencil machine: Automatically stencil markings on BLU/24 bomb.	5,663	88	Feb. 2, 1974	16,743
18. Lake City—Grain size inspection equipment: To automatically file, polish and etch samples for micrographex comparison.	3,900	301	May 27, 1974	4,693
19. Kansas—Radio power units: Conversion of radio units to be used either by battery or electric power.	2,100	319	May 14, 1974	2,381
20. Milan—Corrugated paper bailer: To bale corrugated box materials for recycling.	39,704	574	Mar. 27, 1975	26,521
21. Lone Star—Automatic jungle wrap: To automatically wax dip 81 mm fiber containers for jungle protection.	7,000	52	Nov. 29, 1973	34,804
22. Milan—Automatic press lead: Press to load M433	49,220	73	June 15, 1974	176,192
23. Indiana—Threadcutter for bag manufacturing: To automatically cut the thread between bags after the number of bags required has been reached.	4,000	29	Aug. 27, 1973	51,576
24. Lone Star—Funnel puller M-67: To hydraulically break funnels loose from M-67 grenade.	7,000	145	Feb. 19, 1974	17,612
Total	493,828			1,832,760

Productivity Measurement and Quality Evaluation in the Social Security Administration, DHEW

INTRODUCTION

The Social Security Administration has been using productivity measurement for many years as part of its management processes. The agency has strongly supported and had a high degree of participation in the recent Government-wide study on measurement and improvement of productivity. That study was conducted during the period of fiscal years 1971–1973 under the joint auspices of the Office of Management and Budget, the General Accounting Office, and the Civil Service Commission.

The Social Security Administration is charged with carrying out the social security programs of Retirement and Survivors Insurance, Disability Insurance, Health Insurance (more commonly known as Medicare) and the recently enacted Supplemental Security Income program for the aged, blind, and disabled. By June 30, 1974, it is expected that the Social Security Administration will have 69,600 full-time, permanent employees on duty; most of these employees are geographically dispersed throughout the United States. In addition to the functions performed by employees of the Social Security Administration, important functions in the administration of Medicare and the disability insurance and supplemental security programs are performed under contract with Blue Cross/Blue Shield, private insurance companies and State agencies.

The Social Security Administration serviced about 30 million retirement survivors, and disability insurance beneficiaries in fiscal year 1973. There were also about 20 million persons protected by the health insurance program during that period. The agency receives a high volume of workload which is largely generated by economic and demographic factors and the specific provisions of the Social Security Act. As examples of the volume of workloads, in fiscal year 1973 the agency processed 3.9 million claims for retirement and survivors insurance benefits; 1.5 million claims for disability insurance benefits; 79 million claims for payment for medical services; issued 11 million social security account numbers; and posted 348 million items to update the earnings records of individuals covered by social security.

PRODUCTIVITY MEASUREMENT AND EXPERIENCE IN THE SOCIAL SECURITY ADMINISTRATION

The Social Security Administration measures its productivity by counting and weighting, by their respective manpower requirements, each of the outputs of the agency and relating that to the total manpower input of the agency. The outputs represent principal indicators of the volume of work handled by the agency to carry out its missions. Largely, they fall within four major functional categories common to all programs administered by the SSA; namely, the initial enrollment or claiming of benefits, the appellate processes with respect to initial and subsequent claims decisions, the servicing of the beneficiaries on the rolls and the enforcement of the provisions of law relating to continuing eligibility for benefits. Manpower is measured in terms of manyears (manhours) of paid employment in permanent, temporary or part-time jobs and of paid overtime. Productivity is determined by dividing the derived output index by the derived manpower input index, using a specified year as the base index of 100. In the annual budget presentations to the Congress, productivity experience for the past ten years is shown. Thus in the Fiscal Year 1974 Appropriation request, fiscal year 1964 was the base year as shown in the enclosed chart, Exhibit A, extracted from the budget justifications furnished the Appropriations Committees. Exhibit B, "Comparison of Social Security Administration Output and Manpower, 1964–1965," differs from the material furnished the Appropriation Committees in these respects: (1) It presents the actual trend lines for agency output and manpower input over the period of fiscal years 1964–1973, and (2) it contains actual experience for 1973, new estimates for 1974 and preliminary projections for 1975. The gap between the output trend line and the manpower trend indicates manpower savings. Generally speaking, this means that in fiscal year 1973 the agency used 61,777 manyears instead of 93,699 manyears that would have been required if we had used manpower at our fiscal years 1964 production rates; a savings of 31,919 manyears in the nine-year period.

The Government-wide study on measurement of productivity improvement and the ongoing productivity measurement system established for the Federal sector of the economy as a result of that study uses fiscal year 1967 as the base year for measuring productivity improvement. Exhibit C, "Comparison of the Productivity of the Social Security Administration with that of the Federal Government," presents the fiscal years 1967–1972 period productivity trend lines for the measured portion of the Federal Government, the Social Security Administration, and the group of agencies with which the Social Security Administration is combined in the study's productivity analysis, the Citizen's Records Group. The Citizen's Record Group includes the Internal Revenue Service's Tax Return Processing, the Selective Service, and similar Federal activities. Exhibit C shows that the Social Security Administration's productivity im-

provement over the period studied was 116.08, while that for the measured portion of the Federal Government was 108.7. During the same period, the Citizen's Records Group had a productivity improvement of 116.6.

REFLECTION OF QUALITATIVE CHANGES IN PRODUCTIVITY MEASURES

Those experts involved with the theoretical and actual application of productivity measurement regard the problem of reflecting qualitative changes as one of the most difficult problems in productivity measurement. This problem is recognized by those Government officials involved in the measurement of the productivity in the Federal Government. In contrast to most segments of the private sector of the economy in which the public often has the option of selecting a level of quality based on price and competition, most Federal agencies are providing service to a captive market. When Federal agencies recognize that their service is not what it should be, a conscious decision may be made to expend more resources to improve that quality. The result is that given units of output from the agency require more manpower, even though the actual volume of those outputs may be unchanged. It is important not to penalize agencies by having improved quality reflect in the productivity measures as a decline in productivity. A somewhat comparable problem is encountered when an agency is involved with a variety of workloads which require varying amounts of manpower to process each different type of workload. This problem is commonly referred to as a "workload mix" problem. If the total workload volume remains unchanged, but there is an increasing ratio of workloads which require a greater amount of unit manpower, it is important not to have this reflected adversely in the productivity measure.

The Bureau of Labor Statistics and other Government agencies involved in measuring the productivity of the Federal Government recognize this problem and they are working on some method of incorporating qualitative and workload mix changes in that productivity measure. However, the productivity data produced through the Government-wide study effort do not reflect changes in quality and workload mix.

The Social Security Administration does incorporate qualitative and workload mix changes in its productivity measures. Essentially, this is done by determining the amount of manpower that is required for qualitative and workload mix changes and incorporating that manpower in the output index, as well as the manpower index.

Referring again to Exhibit C, the productivity index as measured by the Bureau of Labor Statistics shows a decline in productivity in fiscal year 1968 for the Social Security Administration. That decline in productivity as measured by the Bureau of Labor Statistics was sufficient to pull the Social Security Administration's productivity trend line below that of the Citizen's Records Group and keep it below that trend line for the remaining fiscal years of the study. This occurred even though the rate of productivity improvement of the Social Security Administration was slightly greater than the Citizen's Records Group for the fiscal years 1969–1972. In fiscal year 1968 the Social Security Administration devoted a considerable amount of manpower to installing a case control system, which helped the agency be more responsive to the public in responding to inquiries and in processing actions more timely. This, plus other qualitative improvements and changes in the workload mix, and in the volume of nonrecurring projects resulted in the expenditure of about 1,100 manyears.

The incorporation of that manpower into both the work output and the manpower input as is done under the Social Security Administration method of computation would have resulted in a non-decline in productivity during fiscal year 1968.

The table below shows the productivity indices for the Social Security Administration for fiscal years 1967–1972 under both the methods of computation used by the Bureau of Labor Statistics and that used by the Social Security Administration. While there are other minor differences in the methodologies used, the main differences in the two sets of indices arise because the Social Security Administration includes qualitative changes, workload mix changes, and nonrecurring work in its productivity measures.

Year	Social Security Administration productivity indices as computed by—	
	Social Security Administration	Bureau of Labor Statistics
1967	100.0	100.0
1968	102.9	98.2
1969	107.8	102.6
1970	114.9	108.7
1971	118.2	113.2
1972	120.1	116.1

PRODUCTIVITY MANAGEMENT IN THE SOCIAL SECURITY ADMINISTRATION

It is acknowledged that productivity measurement is not simply done for its own sake. Productivity measurement is one of the better measurement tools for *overall* evaluation of an organization's efficiency over a period of time. As an overall indicator, it can show management that its total efficiency objectives are or are not being met. Further, given efficiency as one of the basic objectives of organizational performance, the question is whether changed levels of efficiency are a matter of planning or happenstance.

A conscientious effort is made within the Social Security Administration to improve its productivity. Productivity measurement is one of the prime tools used in the reaching decisions in the budget process within the agency and by those organizations that review the Social Security Administration budget requests. Since productivity is only a gross measure of organizational efficiency, a detailed analysis is required each year to determine what steps can be taken to improve productivity. The principal data source for this analysis is the work measurement systems in the Social Security Administration.

About ninety percent of the manpower of the Social Security Administration is covered by work measurement systems. These work measurement systems tell management the number of work units handled, the amount of time spent per unit of work and the grade level of employees engaged in processing the various workloads of the agency. The gathering of this data is either on a sample or a 100% time accounting basis. Because the agency has so many employees who are involved in processing several different types of workloads for several programs in a given day, it is necessary to have work measurement systems that will sort out the input of time by workloads and by programs where feasible. Work measurement, together with the financial accounting system, provide the base for distributing costs by program and source of funding (the appropriate social security trust fund or Federal fund appropriation). These systems also provide data for analyzing productivity changes that occurred in the base year of the budget and to compute changes in future years.

Each year, as part of the budget development cycle, the workloads for the agency are projected and an assessment is made of the major changes planned in the systems and procedures which will affect workload processing. The production rates for each of the workloads for the past, the current, and the forthcoming budget years are analyzed to determine why or the expected reasons for changed levels of production did or should occur for each of those workloads. These changes in production rates are classified according to those that are instituted to gain efficiency, those that are instituted to improve the quality of the workload, and for other factors of changes. Manpower used for supervision, support, training, travel, and similar indirect production categories goes through a similar analysis. The net effect of these changes on overall agency productivity is evaluated. When the level of productivity improvement is not considered satisfactory, a revaluation is made to determine where further productivity improvement might be gained.

The major productivity improvements in the Social Security Administration come from increasing application of automatic data processing techniques to our work processes. Those applications may involve application of automatic data

processing to work done heretofore on a manual basis or by improving the integration and systems capability of a work process that is already automated. Other productivity improvements may come from procedural changes. One example of this latter type of productivity improvements in fiscal year 1973 was the encouragement of claimants and beneficiaries to contact the agency's district offices by telephone, rather than visiting the office (this also provided greater convenience to the public). Another example is the elimination of review of the work of the claims ajudicator in the district offices of less error-prone retirement and survivors insurance claims. Another way in which the Social Security Administration has improved its productivity is through working with major-sized companies to receive social security earnings of employees of those companies in automated form, rather than as hard copy form. A comparable effort is underway with the health insurance contractors, many of which now submit individual health insurance claims on magnetic tape, rather than on hard copy form.

A continuing analysis of productivity is performed as a part of the budget execution process in the Social Security Administration. Reprogramming of resources is sometimes necessary if projected improvements in productivity do not occur because systems changes do not take place as scheduled, new legislation impacts on the way work is performed or some other reason or, conversely, if unbudgeted improvements in producivity do occur for a variety of reasons.

While increased use of automatic data processing and procedural changes will likely continue to be the major sources of productivity improvement, the opportunity to achieve better organizational performance through improved employee performance is not being overlooked. There are many instances of well-documented studies in the private sector of the economy in which improved productivity and quality of operations have been achieved through improved behavioral management practices; such as job enrichment and team building. The Social Security Administration has undertaken just recently several major studies designed to test these practices in a Federal agency environment. The studies are intended to produce quantified measures of the effects of these types of behavioral management on productivity and quality.

QUALITY MEASURES OF PERFORMANCE IN THE SOCIAL SECURITY ADMINISTRATION

One of the conclusions of the task force studying the Government-wide use of productivity measures is that productivity measurement is only one of several measures that should be used in evaluating an organization's total performance. One of the other measures most frequently referred to in conjunction with productivity measurement is quality measurement.

One of the major concerns expressed by Federal managers contacted during the Government-wide study on productivity was that there is a strong need for an equal emphasis on the need for quality measurement. If an apparent productivity improvement is gained at the cost of a serious deterioration in the quality of the service rendered, then the public is not being well served. Because of the very serious impact that the quality of the performance of the Social Security Administration can have on income and potential hardship of individuals covered by social security, the agency is very mindful of the need to provide a high level of service to social security claimants and beneficiaries.

There are a wide range of measures that can be used to determine the quality level of performance. Similarly, there are a wide range of actions that can be taken to improve quality of performance. Often, but certainly not always, measures taken to improve productivity also have the effect of improving quality. As an example, increasing the use of automatic data processing generally leads to productivity improvement, but by permitting an agency to handle a greater volume of work with a given level of resources and time, elapsed processing time is held within reasonable bounds. Mention was made previously of the increasing use of telephone communications to deal with the agency's claimants and beneficiaries. This does result in manpower savings, but it also relieves the public of the need to take the time to actually visit the social security district office.

The Social Security Administration has several ongoing systems designed to measure in a systematic, quantified manner the quality level of its performance. There are two basic systems designed to monitor the quality of the Retirement and Survivors Insurance program and the Disability Insurance program. These two systems are fairly comparable, and the former system is briefly described. A generally similar quality appraisal system will be established for the new

Supplemental Security Income program for the aged, blind, and disabled. While the major portion of actual operations of the Health Insurance program are carried out by contractors, such as health insurance and Blue Cross/Blue Shield companies, the Social Security Administration does monitor the quality of those operations through analyses of prices paid for comparable medical services, reductions made by contractors in billings from providers of services before payment for services and other measures.

The basic objectives of the Social Security Administration's quality appraisal system for the Retirement and Survivors Insurance program operations are: (1) to provide management with overview information on the accuracy and the processing times of that operation; (2) to improve the quality of those operations by providing information to specific processing stations on the type of errors and deficiencies noted and (3) by conducting special analyses of specific problems identified in the quality measurement process. The system randomly selects a statistically valid sample of various types of claims and actions processed at the termination of the processing of those claims and actions. These claims and actions are independently reviewed, and data are gathered on the types of errors detected and on processing times. Errors are classified as payment related or procedural. Errors detected are corrected, and continuous reports and trend analyses are produced. As previously noted specific types of problems may be identified and subjected to more rigorous analyses; and the managers of the various processing stations are periodically visited to discuss the quality of their performance.

Among the type of measures of quality performance gathered in this system are: (1) the percentage of initial claims and a percentage of subsequent beneficiary actions processed free of payment related errors and the percentage free of procedural errors; (2) data on the type of errors being made; (3) the average processing time in total and by major processing locations for claims and subsequent beneficiary actions; and (4) the number of beneficiary actions that are received and processed in time to prevent disruption of payment and to stop or adjust payments at a timely manner.

A review of the recent trends of these various measures of quality shows a mixed pattern: improvement in some of the measures, no major trend one way or another in other measures, and deterioration in the trend of still other measures. This contrasts with the strong continuous trend of productivity improvement for the Social Security Administration noted previously. This relationship exemplifies one of the concerns of the Social Security Administration and the concern expressed by other Federal managers interviewed during the Government-wide study on productivity measurement—the strong emphasis balanced with concern for quality of operations. The essential point, however, placed on achieving a high rate of productivity improvement must be counterbalanced with concern for quality of operations. The essential point, however, is that managers must have measurement systems for both productivity and quality; and operations managers and review authorities must assess the impact that resource allocation decisions will have on these and other measures of organizational performance.

There are two other measurement systems in operation in the Social Security Administration which help the agency monitor its performance and which deserve notice. One of these systems, referred to as the Evaluation and Measurement System, is used to validate the policies and procedures followed by employees in processing claims and beneficiary actions; to ascertain that the policies and procedures are appropriate to meet the requirements of the Social Security Act; and that policies and procedures are properly carried out by agency employees. In a national program, such as the social security program, in which there are legal requirements that determine the eligibility by claimants, it is important to assure that the documentation for benefits substantiates what it purports to substantiate. It is also important that the agency's and the public's time not be spent in developing substantiation that is of little or no value. Finally, it is important to assure that policies and procedures developed by the agency are properly followed by employees. The Evaluation and Measurement System selects a random number of cases for study. Claims and actions are completely redeveloped by employees not preivously associated with the prior action. Claimants or beneficiaries are recontacted and a rigorous field investigation is conducted. Additional documentation is sought to further evaluate documentation submitted with the claim

or action. The data and decisions from the initial action and those from the revalidation are electronically stored and analysis produced on a periodic basis. When there are indications of weaknesses in policies and procedures or in employee adherence to those policies and procedures, further analyses are undertaken and, if appropriate, policy or procedural changes made.

The second quality measurement system, referred to above, is just being developed by the Social Security Administration. It is the Quality of Service Measurement System. This system will provide for direct, independent contact with members of the public who have had recent contact with the Social Security Administration. Those members of the public will be asked to respond to questions on the quality of the service they felt they received from the Social Security Administration, such as courtesy, timeliness of action, full explanations of rights and responsibilities, and other indicators of the level of service.

The measurement of quality is a complex problem. In establishing its quality measurement systems, the Social Security Administration applies rigorous standards, some of those standards by which the quality of operations is measured would not ordinarily be applied by members of the public since there are some technical aspects which the agency considers important but which have no direct impact on social security claimants and beneficiaries. Further, the quality measures may indicate diverse quality in various aspects of operations. At times, quality measures may work against each other. As an example, efforts to reduce processing time may create a higher rate of errors in cases.

Improvement of quality is also a complex issue, particularly in the Social Security Administration and similar agencies in which legislative changes are frequent and in which many systems and procedural modifications are underway at any given point of time. A direct relationship between a specific systems and procedural change and its effect on a specific quality measure is often virtually impossible to discern. Another problem occurs in tracking quality measures over time. Because of legislative, policy, and systems changes, it may be that the nature of the claim or a beneficiary action in 1973 is not the same as it was in 1970.

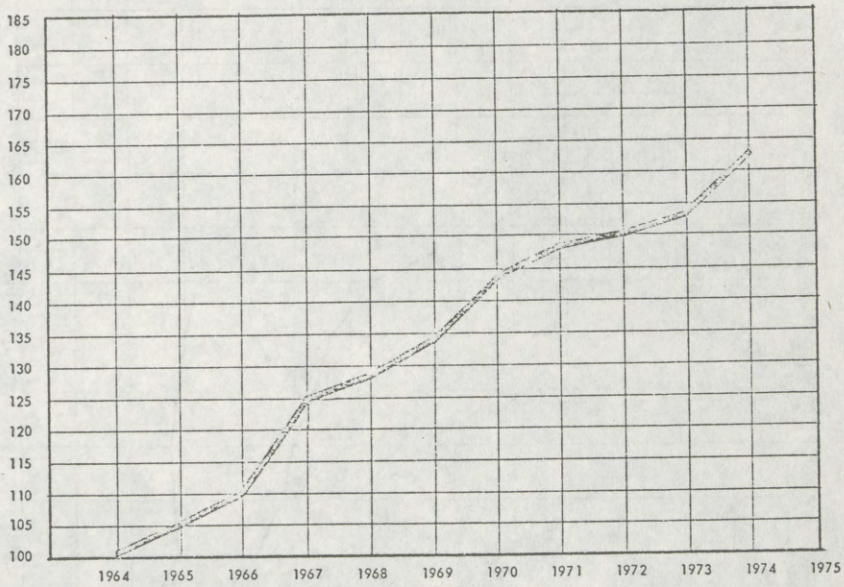
One other point should be made: the quality measurement systems discussed relate to the quality of operational performance; they do not relate to program effectiveness. Program effectiveness is generally construed as referring to how well a specific program is meeting its basic goals. Program effectiveness for the Social Security Administration must assess how adequately its programs are replacing, at a desirable level, income lost through retirement, death, and disability and how well the health costs of the aged are being covered by social security health insurance. This type of program effectiveness measurement for the Social Security Administration is made through a continuing research and statistical analysis activity.

CONCLUSION

The major conclusions of the Social Security Administration on this matter of productivity measurement, quality measurement, and their interrelationships are these: (1) The Social Security Administration strongly supports the Federal Government's efforts to more fully utilize productivity measurement at all levels in the Federal Government; (2) it is important for the Federal Government to pursue the matter of quality measurement; (3) unlike productivity measurement, quality measurement systems must be adapted to each individual agency's unique situation; (4) productivity measurement, quality measurement, and other performance measures must be used jointly in evaluating an organization's performance and in determining resource allocation for the agency; and (5) ongoing, quantified measurement systems' data seldom stand on their own since they are generally only gross indicators which must be supported by more detailed analyses and explanations. These measurement systems are important, and the Social Security Administration places a high priority on the type of information produced from these performance evaluation systems and the significance of the information in reaching management decisions.

Exhibit A

COMPARISON OF MANPOWER WITH WORKLOAD[1]
PRODUCTIVITY INDEX
Fiscal Year 1964 = 100



INDICES OF WORK OUTPUT, MANPOWER, AND PRODUCTIVITY

Year	Work Output	Manpower	Productivity[2]
1964 actual	100.00	100.00	100.00
1965 actual	104.69	99.70	105.01
1966 actual	151.57	136.74	110.84
1967 actual	175.10	140.06	125.02
1968 actual	198.50	154.51	128.47
1969 actual	206.75	153.48	134.71
1970 actual	218.31	151.34	144.25
1971 actual	231.02	156.39	147.72
1972 actual	238.99	159.23	150.09
1973 estimate	273.55	177.90	153.77
1974 estimate	348.37	214.71	162.25

[1] Work performed by State agencies and intermediaries and the manpower for them are excluded.
[2] Productivity index equals work output index divided by manpower index times 100.

Exhibit B

COMPARISON OF SOCIAL SECURITY ADMINISTRATION MANPOWER AND OUTPUT, 1964-1975

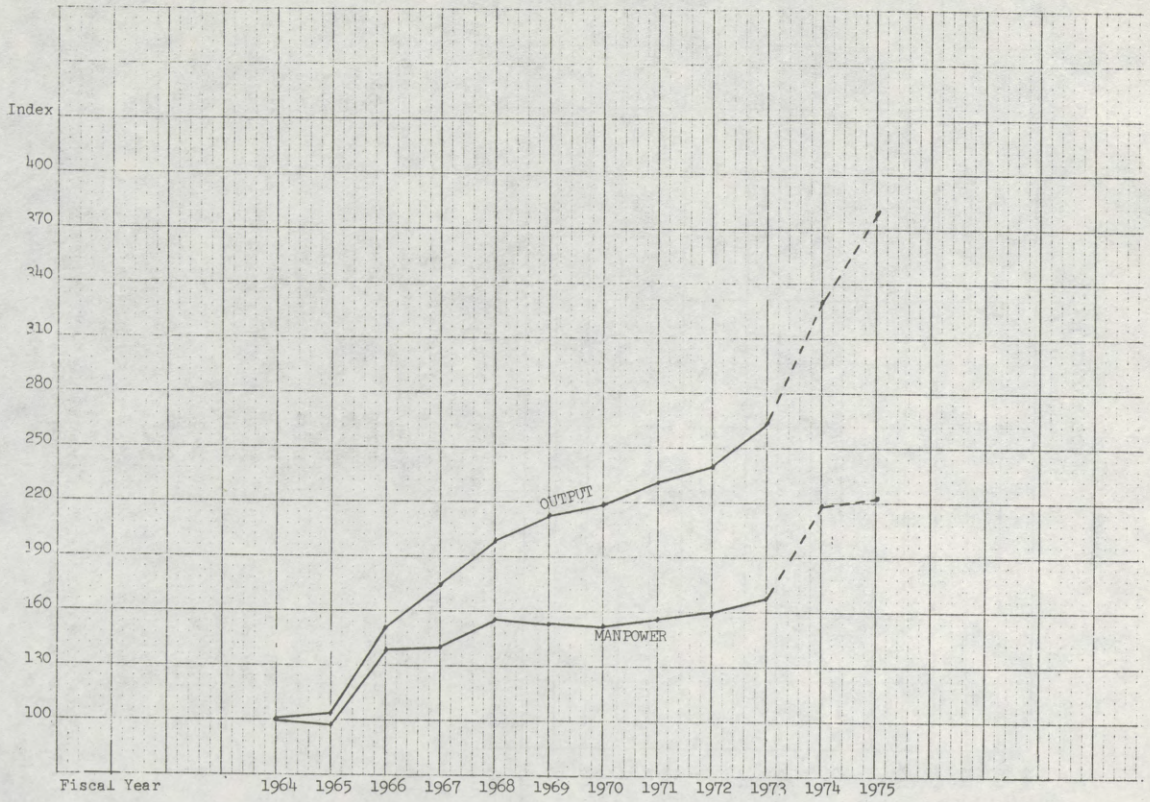
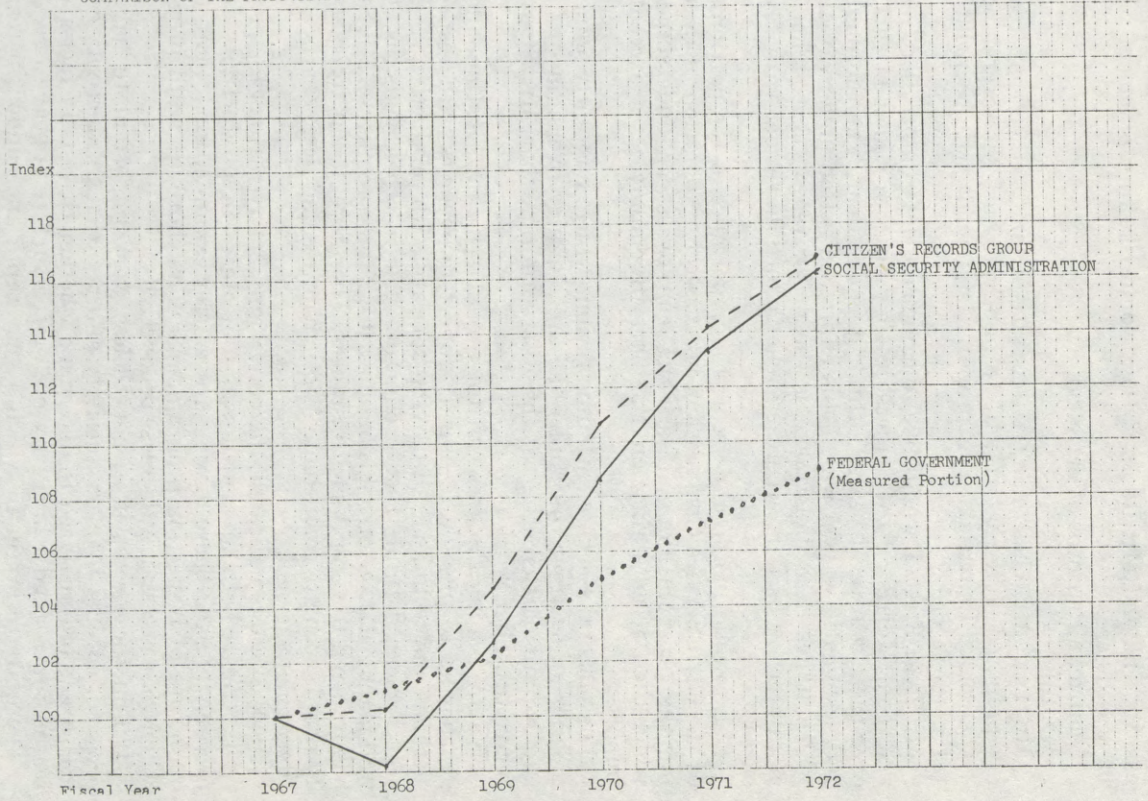


Exhibit C

COMPARISON OF THE PRODUCTIVITY OF THE SOCIAL SECURITY ADMINISTRATION WITH THAT OF THE FEDERAL GOVERNMENT 1967-1972



Mr. STAATS. Mr. Chairman, I would like, with your concurrence, to ask Mr. Ink and Mr. Rosen if they would like to supplement what I have said here.

Chairman PROXMIRE. Very good.

Mr. Ink.

Mr. INK. Mr. Chairman, if it is satisfactory, rather than reading my prepared statement, I will be happy to just hit several points.

Chairman PROXMIRE. The prepared statement will be printed in full in the record.

Mr. INK. First, I would like to commend the Comptroller General and Tom Morris on the leadership they have provided in this area over the last several years. I think it is excellent. The thoroughness and systematic way in which this effort has gotten underway and in which it has been undertaken is the major reason that it has been as productive as it is, whereas earlier efforts have met with far less success.

I also would like to underscore the importance of the participation of the Civil Service Commission, because the recognition of developing the program along lines which employees can understand and which has acceptability on the part of employees is exceedingly important.

The General Services Administration, which I recently joined, is picking up a larger role under the broad policy oversight of OMB, and we are participating in the joint program that Mr. Staats referred to earlier.

We are issuing the data call for productivity information, and are gearing up to provide technical support to agencies with respect to methods and techniques of moving forward with productivity.

It is clear, I think, that productivity, as in other fields, has to be well managed. Like other techniques, it is subject to misuse. Mr. Staats has referred to several such instances. Therefore, it has to be staffed by people who are competent. And it requires and deserves the attention of management.

As Mr. Staats indicated, there are many, many reasons for productivity trends both up and down. A decrease in productivity is not necessarily bad. There may be a need, for example, for a more thorough type of inspection program, or a more thorough audit program, which may necessarily decrease productivity.

But in these cases it is, nonetheless, very important to have the program covered by a productivity effort so that productivity can be measured, and analyzed to determine whether there is in fact a valid reason for a trend which may not on the surface appear to be valid.

There are instances in which a very rapid and sudden increase in productivity perhaps should be looked at rather carefully to see if the support is there or if the quality has been impaired. I think in some of the housing programs several years ago, the federally assisted programs in which the productivity began rising tremendously, a good productivity program of the type Mr. Staats is referring to would have been helpful, because, I believe, those figures would have tended to cause people to analyze whether the management capability was there, and to assure productivity was good from the standpoint of quality.

[The prepared statement of Mr. Ink follows:]

PREPARED STATEMENT OF HON. DWIGHT A. INK

Mr. Chairman and members of the committee: I appreciate the opportunity to appear before this committee today to present the executive branch's new role in the continuance of efforts to measure and enhance productivity in the Federal sector.

It is a special pleasure to follow Elmer Staats, under whose able leadership we have effectively promoted Federal productivity improvements. At this time, I would also like to commend Tom Morris for his very outstanding contribution to the Joint Project since the beginning of this very major undertaking.

As you know, for the past two years, the Civil Service Commission, the General Accounting Office, and the Office of Management and Budget have participated in a Joint Project to Measure and Enhance Productivity in the Federal Government. The Joint Project came to an end on June 30 of this year with the publication of a final summary report which recommended continuation and expansion of productivity improvement activities throughout Government.

The first step in implementing this recommendation was taken by Roy Ash who, in his July 7, 1973, memorandum to executive departments and agencies, defined responsibilities for carrying out these activities by the General Services Administration, Civil Service Commission, Bureau of Labor Statistics, and the Joint Financial Management Improvement Program. Each of these organizations and the Office of Management and Budget have significant roles to play in the successful accomplishment of the overall Federal productivity mission.

OMB has broad policy oversight responsibility for the productivity effort. It has delegated to GSA and the Civil Service Commission overall leadership responsibility for developing Government-wide productivity policy and for seeing that such policy is carried out within the departments and agencies.

The General Services Administration, in its new management leadership capacity as the President's principal instrument for development better systems for providing administrative support to all executive branch activities, issued in September the annual call for Federal sector productivity data. This fiscal year 1973 productivity data is now being submitted by agencies to the Bureau of Labor Statistics for processing in the same manner as data obtained from private sector organizations. The Bureau of Labor Statistics is also assisting the JFMIP Productivity Task Force in the analysis of this productivity measurement data, which will then be followed by the writing of an annual interpretive report to the Congress and the President.

Additionally, the General Services Administration is conducting a series of extensive discussions with representatives of 20 major Federal agencies on the identification and justification of agency capital investment opportunities, and development and utilization of measurement systems in manpower and budget planning.

I would like to stress the importance of the Civil Service Commission in providing policy guidance and technical assistance to agencies on the personnel management aspect of productivity. I think it is fundamental that motivation of our workforce is paramount and that good communication with employee groups is the key. We need to promote the adage "work smarter—not necessarily faster."

Through the Joint Financial Management Improvement Program and other joint agency programs, we are continuing to participate in a host of areas:

Under the JFMIP umbrella, member agencies are now giving much attention to the need for additional capital investment financing techniques.

GSA is providing the leadership for an interagency effort to establish central support services in each of the 10 standard regions. The initial step in this direction was taken in 1971 when a pilot project was established in the Seattle, Washington Region, to provide common services to HEW, DOL, HUD, OEO, and DOT.

The Presidential Management Improvement Awards Program, now being administered jointly by CSC and OMB, continues to recognize the many individual agency management improvement efforts that often go unnoticed by the public-at-large but contribute to the enhancement of productivity.

In summary, Mr. Chairman, I can assure you that executive branch leadership will continue to promote improved productivity through the variety of actions presented to you today. However, important as productivity is, it is only a building block and not the end in itself. Our efforts must be directed toward program effectiveness and achievement of program goals and objectives. This is

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indeed complex and far-reaching and includes areas beyond the province of GSA, but we feel that when properly planned and managed, productivity can contribute substantially to the effectiveness of a majority of our Federal programs.

I would like to close by joining with Comptroller General Staats in extending our appreciation to this Committee for its interest in, and support of, productivity efforts.

Chairman PROXMIRE. Take a minute or more on this housing area. This interests me very much, because we have done a lot of work in housing, and we have been very perplexed by what we can do to improve it.

Mr. INK. Yes, sir. I am speaking to the managerial side of it, not to the substance of the program. But as you well know, several years ago the number of federally assisted housing starts increased tremendously. If my memory is correct, about 2 years ago I believe the productivity figures went up something like 60 percent in 1 year. At that time had the kind of program been in existence, that Mr. Staats and Mr. Morris have been talking about, there would have been a more systematic analysis, in my judgment, concerning that increase, and whether there had been put in place the technical competence to deal with that increased number.

Chairman PROXMIRE. Let me just indicate—this is fascinating, because this is an illustration of how hard this whole thing is to apply—what I think you are saying is that if we had a productivity analysis system in effect for, say, the 235 program, the Government-assisted program of home purchasing by a subsidy reducing the interest rate, we would have had a chance to evaluate whether it was working efficiently, whether it is the more efficient way to do it. And what we have found in that program was that in some areas it worked very well, and in other areas it didn't work at all. It worked brilliantly in Milwaukee and very badly in Detroit. And we think that shows primarily a difference in management between Detroit and Milwaukee an insistence in Milwaukee, for example, that there was more care in the people that you had going into the 235 program, and a system in Milwaukee where you had counseling provided for those who went in, so that if they didn't know much about running their own home, they would be shown how to do it. And a very little of that in Detroit, with which foreclosures in Detroit and no foreclosures in Milwaukee. How would this program have helped that program?

Mr. INK. Had this type of program been in effect, the very rapid increase, such as the tremendous uptrend reflected in the chart Mr. Morris has been showing, should have been a flag for management to see whether the managerial steps had, in fact, been taken to support that tremendous increase. When there is a rapid change in program, particularly when there is a new program, there has to be an early and intensified departmental effort to see that the program guidance is there, to see that the people at the operating level fully understand what is required, to see that there are early audits, and that there are early reviews rather than waiting until the program is in trouble before assessing the program. That kind of new program ought to be looked at with care as soon as the program begins to move, as soon as the money begins to flow, rather than simply assuming that the traditional methods of management, including methods of audit are going

to suffice. Now, it is conceivable that that kind of review would have resulted in a productivity increase that would have been somewhat less. But a sound productivity program assumes that there is quality control, and that productivity increase is not going to be made at the expense of adequate quality of the program.

Productivity we regard as not necessarily an end in itself, but a very important building block toward the basic objective of the effectiveness of programs. Productivity often needs to be weighed with other factors which are not quantifiable, such as we were just talking about in the case of housing programs. One of the things which has concerned us is that too often productivity factors and other kinds of nonquantifiable factors relating to the quality of the program such as the social impact are too frequently not brought together at the same point in management and consequently, they are not adequately weighed and compared, and the kind of analysis that Mr. Staats and Mr. Morris were talking about really doesn't take place. Part of it takes place here, and part of it over there, and it too often is not merged into one overall analysis which then gives us the best judgment that is possible with respect to whether the program is effective or whether it is not.

Finally, I want to underscore that we regard the program as very important, very significant, and one in which proper recognition over a long period of time has been lacking. And we see for the first time really a systematic effort to move it forward to give productivity its true place in the broad field of governmental management.

Chairman PROXMIRE. Before we go to Mr. Rosen, I would appreciate it if we could have Senator Percy go ahead with his questions. He has another committee meeting he has to go to. And then we will go to Mr. Rosen.

Senator PERCY. Thank you very much, Mr. Chairman.

Mr. Staats or Mr. Ink, does the Federal Government have any kind of a suggestion system providing adequate incentive for employees to submit suggestions for increases in productivity?

Going back to the private sector, the most successful program that I have ever conducted was one in which the employees were given 50 percent of the savings in the first year. This brought all kinds of ideas out of the woodwork. And the benefits were tremendous. We got the cost back and then 50 percent of the net was shared. But forever after that the company got the benefit of the program. When you see savings of this kind—dramatic savings—getting back your bait in 41 days is unbelievable. You just wonder whether you can't release creativity and thought if people see that they can benefit financially. I think they would work on this thing, and certainly if there is adequate legislation along this line. We could provide a body of legislation. If it works in the private sector it ought to work in the Government.

Mr. STAATS. I would like to ask, if I may, Mr. Rosen, who is Executive Director of the Civil Service Commission to respond to that. And then I would like to add a word.

Senator PERCY. Thank you.

Mr. Rosen.

Mr. ROSEN. Thank you, Senator Percy.

The fact is that the Congress did give us a fine law about 18 years ago. And in this past fiscal year, Senator Percy, some 67,000 suggestions made by Federal employees were adopted. And it resulted in direct measurable first-year benefits of $156 million, and, of course, much of this will go on.

Now, we weren't quite as generous as Bell and Howell, Senator Percy, and other corporations. But we did pay out more than $4 million in awards to the employees for those suggestions. We do find it a very useful and productive program. And it has been moving up gradually. And we think it is very helpful.

Senator PERCY. So you need no further authorization and legislation. It is just a matter of promotion?

Mr. ROSEN. That is true.

Senator PERCY. Is it available to all departments of the Federal Government?

Mr. ROSEN. Yes, it is.

Chairman PROXMIRE. Have you considered making it as attractive as Bell and Howell did? If it works better, why don't you do that?

Mr. ROSEN. Well, I don't know whether we could conclude that it would necessarily work better, Mr. Chairman, to pay more. I am not here being critical of Bell and Howell, you understand, sir. We think the people who are in the public service and committed and dedicated do need an additional incentive. But it perhaps doesn't have to be of the same magnitude.

Senator PERCY. What sharing plan is in effect now?

Mr. ROSEN. Actually it is on a sliding formula basis. And it starts off at a low figure of around 10 percent, and then, interestingly enough, Senator Percy—you asked the key question—we, different from private industry, reduce the percent as the saving is larger. So that if there were a saving of a million dollars, we would drop down to a much smaller percent.

Chairman PROXMIRE. Could I interrupt?

This is what makes lotteries appealing. You read about some guy winning a million bucks. You are not going to win it, but there is the hope and the dream, and so you buy the ticket. This is something that is very constructive and refining. And I think if you could have somebody win a half a million dollars or a $100,000 or some big sensational winning, you would have a news story, and everybody would know about it, and it would be enormously stimulating.

Senator PERCY. We had a plan. It was 10 percent. No one paid any attention to it. We just decided, if we are going to do this, let's do it big. What do we care if someone makes a big pot of money? It is going to stimulate others to want to do the same thing. And we had some very big awards. They were tremendous. But you are right, it was a lottery sort of philosophy—if that can happen to somebody else it can happen to me. That is what sold it. It was the knowledge that someone really got $10,000 or $20,000. It enabled them to buy a house, not just ice-cream, or another package of cigarettes, or something like that. We realize that there is a sensitivity about big payoffs of Government money. But we have to take those risks. And if legislatively you feel that we can give you more leeway, or something like that—I think the whole point is to stimulate people. The idea that these are public ser-

vants, and they will give their all because they are working for the Government is not realistic. They are human, just like anybody else. They have to be motivated. And they have to feel that they are getting a fair shake. If that goes beyond their job assignment and yet they come up with some ideas, it may eliminate their job. And it well could. Okay. Give them a big enough reward and they may show you that their job is not necessary.

Mr. ROSEN. Certainly, I couldn't agree with you more, Senator Percy, and Chairman Proxmire. We have actually had a number of awards over $5,000, which is a little more than an ice cream cone. And those have been widely publicized, they have been given a tremendous amount of publicity. Certainly, though, the encouragement of an even more generous award structure by this committee will cause us to take another look and see whether some additional changes in that direction would be useful.

Chairman PROXMIRE. There is one point that I do not think the taxpayers complain about, although some people complain about everything. But if they see that somebody wins a $100,000, or a half a million dollars, which means that they are going to get that, as Senator Percy says, the first year, and from thereon the Government gets it all, the taxpayers are not going to complain, it is going to be the simplest thing in the world to explain, they say, this fellow is great.

Mr. STAATS. My own personal view is that we have to find some way to extend this kind of award system up the scale to the management level. Those are awards intended to go to people who are employees at the nonsupervisory level, not exclusively, but in a very large part.

But there is another point I would like to add here. There is a positive disincentive at work here today—and people are coming up with innovative ideas of this type, because if they come up with it, the assumption is that in next year's budget you can do equally as well or better, so they cut it all out of the budget. So the tendency is to hide these things rather than surface it, and publicize it, and take credit for it.

Senator PERCY. Maybe you could suggest a plan to us to provide a sharing system for members of Congress. Maybe Congressmen could get a percenttge of any bills they wouldn't put in to spend money. I tell you, we would have a balanced budget in a hurry.

What happened to PPB? Is the joint financial management improvement program supposed to supercede PPB. And what are the reasons we no longer hear much about it?

Mr. STAATS. I will start that, and then perhaps Mr. Ink will want to continue.

In planning programing budgeting system, while it is not so designated as the official title of it, continues very substantially in the agencies. The essential ingredients of it are to try to project your costs and benefits over a period of time—3 years, 4 years or longer—to try to develop alternatives from the standpoint of producing the best results at the least possible cost.

And then the third component is to tie it into your financial planning system, the budget and the budget execution system. The present administration, I believe I am correct in saying, has not adopted this type. But many of the essential elements do continue.

Now, with respect to the joint financial management improvement program, this is a program that was started back in 1950, with the Budget and Accounting Procedures Act. The law specified that the Director of the Budget, the Secretary of the Treasury, and the Comptroller General, should cooperate in their common interest in the financial management area. As time has gone on, the Civil Service Commission and the General Services Administration have been added, those being the central leadership agencies. There are a series of programs which are under the sponsorship of this joint financial management improvement program, including productivity, the follow-on productivity study. There are many others. We have done what we can to encourage the JFMIP, as we call it, in many of its activities. And only recently we had a full-time staff director appointed to give stimulus to the work of this group. But they are quite different and separate in terms of their function.

Senator PERCY. The Harris Poll at the end of 1972 surveyed professional people. More than 50 percent of them felt that the productivity of Government employees was substantially less than the productivity of employees in the private sector. More importantly, Government employees were asked the same question; 51 percent felt that their own productivity was less than it should be. Now, I am not one who philosophizes that Government employees work less hard than people in the private sector. In fact, I have tried to convince my business friends that I have seen harder and more dedicated work put in by Government employees than by any others. But whether they are working efficiently and well is something else again. Long hours is not the same as efficiency. In the thrust of your programs, do you feel that the Government now has an efficacious enough program aimed at finding ways to improve the efficiency of Government workers. And is our effort substantial enough in this regard?

Mr. STAATS. That is a very difficult question to be very categorical about. I would like to ponder it, and then perhaps Mr. Morris or Mr. Ink or Mr. Rosen would like to add to it.

But the general response I would make to your question would be this. You could find many dramatic instances where really outstanding jobs of management have been done in the Federal Government, some which I think any private concern would be proud to have, and would say that they could earn a lot of money in their operation with an equally good system. You have others which are not up to par. As we have emphasized here, the Federal Government is really kind of a conglomerate, and it has some units in that conglomerate that are highly proficient and productive, and others are not and need to be improved. The value of this productivity analysis approach is that it gives indicators as to where problem areas exist. There may be perfectly good reasons why productivity should be stable or even decline. There may be reasons for that. But the point is that without this you don't know.

And I would say also, in response to the Harris poll, that the fact that we haven't been able to provide overall indicators of productivity in the public service has made it impossible to refute that argument, and to change this image of the public service.

I think that whether it shows a good performance or a poor performance is less important in that sense than it is that we know what it is and be able to make statements which can be backed up with factual analysis behind them.

I think personally that one of the most significant things about this study up to this point is that in addition to giving us better information it may help us focus on these capital investment type decisions that will give us a high payoff of improved service and lower costs.

Senator PERCY. How far along are we in developing concrete proposals for financing productivity investments; that is, capital budgets, revolving funds, productivity bank, and so forth?

Mr. Morris.

Mr. MORRIS. We have turned out one report on the problem and alternative approaches. We need to continue exploring which approaches are the most practical. And we probably need a range of approaches. As Mr. Conlon testified while you were out, the revolving fund offers opportunities that activities without that kind of flexibility cannot exploit. However, I think we are perhaps a year away from having specific proposals.

With respect to our management improvement programs, for which Mr. Ink and Mr. Rosen carry the responsibility in the executive branch, I would like to observe that I don't think we should ever be satisfied, we can't let the emphasis on the need for these efforts ever to relax. We feel the interest of you gentlemen in listening to these kinds of examples can do a great deal of good in setting an example.

And third, I feel that good management is what we are really talking about and we need to continue to stress its importance.

Mr. INK. I would agree with that. And it is important to maintain a sustained effort and sustained vigilance, because the fact that an effective program may come into operation in an agency in no way insures that that effective program is going to continue. One of our problems in Federal Government is the unusually high turnover in the higher levels. I think in comparison with industry there tends to be more top level change in Government. And in some respects it is more difficult at times to maintain these kinds of solid management programs. They don't get a lot of publicity, and it is not the sort of thing that an agency gets brownie points for in the press. It is very difficult, but very important, that there be continuity. As has been discussed, without knowing what the trends are, the value of the data for 1 month or even 1 year is limited. And the kind of analysis which can be made are extremely limited.

Senator PERCY. I have just one final question. I appreciate your comments. I have met this past year with three different top groups in business on the subject of quality of work. At one symposium which I attended in New York representatives of 150 companies and industries came together to determine what this is all about, what effect it will have, and increasing education in this area. People are constantly improving their capabilities. But the jobs challenge does not seem to be growing as fast. Just recently at Arden House, there was a 3-day seminar of labor and business leaders to talk about the dissatisfaction workers feel toward their work. The improved productivity that can

result if the capability of a person is matched with the challenge of a job was also discussed. Can you tell us what the Federal Government may be doing? Are there some experiments being run now? And is this subject being given the same amount of attention in Government that it is receiving from academic communities and the business community?

Mr. ROSEN. Yes, Senator Percy, this subject is being given a great deal of attention both by the Civil Service Commission, my own agency, as well as many of the departments and agencies.

It is very difficult, as you know, to generalize in this area. We do not have any evidence of an overwhelming dissatisfaction in the Government in terms of issues that you mentioned. But we are confident that we are not much different than the private sector insofar as dull and boring jobs not being very stimulating for the highest productivity.

And as we have examined it, we believe that in many cases this comes down to really two areas for specific attention. One is the area of leadership. What kind of supervision and management is there of people? And here we think that there is considerable improvement that can still be brought about. And we are deeply involved in improving the training of supervisors and managers with this thought in mind.

The other area where we think there is room for improvement is in the nature of changing the job structure, enriching the jobs, where people can see the product of their efforts more completely and identify with the ultimate results of the organization, whether it be patient care in a Veterans' Administration hospital, or forecasting the weather, or research on agricultural crops, or stock work in a large supply depot.

So these are the two centers of activity that we are concerned with right now, and where we do have the beginning of some demonstration projects. And, Senator Percy, as the data begins to come in from some of these efforts, we are going to seek a wider application of those efforts that look like they will improve productivity.

Senator PERCY. Is there anyone that can specifically comment on what is being done at the Baltimore regional office of the Social Security Administration? I think they have done some fine work there.

Mr. ROSEN. Yes, Senator Percy. We do have a specific project underway there. And there the work to date indicates that job content is the primary problem. And so there is an effort underway to see about enriching the jobs and see whether this will have a favorable impact.

You heard from Mr. Conlon of the Bureau of Engraving and Printing a short time ago. Actually there is a project underway there as well. And there are some other elements appearing that are quite different from job content. So some of these look very encouraging to us, and we are pursuing them with vigor.

Senator PERCY. I would like to say that we in the Congress have a long way to go in improving the quality of our work. Job enrichment applies here also. I have done a lot of thinking about that. I find that a single individual can carry a project further than the whole staff might otherwise. And certainly it doesn't do the whole

staff any harm once in a while to jump on all the mail that comes in. Everyone has to answer mail for a weekend, or something like that. Just as I find in the reports of China. The top levels in China still have to go back and work in the field, or in the factory to keep the common touch. So there is a great deal that can be done all through Government. We need it here in the Congress just as much as anyplace else.

I want to thank you very much, Mr. Chairman. I also want to thank this very distinguished panel.

Chairman PROXMIRE. I want to point out that in Joliet, Ill., your State, they provided $500,000, as I understand it, to this agency on ammunition procurement. For that $500,000 they saved $1,800,000 every year. So the first year they got back their $500,000 more than threefold. And from now on that savings continues. And I think it is a marvellous example that very few people know about. I didn't know about it until this morning.

Senator PERCY. There are many things that are going on in Illinois. You will have to come out and run through our State sometime.

Chairman PROXMIRE. Mr. Rosen, go right ahead.

Mr. ROSEN. Thank you, Mr. Chairman.

First, I want to add my high regard for the leadership of Mr. Staats and Mr. Morris and the association with Mr. Ink in this whole project. The Civil Service Commission is very pleased, Mr. Chairman, to have been a part of this project, because much of what we do is directly related to the human factors of productivity. For example, well qualified people are the first requisite for any effective organization. And we have a major responsibility for the design and the operation of recruiting and examining systems that will attract the best qualified people in the Government. And on the whole I believe we are succeeding in this respect. And I will just give you one example.

Looking at the figures of the thousands of college graduates who each year take our primary entrance examination, 70 percent of those who wind up on the eligible lists and are eager for appointment are from the top third of the graduating classes. So the best are applying and competing. And we are pleased with this.

In the area of pay and benefits and other incentives, we know that these are a fundamental part of the reward structure; they are integral to an effective work force. And we are in the business, of course, of building and refining the pay systems and the job classification and the incentive award and other benefit systems, so that both the taxpayer and the employee get a fair deal out of it.

Training, Mr. Chairman, is another and very exciting component of productivity improvement, for which the Commission has the major responsibility. We have been stressing managerial training as we mentioned just a few minutes ago. In the past year, just to give you some feel for the magnitude of the effort, in the past year we have had over 100,000 employees attend our training programs. And 70 percent of those employees received training directed to improving supervision and management. And I know you will be pleased to know, Mr. Chairman, that of this 100,000, about 15,000 were from State and local governments.

And then there is one new activity that we are just getting underway. It is the establishment within the Civil Service Commission of a clearing house on productivity and organization effectiveness. This unit will serve as a focal point for not only collecting and disseminating information about manpower management that influences productivity improvement, but will also help encourage our activities along this line.

Good personnel management also recognizes the contributions that employees can make to more effective utilization of human resources. Furthermore, with the Federal work force, more than 60 percent organized, managers, not only have an obligation, but an opportunity to provide for structured employee input, through their union representatives, in the formulation or the implementation of appropriate policies and programs designed to enhance productivity. We feel that a willingness by management to seek the views and accept useful suggestions in making decisions, and a cooperative, understanding attitude by employees and their representative, can in fact and does in fact contribute to the efficiency and the effectiveness of Government operations.

So clearly both management and the employees have a responsibility to the public they serve, and we have no reason to believe that this responsibility will not be fulfilled.

In short, Mr. Chairman, we view it as our responsibility continually to help agencies develop and maintain a high quality productive work force through which greater organizational effectiveness can be accomplished.

Chairman PROXMIRE. Thank you very much.

Now, I have a series of questions here. First, I would like to get back to your prepared statement, Mr. Staats. You attached a list of agencies taking part in phase III study. Many of the biggest agencies in the Government, including the Postal Service and the Defense Department and HUD and the Transportation and Treasury, and so forth, are listed. Some are not. What are the major agencies that are not included in this study, and why weren't they?

Mr. MORRIS. Sir, the agencies not included by and large are the smaller agencies. They would include Battle Monuments Commission, and——

Chairman PROXMIRE. How about the Highway Department?

Mr. MORRIS. The highway activity, I believe, is represented in our coverage, sir.

Chairman PROXMIRE. Where?

Mr. MORRIS. Within its parent agency, DOT.

Chairman PROXMIRE. And that is why the Department of Transportation is so big. I notice that is big. You have more man-years there than you have in HEW.

Mr. MORRIS. We have excellent coverage in DOT, particularly from the Federal Aviation Administration.

Chairman PROXMIRE. Then let me ask you, why was such a tiny percentage of NASA measured? You have National Aeronautics and Space Administration only one-tenth of 1 percent as measured. Why is that?

Mr. MORRIS. We have been unable in the case of research and development type functions in any agency, or those primarily concerned in such functions, to arrive at quantifiable output data of the type usable for this index, NASA, AEC, and in fact much of GAO's professional work and professional work generally in the Government is in that 40 percent increment that we have not yet learned to measure. We find here that the technique of "management by objectives" which OMB is sponsoring may be the better way of coming at a measurement of those functions.

Chairman PROXMIRE. They were so much worse than any of the others, the one-tenth of 1 percent is far less than some of the others that are heavy in resources like AEC, and so forth.

Mr. MORRIS. Yes, sir.

Chairman PROXMIRE. Was there a lack of cooperation on their part?

Mr. MORRIS. We have good cooperation. It was just a lack of opportunity as they have seen it and as we have seen it, too. We do not feel critical of their experience at this time. They have tried hard to find measures.

Chairman PROXMIRE. I don't understand why you can't determine what their objectives are. They do the same things often over and over again. They went to the Moon all those times. Can't you find some way of equating their input with their results?

Mr. MORRIS. In the simple terms of output per man-year, no research and development activity that we have dealt with in the private or the public sector has found good, useful quantitative measures. Setting objectives, yes, like getting to the Moon by 1969. That they achieved. But the quantifiable aspects have eluded use.

Chairman PROXMIRE. How about the Federal Maritime Board? Why do you have only 6.3 percent of that—or am I misreading that? I guess that it is the FCC that has that, only 6.3.

Mr. MORRIS. We have an uneven coverage of the regulatory agencies. Some are 100 percent and some aren't. And we have more work to do there, sir.

Chairman PROXMIRE. In any case, is this a matter of lack of cooperation?

Mr. MORRIS. I think we feel at this point, sir, that we are getting an excellent response from all the agencies that have a capability. We have another year's work ahead in which we expect to improve the coverage. But I know of no instance where there is a lack of cooperation.

Chairman PROXMIRE. How about the U.S. Information Agency?

Mr. MORRIS. They have difficulty in identifying compresensive measures. However, they have reported outputs covering 2,300 man-years, including certain of their broadcasting operations and publication services.

Chairman PROXMIRE. Why? Don't they have a certain number of broadcasts and a certain amount of material they turn out, and so forth?

Mr. MORRIS. But to find units that can be consistently counted from month to month and year to year is the difficulty. It is just like counting GAO reports, some take a year to complete and some a few weeks.

We are seeking unit figures which can be aggregated as a measure of total output.

Chairman PROXMIRE. I think the USIA, because they do turn out a certain amount of material to be broadcast, and to be disseminated in other ways, would not be as complex as, say, the AEC.

Mr. STAATS. On the fiscal side of the broadcasting operation it seems to me you might have some potential. The number of people who supply broadcast material and analyses and interpretation of and that sort of thing would be much more difficult.

Chairman PROXMIRE. How about an agency I haven't mentioned before, General Accounting Office? I see the General Accounting Office has 13.3 percent of its work measured. That means that 86.7 percent was not measured. Why is that?

Mr. STAATS. The part which is measurable is the audit work, which is fairly routine work, of transportation vouchers, where we have had a very visible increase in our productivity, for many of the reasons we have mentioned here today—the introduction of sampling, and computerization of much of it. But the part of our professional work which we can measure—but we would not want to say that it would really have a lot of value—is the number of reports we produced from year to year.

Let me give you an illustration. Congress is just asking us to make a study of health maintenance organizations. And those will be limited to HMO's that have been in existence for 37 months, which means that we will have to start monitoring some of those new ones right now, but we will not be able to report until after something like 3 years. Other studies, as Mr. Morris points out, we can produce relatively fast. But the variation in the collection from one review to the next is so great that while we could provide some indices, I doubt if it would really be too meaningful.

But let me take this occasion to bring out something which I don't think has been emphasized enough. The Government in this respect is no different from what we have in the private sector. Much of what is in the private sector is not suspectable to measurement on a fiscal output basis, as Mr. Mark from the BLS here has already emphasized. But that doesn't mean there are some indicators that can be developed wth respect to the progress of certain objectives. And we have that in GAO, in terms of time it takes to process a report at various stages of the way. And we have other types of indicators of the degree of acceptance of our recommendations, the dollar savings where our recommendations have been adopted. These kinds of indicators we have.

Chairman PROXMIRE. I didn't mean, of course, that the GAO——

Mr. STAATS. But this is not untypical of some other types of operations.

Chairman PROXMIRE. How about the Congress, is there any possibility, do you think, of developing ways of measuring productivity in the Congress? At one time I talked to some of the business efficiency firms, Arthur Little, and so forth, Booz-Allen, to see if they could come in and do some kind of a study of my staff for me. But I found I would have to pay for it out of my own pocket, and I found it cost considerably greater than I could possibly afford. But I wonder if there

is any way that this might be done on maybe a sample basis or limited basis, if there are any suggestions that could be given to Congressmen and Senators for measuring their staff output?

Mr. STAATS. Two things. One is the establishment of the Joint Committee on Congressional Operations, which is designed in part to provide a focal point in the Congress for improvement of the managerial side of the congressional operations. My own personal view is that there is a lot more potential there, a lot more needs to be done.

But on the other point I would like to make is that in the Legislative Reorganization Act of 1970 it was provided for a joint project of Treasury, OMB, in cooperation with the GAO, to develop a Government-wide data management system, hopefully on the basis of computerized systems, to provide information for all of the agencies of the Government, including the Congress. We have 25 people who are working with the committees of Congress now and the Treasury and OMB and trying to develop this system. We think that while it is a long-range project, there is a great deal of potential here in providing information on a quick readout basis which is relevant to the needs of committees and subcommittees of the Congress.

I guess there is a third point. I think Congress itself could stand the kind of analysis which we expect the agencies to receive, in terms of just ordinary business management practices.

Chairman PROXMIRE. We use that very well. We have problems of our own, political problems. We have constituent pressures to hire people or not, to pay people off, and that kind of a thing. That is a problem of course. But that is a problem everywhere. But I think something like this would be very helpful to us, to the extent that Members of Congress wanted to take advantage of it, at least to begin with, so we would know how we could get more out of our staffs and do a better job to the taxpayer and set a better example.

Mr. STAATS. A number of the Members of the Congress have stressed the view you have here. I am sure there is a great deal of potential. Just how to bring it about I am not so clear. The Joint Committee on Congressional Operations might be one vehicle.

Chairman PROXMIRE. If you leave Defense out, you have been able to measure better than 60 percent, you have been able to measure 80 percent. On Defense you only measure 31 percent because Defense has such a large number of managers, now 1,169, a big percentage of your total. And that reduced it down to 60 percent. Why is Defense so far behind? Why should Defense have only a little better than a third of the amount of measurement that the rest of the Federal Government had?

Mr. MORRIS. This question we were very interested in, obviously, sir.

The activities which have been measured are primarily called logistics, which are procurement and supply activities, and those that overhaul and maintain ships, planes, tanks and heavy equipment; that is, the truly industrial activities.

The activities which have not lent themselves to measures thus far are, first, research and development, which is the same problem which we spoke of in the case of NASA.

Secondly, the large training and education area which has also been difficult to measure in the private sector. We would hope for breakthroughs here as we go along. And we should find ways of measuring the outputs of our training and educational activities.

A third very large group is just the sheer overhead functions at headquarters, such as here in Washington and at many places around the country at base level, where the base support people do many things which have not lent themselves to good measurement. So that is another universe that needs attention as we look ahead.

Chairman PROXMIRE. So critics like Admiral Rickover, and so forth, would argue that they don't lend themselves to it because they are so unproductive, they are just counterproductive. He has argued, as you know, that you would have had a more efficient Pentagon if you fired half the admirals and generals and their staffs.

Mr. MORRIS. Overhead functions require continuing scrutiny.

Chairman PROXMIRE. Appropos of that, I put in an amendment to the appropriations bill, which was defeated on the floor, which was reflecting what the House did. The House bill goes to conference anyway. My amendment which was defeated would have limited the number of admirals and generals down to colonels and Navy captains. This was an effort to do something about the so-called grade creep, the fact that we now have more generals and admirals than we had in World War II, we have one-sixth as many people and we have more generals and admirals. And to many people this seems utterly ridiculous.

When I put this amendment in, one of the arguments raised against it by Senator Goldwater was, nobody ever talks about the grade creep in the civilian agencies and the other agencies, we have the same problem there, but nobody ever complains about that. We have all kinds of increases in grade for people in HEW and Transportation, and so on. And I think he may have a good criticism. But we just don't have the figures on it, we don't know, because we don't have the same kind of generals and admirals classifications. Is there any way that we could determine whether or not we have had that tendency to increase the supervisory personnel, the people with high salaries, in relationship to rank and file people who do the work in the nonmilitary agencies?

Mr. STAATS. Mr. Rosen, I think should respond to that.

Mr. ROSEN. Mr. Chairman, there is in fact an increase in the number of employees in the higher grades. But it is not linked to the issue of supervision. The largest part of the increase in the higher grades is because of the need for an increasing number of high grade professional specialists due to the technological growth and the number of new programs that have been authorized.

Chairman PROXMIRE. How do you know it can be rationalized on that basis, or do you?

Mr. ROSEN. The reason we feel this is a sound conclusion is that the system for determining grades is based on classification standards. We do have an audit program, it is not a complete 100 percent audit, but as in most large business establishments, we use a sample audit. And by and large we find that the agencies are classifying the jobs properly in accordance with the standards. Now, I don't want to mislead you in any way, Mr. Chairman. The fact is that I am sure that there are

some jobs which are allocated at a higher grade than they ought to be. Whenever we identify these, we call for corrective action.

Chairman PROXMIRE. Let me interrupt. I wonder if there is any way that we could make a comparison with the Defense Department for the benefit of both? It may be that my criticism of the Defense Department is unfair, and I ought to criticize the whole Federal operation, or it may be that the rest of the Federal operation does it much better. You have, as you say, by and large, with exceptions, that you would have in any big group, an allocation of supervisory and professional and high-paid technical people in accordance with the job to be done. We think we have a basis for criticism of the miitary. That is disputed, but I think we can document it. Is there any way that we can compare the two?

Mr. ROSEN. I do not know of any direct way to compare them. The fact is that I am not fully familiar with the basis on which people are given certain grade increases or promotions in the military. I do know this, Mr. Chairman, that the military system is different in one important respect from the civil service. It is a rank-in-the-man concept, where an individual who develops certain experience and knowledge and training over a period of time, and has evidenced the capacity for more important work is promoted through promotion boards. Now, in the civil service system——

Chairman PROXMIRE. That is the problem in the military. I understand it is a tough problem, because it is one way you keep good people, and keep ambitious, hard-driving people, is to give them an opportunity to be promoted. I realize that we are going to have to pay a price if we weed out what seems to be a superfluidity of high ranking officers. But I would think, in all fairness to the taxpayers and to the burden the taxpayer has to bear, that we would just have to do it, and find some other way of compensating people or providing an incentive for people so that we can keep enough good people in the military. It is not easy.

Mr. ROSEN. I really am not competent to comment on the military side of this, whether it is unjustified or not. But I can say this to you, Mr. Chairman, that on the civil service side we are prohibited from giving increases in grade just because someone supervises more people.

Chairman PROXMIRE. Let me ask you this. What is the proportion of supergrades, that is 16, 17, 18, now compared with 10 years ago and 20 years ago? Do you have that?

Mr. ROSEN. The proportion would be higher. And I would like to be permitted to furnish that for the record, Mr. Chairman, if I may. But I must say respectfully that I doubt that the evidence of such a higher proportion is really a sufficient basis to draw a conclusion that what may be going on now would in some way be improper, because——

Chairman PROXMIRE. It depends on how much higher it is. If it is 4 or 5 times higher I would say we ought to look into it, because it might be improper, or at least it might be wasteful.

Mr. ROSEN. Let me say this. We have looked at the supergrade jobs. And the problem we are having in the executive branch of the Government right now, Chairman Proxmire, is that we don't have enough supergrades. In the last 5 years the Congress has authorized an

increase of only 150 supergrades for general distribution. And yet the numbers of new programs, the complexity of programs, the new requirements have convinced us from our analysis of the needs of the agencies that it is not sufficient in order to recruit and retain first-rate people, sir.

Chairman PROXMIRE. You may well be right.

Would you give me those figures in detail, along with the military figures if you can get them. Maybe Tom Morris will work with you to do it.

Mr. STAATS. May I make a suggestion, Mr. Chairman?

Chairman PROXMIRE. Yes.

Mr. STAATS. In the information that Mr. Rosen is to supply, it seems to me that it might be helpful to have also, along with that, an analysis of the supergrade jobs and the military jobs, as well as who hold scientific, technical, and professional jobs, against those who are in line positions.

Chairman PROXMIRE. Or staff positions?

Mr. STAATS. Or staff positions—who are justified pretty much—I think to get comparable data, going back for the period of time that you are suggesting, it would be helpful to break these out.

[The following information was subsequently supplied for the record:]

COMPARISON OF GENERAL/FLAG OFFICERS TO TOTAL MILITARY STRENGTH

Year	End strength		General/flag officers compared to total military strength	
	Total military personnel (E-1 to O-10)	General/flag officers (O-7 to O-10)	Ratio [1]	Percent [2]
1960	2,476,435	1,260	1,965	0.050
1965	2,655,389	1,287	2,063	.048
1970	3,066,294	1,339	2,290	.043
1971	2,714,727	1,330	2,041	.048
1972	2,323,079	1,324	1,755	.056
1973	2,252,841	1,291	1,745	.057
1974 [3]	2,175,241	1,248	1,743	.057
1975 [3]	2,153,266	1,231	1,749	.057

[1] Number of personnel for each general/flag officer.
[2] General/flag officers as a percent of total military strength.
[3] Based on President's fiscal year 1975 budget request, including active duty personnel paid from Reserve and Civil Works Appropriations.

U.S. CIVIL SERVICE COMMISSION,
Washington, D.C., January 4, 1974.

Hon. WILLIAM PROXMIRE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR PROXMIRE: This is in reference to my testimony on December 17 before the Joint Economic Committee, and the subsequent telephone conversation between Mr. Tammen of your staff and Miss Ugelow of the Commission's Bureau of Executive Manpower.

The Civil Service Commission maintains data files on positions under the General Schedule or under other salary systems subject to Commission purview. It has no jurisdiction, and accordingly no data, on positions in the uniformed military services. Furthermore, these systems are not comparable. The General Schedule is predicated upon a "rank in the position" concept while the military services utilize a "rank in the man" concept. It is, therefore, not possible to establish a one-to-one relationship between the general schedule grades and the military officer ranks.

We did, however, telephone the Department of Defense to determine how information on the strength of the uniformed services could be obtained. We were advised that a written request would have to be submitted to the Secretory of Defense. Since because of its lack of jurisdiction in this area the Commission could only serve as a middleman, we thought that the Committee might prefer to deal directly with the Department of Defense.

We are enclosing the following tables and reports relative to upper level positions under the Commission's jurisdiction:

(1) A table showing the relative growth of General Schedule positions for representative years between 1960 and 1972;

(2) A table showing the functional classification of supergrade positions; and,

(3) Copies of Executive Manpower in the Federal Service,[1] January 1972 and March 1973 editions. These reports contain various data on the structure and characteristics of upper level positions under the Commission's jurisdiction.

We hope that this information will be helpful to the Committee and we will be glad to provide further assistance, if necessary.

Sincerely yours,

BERNARD ROSEN,
Executive Director.

Enclosures.

GENERAL SCHEDULE EMPLOYMENT

Year	GS 1–18 [1]	GS 16–18 [2]	Percent of GS 16–18 of the total
1960	954,000	1,576	.165
1965	1,112,000	4,484	.403
1970	1,287,000	5,776	.449
1971	1,298,000	5,854	.451
1972	1,281,000	5,781	.451

[1] U.S. Civil Service Commission, Pay Structure of the Federal Service, annual.
[2] U.S. Civil Service Commission, Executive Manpower in the Federal Service, March 1973, table 2, p. 3.

FUNCTIONAL CLASSIFICATION OF SUPERGRADES [1]

	Scientists [2]		Nonscientists		Total population, Percent ↓
	Percent ↓	Percent →	Percent ↓	Percent →	
Managers	77	38	85	62	82
Supervisors	19	53	11	47	14
Individual workers	4	42	4	58	4
Total	100	40	100	60	100

[1] U.S. Civil Service Commission, Executive Manpower in the Federal Service, January 1972, table 9, p. 6.
[2] Includes the following occupations: Physical, biological and medical sciences, mathematics, and engineering.

Chairman PROXMIRE. We feel that we have moved to a situation where we have enormously increased our support and supply operation compared to our combat operation in the military. This is a reflection of that, too.

Mr. INK. Mr. Chairman.

Chairman PROXMIRE. Yes, Mr. Ink.

Mr. INK. I would also like to encourage further experimentation with the use of dollar limitations rather than personnel ceilings as a basic means of control.

[1] Copies of Executive Manpower in the Federal Service, January 1972 and March 1973 editions may be found in the subcommittee files.

Chairman PROXMIRE. We had personnel ceilings, as you know through the Korean War, and then it was stopped shortly but before that it was fairly effective. Do you think dollar ceiling would be better?

Mr. INK. I think there is a possibility of this, and I think we need more experimentation, because it provides an incentive to management to distribute the dollars on the basis of where they can contribute to productivity. As it now stands, when the basic control is on ceilings, then a high level person counts the same as a low-grade individual, and there isn't the incentive for a balance, and a proper mix among grade level in that organization. In order to do that, of course, there needs to be adequate financial controls, and there needs to be accurate and timely fiscal information, so that there is adequate managerial control over all.

Mr. STAATS. I don't think there is any doubt about it, if a manager has to contract his organization to stay within a personnel ceiling, the tendency would be to take off the lower grade people.

Chairman PROXMIRE. That has been done.

Of course, that is a terrific problem in the military. They have suffered a big drop in recent years. They suffered a big drop after World War II, and in the Vietnam War it dropped from 3.5 million in 1969 to 2.3 million today. And you say there is a tendency in those circumstances to discharge the lower ranking personnel and retain the higher ranking slots?

Mr. STAATS. The real control should be costs in relationship to output. If we can make management responsible for applying that test, based on productivity analyses, we would be far better off than by circumscribing management and saying you only have so many people.

Mr. INK. That provides a counterforce, an incentive to deal with the kind of problems you pose.

Chairman PROXMIRE. We may have to have some of both. I think the dollar is certainly the fundamental control. But I don't think it is a good idea to permit the military to continue—pretty soon you will have nothing but generals, insteads of being a private as I was when I went in, you will go in as a general.

Mr. STAATS. If he hires too many people his costs are going to go up.

Chairman PROXMIRE. What percentage of the hundreds of thousands—this is for Mr. Rosen—of the 100,000 civil service trainees that work specifically on productivity improvement, that is, on—for example—on the advantage of investment to save manpower, how many would be exposed to this kind of argument we have had here this morning?

Mr. ROSEN. I couldn't give you a precise figure, Mr. Chairman. But certainly in many of our training programs the issue of productivity improvement is a subject that does receive attention.

Chairman PROXMIRE. You hit that hard and you hit it continuously. But why can't you have a situation where virtually everybody is in a management position when he comes in for a civil service training, at least as to some real exposure for this? Because I think few people in the Congress or the general public are aware of the enormous opportunity for saving by a sensible investment policy.

Mr. ROSEN. In fact, Mr. Chairman, one of the gratifying aspects of participating with Elmer Staats and Tom Morris and Dwight Ink in this project is the fact that we feel we can get out of this basic information which can be built into training programs for supervisors and management. We think that there are now identified success stories which can be fed into these training programs and can help us say, "Go and do likewise." And we can say we are not just theorizing, here is where it worked. So we think there will be more of this. And certainly we will follow through.

Chairman PROXMIRE. Mr. Morris.

Mr. MORRIS. To be sure Mr. Rosen gets full credit, sir, they started offering some 11 courses last year covering a spectrum of subjects to a spectrum of people, dealing with productivity and related subjects. Many of us speak to these courses. And I think there has been a very good response here. There is more to be done, to be sure, but this is a very good initial start.

Chairman PROXMIRE. Mr. Staats, one of the great results of your study has been a recognition that there is an improvement in productivity in the Federal sector, in the governmental sector overall, the Federal, State, and local. And this is a surprise to many economists. At the same time your report indicates that the Federal productivity rose about 1.7 percent a year in the 5 years ended in 1972, which is well below the typical average private sector increase of 3 percent. What are the reasons, the principal three or four reasons for this difference?

Mr. STAATS. This covers a 6-year period, 1.7 I think covers 6 years. The 5 years which we reported last year on a preliminary basis was 1.9 for a 5-year period. So it has gone down to some degree.

I would like again to ask Mr. Morris if he would like to comment on your question.

Mr. MORRIS. Sir, we think first of all it is probably not at all realistic to try to compare the Federal sector as such with the private sector as such. The two universes just have totally different contents. For example, the Department of Defense, which, as you point out, is a big part of our Federal sample, experienced a huge upsurge during Vietnam and it is now experiencing a rapid decline in its staffing, and therefore a sliding off in productivity is inevitable. So we think the composite index on the public sector is not one that is useful to compare with the private sector, but one that should be examined and compared with itself and its components from year to year. This is what we are endeavoring to do.

Chairman PROXMIRE. Is it possible that a major difference could be in the more intense use of capital equipment in the private sector?

Mr. MORRIS. Yes, sir. And we feel that we can compare the capital intensive-type activities more readily with the private sector, and should do so.

Mr. STAATS. But the very fact that we know the figure went down from 19 to 17—I think it is important for us to know that.

Chairman PROXMIRE. It went from 1.9 to 1.7. It must have been a pretty bad year. How big a drop was that, the last year? You say in 6 year's time it is significantly below 5 years.

Mr. STAATS. As a decrease from 1.9 which is the 5-year average to 1.7. So a 1-year drop would be pretty significant.

Chairman PROXMIRE. Maybe last year with an increase of, say, 1.8 of 1 percent, or something like that, is that about right?

Mr. STAATS. Maybe Tom can answer that question.

Mr. MORRIS. I would like to comment on this, because, first of all, we are dealing with very recent experiences.

Chairman PROXMIRE. There was a big Vietnam drop back in 1969 and 1970, not this time.

Mr. MORRIS. What we have learned is that from year to year one can expect activities to vary greatly, whether they gain at all or drop. Leadtimes become very important. To put a computerized installation into operation may require 2 or more years before one experiences the productivity impact. So unless long-range planning is practical, many of these productivity levels can't be sustained, and we will have to accept level-off or declining trends.

So the overall number is a very dangerous thing to make judgments on. We think it is something we need to use as an analytical tool and to watch the 16 components that we have identified in terms of discovering what has happened.

Chairman PROXMIRE. You have a 3- or 4-year leeway; without being partisan, I might say the impact of the Nixon administration is beginning to show itself.

Mr. STAATS. Mr. Chairman, one thing is that 5-year analysis covered only 55 percent, whereas the 6-year analysis covers 60 percent. And in that additional 5 percent are found units which are smaller units for the productivity.

Chairman PROXMIRE. I was being facetious of course when I made that partisan reference. Watergate has done a lot of things, but we can't blame that drop on Watergate.

I know you are well aware of the problems of measuring productivity. One basic element is getting a good measure of output. Doesn't your procedure bias the results in accounting, where there is only a fiscal count, like of the number of letters mailed? How do you handle the output of the Federal Trade Commission or the Securities and Exchange Commission. In the FTC, for instance, an important function is consumer protection? How is that handled?

Mr. MORRIS. In each case we have worked with the agencies concerned to select those statistical data which they use for managerial purposes, and which we believe can be repeated and counted consistently. For example, the Federal Trade Commission is reporting to us five kinds of output indices. First is orders issued in connection with consumer protection trial work. The second is orders issued in connection with competition trial work. The third is formal investigations completed on regional investigations. And we have two others of similar nature, these being those outputs statistics that we consider more useful.

Chairman PROXMIRE. They have to hold their quality static, don't they?

Mr. MORRIS. This also assumes that quality is kept at acceptable limits.

Chairman PROXMIRE. Do you think that is a reasonable assumption in the case of an agency like the FTC?

Mr. MORRIS. I should not like to answer that. The rule is that every agency should have its own quality control as well as its productivity measure.

Chairman PROXMIRE. Let me suggest that it seems a very difficult measure for a local government. One of the biggest costs of local government, of course, is education. When you reduce the size of a classroom for a teacher from 50 pupils to 30 pupils, almost all of us would agree that that is good, the child gets individual attention. The productivity obviously deteriorates, drops. But what happens is that you have a different quality element. How would you handle that kind of a productivity measure?

Mr. MORRIS. In such a case we think we should then restate the measure of output and put it on the correct basis; that is, the basis that you consider to represent the right quality of performance, and restate index trend on that basis.

Mr. INK. If I might add, Mr. Chairman, in any event, as was mentioned earlier, the productivity measure is a basis for analysis. And part of the analysis, it seems to me, is what impact the productivity change may have had on the program. We mentioned housing awhile back. There were many other factors that needed to be looked at and weighed in conjunction with the productivity figures themselves. Productivity is a managerial tool, and should not be taken as an end in itself. If the productivity figures are simply accepted by management as the answer to the program without the kind of analysis that Mr. Staats was mentioning earlier, then the productivity program is likely to create some significant problems.

Mr. STAATS. This problem is not unique to Government, of course, as you are well aware. The service sector of the private industry has grown tremendously. And you have the same problem with quality control and quantity measurement there as we have, I think, in the Federal sector.

Chairman PROXMIRE. It seems to me there is an awful lot to be done here in reorienting our investment objectives. You have touched on that very well. But let me just suggest how big it is.

There is an estimated $3 billion of fiscal year 1973 obligations that have a direct impact on productivity. But obligations are concentrated in agriculture and transportation. For example, agriculture represents four percent of the GNP. The percentage of the Federal productivity obligations are 21 percent for agriculture. Manufacturing, representing 36 percent of the GNP, has 2 percent of the Federal productivity obligations. Transportation has 5 percent of the GNP, but has 42 percent of the Federal productivity obligations. Are these figures that I am listing here at all familiar to you, do they suggest that there is a serious failure on the part of the Federal Government to allocate their actions that might improve productivity improperly?

Mr. STAATS. I am personally not familiar with those figures. But I notice that you have John Dunlop coming tomorrow, and perhaps he could address himself to that better than we.

Chairman PROXMIRE. As long as you are here, Mr. Staats, what do you think of trying to gear, to some extent, at least, keeping in mind the relationship of various sectors of the private economy, like trans-

portation, to GNP, and trying to bring the Federal investment in productivity improvement into accordance with——

Mr. STAATS. You mean in terms of Federal expenditures and Federal programs?

Chairman PROXMIRE. Yes.

Mr. STAATS. Absolutely. And I don't personally think that nearly enough has been done in this field.

Chairman PROXMIRE. We seem to be badly neglecting manufacturing, for example, on the basis of this.

Mr. STAATS. The whole field of industrial technology has been neglected. We have done very little compared with what we have done in, say, the aerospace industry, or agriculture, or many other parts supported in the budget. But I certainly agree that a lot more of this kind of analysis should be a part of the budget process and should be available to Congress.

Chairman PROXMIRE. One of the most shocking increases in Federal spending has been in the Law Enforcement Assistance Agency. And for understandable reasons we have all gotten very excited and concerned about crime in the streets, the big political issue. So Congress has geometrically increased the amount of money we have spent on LEAA, it has gone from a few millions to tens of millions to hundreds of millions, and now it is over a billion dollars, and very quickly, as I understand it. The initial purpose behind this LBAA operation was to provide for research in the area of crime detection so that the Federal Government, which can do research on a national basis more efficiently than even the big cities can do it, would assist in that way. But instead we have provided funds for squad cars and for personnel. In fact, the problem here is that LEAA, which disburses technology, oriented grants, thus are without any productivity assessment. Do you have any knowledge of that?

Also, EPA has dropped its local program to improve local solid wastes products. I guess it was viewed as beyond the EPA mandate.

The Office of Education has not figured out how to address productivity issues in education.

DOT has no productivity measure for mass transportation.

HEW proposals do not have anything to say about productivity.

And so on. Don't you think that where we are spending these immense sums, billions and billions of dollars—and they are increasing all the time—that we ought to have a productivity input here, woudn't that be helpful?

Mr. STAATS. Yes. And I would like to say here, in connection with the GAO audit reports, speaking of Office of Education, the Law Enforcement Assistance program, and those other programs, this is an integral part of our effort to evaluate the effectiveness of the program.

Chairman PROXMIRE. I see.

Mr. STAATS. In the LEAA program you are quite correct in saying that it was initially designed to be research, demonstration and technical assistance. All of these are relatively low dollar cost items. But the pressure developed to get communications equipment, transportation equipment, and all of those things which are needed, but we really didn't know enough about the payoff to warrant the growth of those programs as we saw it.

Chairman PROXMIRE. This is the kind of thing, and the EPA program is another area where it would seem that there should be a notion of payoff, the productivity, which should be cranked right into the allocation.

Mr. STAATS. Reports will be submitted to Congress very shortly on the study we are making. The results we are getting on research programs in the water pollution area so far seem to us to indicate that we are way behind on research and development in relationship to the contemplated capital investment program of Federal grants to locals for water pollution treatment plants. Now, this is the kind of analysis which I believe you are referring to.

Chairman PROXMIRE. Mr. Ink.

Mr. INK. Mr. Chairman, although it is too early to know whether this is going to result in very much that is meaningful, there has been added this year an additional language in the OMB basic document which calls for budget estimates. One of the key things is that it says, "work measurement, unit costs and productivity indexes should be used to the maximum extent practicable in justifying staffing requirements for measurable workloads." And then it goes on to discuss it in several paragraphs. As I say, I can't tell you, Mr. Chairman, at this point whether this is actually resulting in meaningful information in the areas you are talking about or not. But it is one other step forward.

Chairman PROXMIRE. I realize that we are getting a little away from the direct purpose of your study. But I think it is so closely related that I would just like to persist a little bit further in it.

Last week we had a professor of transportation from Harvard University, one of the outstanding experts in the country. And he argued that the ICC regulations were so unproductive and so counterproductive that they were resulting in a cost to the economy of several billion dollars a year. And he indicated that we would just be better off without the Interstate Commerce Commission, that their regulations with respect to railroads reduce productivity, and this whole Federal Government activity in some areas, it is argued, reduces productivity.

The NCOP estimates 2,000 Federal regulations in food, and some lead to low utilization of railroad cars, and $2 million waste in the handling of cheese and butter fats surplus.

In health the Federal Government loses $15 to $20 million a year based on actual count, with no productivity incentive.

In banking the Social Security Administration releases all transfer payments on the same day without regard to its impact on the productivity of banking operations.

These are all general criticisms. But I wonder if there isn't any central operation perhaps in the Office of Management or somewhere else where they would request the regulatory agencies and the line agencies to be concerned about the impact of their actions on productivity.

Mr. INK. With respect to the regulatory agencies, there is a different relationship with OMB than in the line agencies. But effective management has been a very serious problem, and a very real problem in a number of regulatory agencies. Mr. Zarb from the OMB, who is doubling over in the energy area right now, had to leave a few minutes ago, but I do know that the OMB has at the request of several regula-

tory agencies, made some analysis and studies in respect to the amount of procedural red tape which some of them had been concerned with.

Chairman PROXMIRE. Have they changed any of that?

Mr. INK. They have been changed. A broader effort in which the OMB and GSA work more directly has been the grant-in-aid system, which is probably one of the best examples of the kind of problem you are talking about, the system has been tremendously complex and detailed and burdensome procedures. We stressed here this morning—and I think rightly so—the importance of capital improvement and mechanization in improving productivity. But procedures themselves also are a very important area of finding ways to increase productivity. And we do have evidence, quite a bit of evidence, that this has been a problem in the grant-in-aid system even though we don't have, generally speaking, good quantifiable productivity figures.

Chairman PROXMIRE. Mr. Rosen, to what extent does the Civil Service Commission help State and local government in productivity improvements?

Mr. ROSEN. Our major effort, Mr. Chairman, in helping State and local governments on this score has been in terms of the participation of State and local officials in our training programs. We have, however, provided very modest grants to a few jurisdictions on some efforts that they were undertaking which have related directly to productivity improvement.

Chairman PROXMIRE. And then do you disseminate their findings?

Mr. ROSEN. That is correct, sir. We have an information exchange service, and whatever comes out that looks good, and might have broader applicability, we get the word out to other State and local jurisdictions.

Chairman PROXMIRE. What kind of experience in productivity measurement has the Civil Service Commission undertaken?

Mr. ROSEN. Actually our current efforts are along this line. We have gone out to the agencies—in fact this week, we are starting a survey of various kinds of manpower management improvement efforts that agencies have been conducting. We want to know what really has been done with local initiative throughout the Federal Government. The fact is, Mr. Chairman, we just don't know right now. When we get the results of this survey we will take the best of these, where the conclusions are clear, and we will disseminate that information. We will also at that point, Mr. Chairman, be able to identify where there appear to be some gaps. And where there are some gaps, we will consider undertaking some demonstration programs, whether it might be job enrichment, job restructuring, or improved supervision and management. Those are areas where we think we can be most helpful.

Mr. STAATS. Could we ask Mr. Morris to elaborate a little on some of the other agencies?

Chairman PROXMIRE. Yes; I wish you would.

Mr. MORRIS. The National Commission on Productivity has followed our work very closely. And it has started sponsoring efforts at the local level about which they will tell you, I am sure. And we have been pleased to join our efforts with theirs. They are currently sponsoring tests in St. Petersburg, Fla., and Nashville, Tenn. They have a several month program running to lay out a productivity improvement program for each city.

Our help, as part of the JFMIP program, has been requested by the city of Milwaukee, and we hope to be doing some work there in the next few months.

The National Science Foundation has a number of grant programs to improve technology in the public sector, things like solid waste collection and disposal, fire department location and construction, and matters of this type.

So there is quite a foment of effort going on throughout the Federal structure to assist State and local governments.

Mr. STAATS. We are delighted that you are having witnesses from the State and local government also for these hearings. I would just like to emphasize that we don't see the Federal Government as simply an interested bystander. The Federal Government itself stands to gain or lose, depending on how good a job is done.

Chairman PROXMIRE. As you pointed out, there is an enormous proportion of our spending that goes to State and local governments, not only revenue sharing, but the grant programs will continue, the special revenue sharing is coming up, with enormous expenditures ahead. So we have a direct stake.

Mr. STAATS. About $45 billion this year.

Chairman PROXMIRE. $45 billion.

One other question, and then I will be through.

Mr. Rosen, when the Civil Service Commission conducts inspection of agencies' personnel management, do you ever look at their productivity management systems?

Mr. ROSEN. Our concern here is not directly on the matter of productivity measurement systems of the kind that Mr. Staats and Mr. Morris were discussing this morning. We do look very seriously at the human factors in productivity management and what the agencies are doing there, along the line that I discussed earlier, Mr. Chairman.

Chairman PROXMIRE. Gentlemen, thank you very, very much. This has been a most enlightening and helpful morning. And I hope, Mr. Ink, that you will give me those specific examples. Now that I think of it, this is a very fine example, now that I have a chance to see what it is, but it is limited to one agency, and limited to one kind of investment. But it is excellent. And if I could get others that would affect others, success stories in the areas of investment, that would be more helpful. And I will be delighted to do what I can to help publicize it.

Mr. INK. We will be very happy to provide that to you, Mr. Chairman.

[The following information was subsequently supplied for the record:]

JANUARY 4, 1974.

Hon. WILLIAM PROXMIRE,
Chairman, Subcommittee on Priorities and Economy in Government, Joint Economic Committee, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: I thoroughly enjoyed and appreciated the opportunity to appear together with Elmer Staats, Comptroller General of the United States, and Bernie Rosen, Executive Director, Civil Service Commission, before the Joint Economic Committee on December 17, 1973 to report on the Joint Productivity Project.

As a result of the impetus provided by you in the fall of 1970, we have made considerable progress in the measurement and enhancement of productivity in the Federal sector. As I indicated in my testimony, Tom Morris of GAO has pro-

vided very effective leadership for our Joint Project Team. However, much remains to be accomplished. We have taken action to institutionalize a system for measuring productivity in the Federal sector; promote extension, refinement, and use of appropriate productivity measures; encourage development and installation of productivity improvement programs; and enhance coordination of productivity measurement and improvement efforts.

During the course of the hearings, you requested that I provide examples of productivity improvement actions taken by Federal departments and agencies that normally do not come to the attention of the public-at-large. We have with GAO jointly compiled such a list for your review. Although not exhaustive, the list does provide a representative sample of agency productivity improvements which have resulted in significant cost-savings. Not only does the list record productivity improvement actions involving replacement of personnel through mechanization and automation, but improvements evolving from consolidation of administrative and programmatic operations, development of statistical models, standardization of activities and techniques, and other actions. A number of these productivity improvement efforts were made available for public release (i.e., Presidential Management Improvement Awards), but none were widely publicized.

Again I would like to thank your Committee for its interest in, and support of, our productivity improvement efforts.

Sincerely,

DWIGHT A. INK,
Deputy Administrator.

Enclosure.

A. AGENCY FOR INTERNATIONAL DEVELOPMENT

During fiscal year 1972, the entire automated system of the Office of Participant Training was converted from the cumbersome Formatted file system to the IMB 360/50 system, resulting in a savings of approximately $2,000 a month and a decrease in computer processing time of approximately 17 hours a month.

B. ATOMIC ENERGY COMMISSION

A detonator-cable assembly produced at the Mound Laboratory (Ohio) undergoes tests and measurements during the production process. The small component aluminum cup of the assembly was frequently scatched or nicked with handling during these tests, causing as many as 32 assemblies to be rejected each month. Molded plastic cups were designed which fit over the aluminum cup to protect it during radiographic and electrical testing. The net annual savings at Mound Laboratory are $124,700.

C. DEPARTMENT OF COMMERCE

1. Office of Publications established criteria which led to the development of new microfiche equipment. This equipment increases the storage equipment of a single microfiche card by 66% without loss of quality. The Committee for Scientific and Technical Information has now adopted the new card as the official Federal Standard. The annual savings to Commerce operating units alone exceeds $88,000.

2. National Bureau of Standards adopted a single uniform system for reporting financial management data on the status of its many projects eliminating more than 70 informal preliminary reporting systems as well as the formal accounting system. The new uniform system has improved the timeliness of a number of reports, enhanced the accuracy of the data, and saved thousands of manhours of professional personnel. The net cost benefit is estimated at $569,000.

3. Until recently the complexity of chemical patents precluded their automated printing by the Patent Office data base system. Newly developed techniques now permit data base (i.e., computer controlled) composition of many of the tables, formulae, and difficult text, making it feasible to include a larger number of complicated patents in the data base system. The cost difference between computer-controlled and hot-metal (hand) composition of these patents is $60 each. Based on more than 11,000 such patents scheduled for data base printing in FY 1972, savings totalled $670,000.

D. DEPARTMENT OF DEFENSE

1. *The Department of the Army* conducted a test by allocating a $500,000 fund, available only for fast payback capital investments, to its Ammunition Procurement and Supply Agency (APSA) in Joliet, Illinois. APSA was allowed to make immediate decisions on proposed investments by the Government Owned Contractor Operated (GOCO) ammunition loading plants where the payback could be achieved in two years or less. In a few months, 24 projects were approved which would return $1.8 million in annual savings. The majority of these projects have paid or will pay for themselves in less than 180 days following installation. Illustrations are:

An automatic nailing machine costing $38,185 saved 20 men in constructing pallets for bombs. The annual savings of $240,000 resulted in an amortization period of 57 days.

A machine for automatically loading small-arms ammunition costing $50,000 saved 42 personnel engaged in packing ammunition rounds into ball clips. A savings of $453,000 amortized the cost in the first 41 days of operation.

An automatic laundry clothes dryer costing $25,000 saved five people amounting to annual savings of $50,000. This project repaid the investment in 180 days.

An automatic scrap compactor costing $29,000 increased the recovery price for scrap brass and reduced storage space, saving over $47,000 and repaying the investment in 160 days.

2. *The Defense Supply Agency's* depot at Ogden, Utah pioneered base supply mechanization, automated shipping processes, and improvement of inventory record accuracy. Cost savings of $1.3 million were achieved during FY 1972 while maintaining the best average order processing time of all DSA depots. This productivity improvement project resulted in a Presidential Management Improvement Award.

3. *Corps of Engineers*

(a) Mathematical computations by field survey crews were done by manual calculation. Three Sharp Micro Compet qt–88 electronic calculators were purchased by the Pittsburgh District for use by survey field crews. The calculator is portable and operates on re-chargeable batteries or A/ power. Use of these portable calculators has greatly increased the capability of field crews and has produced first year net savings of $1,761 with recurring savings of $3,300.

(b) The Los Angeles District installed a telephonic dictation-transcribing system consisting of integrating communication, dictation and automatic typing equipment. Use of the system in one element of the district resulted in an annual saving of $24,302.

(c) Installation of electronic monitoring equipment to observe Chesapeake and Delaware Canal traffic has eliminated the need for nine traffic checkers, and will provide FY 1973 savings of $152,300 and FY 1974 savings of $73,000.

(d) Centralization of District Finance and Accounting activities in the Cincinnati, Ohio Division resulted in a reduction from 125 to 96 people on a Division-wide basis. First full year savings are estimated to be $255,000 beginning in FY 1973. Net savings in FY 1972 were approximately $25,000 after deducting all offsetting costs.

(e) Accomplished an innovative technique for removal of rock by utilizing the specialized capabilities of a large hydraulic dredge instead of drilling and blasting equipment with dipper dredge and attendant plant for the rock removal. Net savings of $1,244,500 are to be used to finance other approved requirements.

4. The U.S. Army Materiel Command (USAMC) developed two log-linear S-curve models for measuring the effect of engineering changes and for predicting production costs from weapons systems research and development costs. As a result of the application of this model, two contractor impact claim proposals were definitized in a *shorter time* than the time frame established in the USMAC Milestones. Quantified savings to the Government for these two efforts have been documented separately as $4.4 million and $1.02 million. This productivity improvement project resulted in a Presidential Management Improvement Certificate.

E. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

ADP Systems Management and Operations acquired an Optical Character Reader for use as a data conversion device on the closely controlled high volume

Home Mortgage Insurance Application System. This operation involving approximately three million transactions annually required the equivalent of 22 manyears of effort to convert handwritten source documents having fiscal implications to computer readable media. The equipment is handling the same workload at a 3 manyear rate annually, equivalent to an estimated FY 1973 savings of $72,500.

F. DEPARTMENT OF THE INTERIOR

1. *The Geological Survey, Topographic Division,* each year maps over 100,000 square miles. Since 1967 the Division has steadily reduced its personnel while maintaining a relatively constant output. The result is that the number of square miles mapped per manyear has risen from 67 in 1967 to 85 in 1972—an annual gain of better than five percent. The reasons for this improvement are:

Twenty-year-old plotting instruments were replaced by new and more versatile equipment which is more accurate and productive since it permits the use of superwide-angle cameras.

Improved stereo-projection equipment was developed as a result of the Division's own research program.

A nationwide system of computers was installed to service the four mapping centers in performing intricate computations needed for precision mapping, as well as to substitute computer plotting for manual plotting.

Visual aids were developed to assist individual workers and to prevent deterioration in their eyesight, thus prolonging their years of high productivity.

2. *The Bureau of Reclamation* implemented an automated drawing index reference listing as part of the Engineering Drawing Microfilm Program for better management of the 500,000 drawings on file and the additions of 10,000 per year. Improved service to a large engineering force and a lower operating cost for reference service has been acheived. More efficient record control, selective decentralized distribution of printout listings, rapid assimilation of new data, and manipulation of voluminous drawing records to accommodate user needs are beign achieved through ADP. Recurring annual savings are estimated at $10,000.

3. *The Bureau of Reclamation* obtained and placed into operation an 11″ x 17″ x-y plotter capable of on-line operation with a teletype terminal. This permits graphical plots to be made rapidly with digital data. The reduced manual effort required has permitted several other plots to be made at an estimated recurring saving of over $6,000 per year.

G. DEPARTMENT OF JUSTICE

Sandardization of inmate folders—Uniform procedures for all inmate file folders for case records eliminated reconstruction of folders on transfers of inmates. Resulted in FY 1972 savings of $15,000, with estimated FY 1973 and 1974 savings of $16,000 and $17,000 respectively.

H. DEPARTMENT OF THE TREASURY

1. *Bureau of Engraving and Printing (BEP)* increased its output of currency, stamps, and other instruments by better than 50% since 1967—achieving volumes of 3 billion items of currency and 26 billion stamps. To support this expansion, it has had to increase manpower by less than 25%, thus achieving an annual productivity growth exceeding five percent a year. This represents a savings of 1,000 employees. The most significant increase has been in currency production; former wet-printing process equipment which turned sheets of 18 subjects has been replaced by a faster dry-process printing which produces sheets of 32 subjects.

2. *Comptroller of the Currency*—Through refinements in procedures and training of personnel, National Bank assets examined per manyear increased from an average of $320 million in 1970 to $333 million in 1971.

3. *Bureau of Customs*—Another good management example is the Treasury's Bureau of Customs which has experienced a doubling in foreign mail parcels processed since 1967. The Bureau has been able to assimilate this increase with an addition of only 44 percent in staffing by having better management systems and by offering its employees opportunities to develop specialties in this function. As a result, productivity has improved by 34 percent since 1967 and employees have been afforded new career opportunities.

I. FEDERAL HOME LOAN BANK BOARD

Totally overhauled procedures and concepts for processing various types of applications received by the Federal Home Loan Bank Board. Scrapped old methods, devised and documented new procedures and application forms which accommodated a 45% increase in applications workload while decreasing processing time by 65%. Manpower economies, decentralization, and work simplification resulted in estimated savings of $1.075 million for the Federal Government and many millions of dollars within the savings and loan industry. The productivity management project resulted in a Presidential Management Improvement Award.

J. GENERAL SERVICES ADMINISTRATION

1. GSA is providing the leadership for an interagency effort to estabilsh central support services in each of the 10 standard Federal regions. The initial step in this direction was taken in 1971 when a pilot project was established in Seattle, Washington, region to provide centralized printing and duplicating, mail and messenger, procurement, receiving and shipping office supplies, library and laboring services to agencies of HEW, DOL, HUD, OEO, and DOT. FY 1972 savings approximated $68,000. This concept will be extended to the remaining nine Federal regions. This productivity improvement project resulted in a Presidential Management Improvement Award.

2. A continuing project to consolidate multi-shipments to the same consignee point resulted in a savings of $118,000 in FY 1972. This savings was achieved during a limited project test. Full implementation of this project should result in a total cumulative savings of $1,000,000 by the end of FY 1974.

3. Savings of $263,000 were effected in FY 1972 in the area of GSA communications by telephoning Government telegrams in lieu of using commercial telegraph systems.

4. Phasing out of the Los Angeles Supply Facility and consolidation of operations in the Stockton Supply Facility resulted in a net reduction of $566,000 in FY 1973 and FY 1974.

K. NASA

1. Curve reading, calibrating, tabulating and plotting were being done manually at the *Office of Aeronautics and Space Technology's* Lewis Research Center. A semi-automatic digitizer was connected to an electronic programmable desk calculator, an electric typewriter and an automatic plotter which now performs these functions automatically at a savings of $47,464 annually.

2. *Marshall Space Flight Center*—An available ADP system, consisting of a calculator with an extended memory, programmer and x-y plotter, has replaced the manual effort designed to transpose all technical data obtained into graphic forms (operating curves) to reflect results of the Solar Array Illumination Test. Manhours were reduced approximately 95 percent with a net savings of $15,800.

3. *Office of Tracking and Data Acquisition*—OGO spacecraft were controlled from one operational control center on a full-time basis. After a review of actual support requirements, it was determined that support could be reduced and the control of OGO spacecraft shifted to a multi-satellite operations control center, a facility designed to support several different spacecraft. The action resulted in a savings of 21 contractor manyears and approximately $300,000.

L. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

One of the most dramatic cases is the Social Security Administration which services 30 million retirement survivors and disability beneficiaries and provides health insurance protection for 20 million individuals. SSA has measured its productivity since the mid-1950's. For example, in Fiscal Year 1973, SSA required 61,777 manyears to service its beneficiaries. At productivity levels prevailing 10 years earlier, SSA would have required 31,919 additional manyears to perform this work. These gains are attributed to: (1) Automation; (2) Systems improvement, including assisting beneficiaries by telephone rather than requiring office visitations; (3) Statistical analysis to eliminate or short cut reviews of plans which have minimum errors; and (4) Use of new techniques to measure and foster improved service to beneficiaries.

29-906—74——6

Chairman PROXMIRE. Gentlemen, all of you, Mr. Rosen, Mr. Ink, Mr. Staats, Mr. Morris, you have done a great job this morning, very useful. It is not the kind of thing that is likely to have the TV cameras here or get a great deal of attention, but I think it is something that is so constructive and positive, and I think it can save literally billions of dollars over the next few years. And I think you have done a lot of fine work, and as I am sure you would be the first to say, it is a beginning, but I think it is an excellent beginning.

Thank you very much.

Mr. STAATS. It is not as spectacular and newsworthy as other subjects, but it is more important than other things that are spectacular and newsworthy at a given point of time.

Chairman PROXMIRE. That is right.

Mr. STAATS. And hopefully we are building a system which in the long period of time will have important results for efficient Government.

Chairman PROXMIRE. Mr. Hamilton, from New York City, has done fine work for the Lindsay administration, was to have been here this morning, but he was a casualty of the snowstorm. Tomorrow we will hear from John Dunlop.

The subcomittee will stand recessed.

[Whereupon, at 1 p.m., the subcommittee recessed, to reconvene at 11:30 a.m., Tuesday, December 18, 1973.]

FEDERAL PRODUCTIVITY

TUESDAY, DECEMBER 18, 1973

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

The subcommittee met, pursuant to recess, at 11:35 a.m., in room 1202, the Capitol, Hon. William Proxmire (chairman of the subcommittee) presiding.

Present: Senators Proxmire and Schweiker.

Also Present: Loughlin F. McHugh, senior economist; George D. Krumbhaar, Jr., and Walter B. Laessig, minority counsel; and Michael J. Runde, administrative assistant.

OPENING STATEMENT OF CHAIRMAN PROXMIRE

Chairman PROXMIRE. Welcome, Mr. Dunlop, to our renewed hearings on how to improve productivity. Yesterday we heard from the Comptroller General, Elmer Staats and members of the executive branch, who are responsible for the major development of measures and analysis of productivity in the Federal Government.

Obviously, as chief executive of the National Commission on Productivity you have great interest in the development of not only improved measures and analysis of Government productivity, but also in seeing that whatever steps are needed will be taken to improve the economic performance of the private economy as well.

Your interest in these matters is undoubtedly reinforced by the requirements of your position as chief regulator of the wage-price-profit control system to contain the inflationary pressures now beleaguring our country.

I hope we shall have an opportunity to go into all these matters today, because I known you will agree, they are all closely interrelated.

I believe it is vitally important that we have an agency in the Federal Government which devotes its full time and effort to the problems involved in improving productivity at all levels. This is why I strongly support the continuation of the Productivity Commission.

I am not entirely happy with the results of the efforts of the Commission to date, as you are well aware. Part of this problem may be that Congress has not adequately funded the Commission. But I do

not believe the blame can be fully ascribed to Congress. For most of the early part of its existence, the Commission was, I believe, moribund. In my view it was not adequately staffed. And I think that statement is almost the understatement of the year.

Indeed I am not convinced it is adequately staffed today. And the administration must be faulted for its failure to press for more adequate professional support for the Commission's work. I am not faulting the present staff's work. But I do believe that there is an almost total lack of professional staffing in the area of economic and statistical expertise.

I hope you will tell me I am wrong in this evaluation.

Much of our discussion yesterday revolved around the specific subject of Government productivity—and more particularly Federal Government productivity. I hope in our discussion today we can broaden the subject—more particularly what the Federal Government is doing to improve productivity at the State and local levels and productivity in private enterprise.

I might say that because the Federal Government is by far the biggest employer and the biggest enterprise, the productivity of this Federal Government of ours is just quintessential. I think with your great distinction as an economist you are well aware that the one way we can make progress in this society of ours, that is, to hold down prices and increase income, is to improve productivity. There just isn't any other way. And we simply must focus effective attention on it.

As I say, the Federal Government is the largest conglomerate in the world, as Elmer Staats pointed out yesterday. It can do more than any other enterprise to support adequate research and development which is so central to the issue of improved productivity. Are we funding enough research and development? Are the funds being adequately applied? In all of the aid that we are now supplying to State and local governments—much of which is meant to be for State and local research aid—are we not misapplying our efforts, such as for police hardware rather than research in causes of crime?

These are some of the issues I would like to discuss today.

Will you push for inclusion of a productivity factor in the national accounts for government workers? As you know, they now treat government workers as people with zero productivity gain.

We were told yesterday that the GAO survey of Federal workers has a much larger coverage than that which is now used for the private economy.

I think they said that the coverage was 60 percent for the Federal workers, that they have productivity measures on, compared to something like 12 percent in the private sector. And yet we don't include that productivity element from the public sector in the computations.

Thank you very much for coming. I know it is inconvenient for you to come today. And I very much appreciate your rearranging your schedule so that you could do it.

Go right ahead, sir.

STATEMENT OF HON. JOHN T. DUNLOP, CHAIRMAN, NATIONAL COMMISSION ON PRODUCTIVITY, ACCOMPANIED BY JOHN STEWART, EXECUTIVE DIRECTOR, AND JOHN MORRISSEY, ASSISTANT TO THE EXECUTIVE DIRECTOR

Mr. DUNLOP. Thank you, Mr. Chairman.

I have with me today the Director of the Productivity Commission whom you know, Mr. Stewart, who is sitting on my right.

I thought, Mr. Chairman, that rather than read this prepared statement, which was prepared by my associates with my comments, I would simply file the prepared statement and make a few summary remarks and then make myself available to you for whatever questions you have.

Chairman PROXMIRE. And the prepared statement will be printed in full in the record.

Mr. DUNLOP. Thank you, sir.

Let me take just a few minutes to summarize a couple of points of major importance.

First of all, I would like to take this occasion to congratulate you, Mr. Chairman, on your leadership role over the years in focusing on the acute need to impose more stringent limits and priorities on Federal expenditures—a role which surely will be viewed as among the most important of our day moving toward a more rational allocation of public resources and productivity improvement.

I am also aware of the important role which Elmer Staats has played in this area. He happens to be a professional friend of mine and has been for many years, and I welcome his leadership.

You are no doubt aware that some of the work that his organization has done on productivity measures has been funded by the Productivity Commission.

Next, I am sure that you would agree that productivity is a very large concept which is influenced, if you like, by a wide range of developments. It is very hard to isolate the independent effects of any one factor on productivity. And yet we would all agree, I believe, that long run changes in productivity are central to our economic welfare, and that those changes take place relatively slowly.

I will not take the time to go into detail, but want to recognize at once that, when changes are made in organizations, there are costs associated with those changes, and displacement of people. And I want, of course, to be associated with the view that oftentimes it may be necessary to provide protection to people who are displaced or otherwise disadvantaged by change in order to stimulate such change.

On the other hand, these protections should not be allowed to become so large or rigid that they interfere with the adjustment processes.

Now, I am delighted to start this discussion by recognizing the critical role of Government both in measurement of productivity, and its role in the private economy, which as your opening statement indicated, has often not been recognized. We have 2.6 million employees

at present in the Federal Government, and 10 million employees in State and local government. The Productivity Commission in the last year has focused a good deal of attention upon stimulating measurement in government and starting pilot projects in local and State, police protection, law enforcement, garbage collection, and the like.

Now, the prepared statement that is submitted, Mr. Chairman, has four main sections which I am just going to mention, and say no more.

The first deals with the productivity improvement initiative in the Federal Government.

The second deals with the Federal Government's impact on productivity in the private sector.

The third deals with productivity in State and local government, to which I just alluded.

And the final section deals with the work of the Productivity Commission itself, which was established originally by executive order, and more recently by legislation. And at the end of my statement I will say a word about that as it stands today.

If you were to ask the question, "What is the range of products and interests of the Productivity Commission and its staff in the year 1973–74," I would briefly read a listing of these, for they do, I think, truly summarize the projects that we have in mind. I have a more detailed summary which you may have seen before and which I would be glad to provide. These projects include work in food, in health, in trade and transportation, State and local government, education, labor management committees, the quality of work committees, and their impact on productivity, work on attitudes toward productivity, the role of capital investment in productivity, public information, and finally, the very decisive area of measurement of productivity in a number of areas, including construction, where measures, like in the Government, have been particularly inadequate in the past.

Now, Mr. Chairman, you have been provided with a list of present programs for 1973–74.

I would like to take this occasion, Mr. Chairman, to say to you—since I know of your previous support for the Commission on Productivity, but recognizing that its work could be improved—I would like to say that unless some miracle happens in the House of Representatives this week, the Productivity Commission, in terms of its legislative authorization or its budget, will have passed away. The House of Representatives has not enacted either the authorization legislation, or the appropriations.

So the work of the Commission, in a formal sense, may be nearing its end. And I think it is important for me to say that, in discussing questions about the work of the Commission.

I think it is fair also to say that a fair amount of time, energy, and effort on a great many people's part have been devoted over the last 3 or 4 months to rectify this situation, but thus far to no avail.

Now, in drawing those preliminary remarks, Mr. Chairman, to a conclusion, I would like to underscore these points: First, I do think that it is important to have an organization in the Government, the sole purpose of which is to insure concern over productivity, and to stimulate actions on the part of the Federal Government to develop systems of measurement of productivity, to encourage pilot programs

and demonstration projects, to weigh the results of those projects, and to seek to have them incorporated in the regular ongoing activities of the Federal Government and State and local governments, as well as to work with labor and management representatives throughout the private sector. And it seems to me that such a continuing organization, reorganized, perhaps, with a clear mission, is an essential part of an economic program and the longer run economic policies in this country.

And finally, I should say that in the stabilization program we refer to the work of the Commission, such as in the food industry where we have sought to draw from the work done by the Productivity Commission.

In our handling of labor costs under the control program we have offset changes in those costs by a productivity factor developed by the Bureau of Labor Statistics. An organization to work in this area seems to me to be an indispensable part in not only the Government's own activity, State, local, and Federal, but also in the Government's relationship with the private sector. I think I should stop, Mr. Chairman, and respond to such questions as you may have.

[The prepared statement of Mr. Dunlop follows:]

PREPARED STATEMENT OF HON. JOHN T. DUNLOP

PRODUCTIVITY IN GOVERNMENT

Mr. Chairman, I am pleased to have this opportunity to testify today on an issue of continuing importance, namely, the productivity of government at all levels.

You are to be congratulated, Mr. Chairman, for your leadership in focusing on the acute need to impose a far more stringent sense of limit and priorities on Federal expenditures which surely will be viewed as among the most important forces of our day moving toward a more rational allocation of public resources and toward productivity improvement.

Improving productivity is like dealing with many other complex problems. These are many people taking many useful individual actions, but in total, these acts do not meet the national needs. Until we center the responsibility the most effective results are not achieved and the advantage is not attained through people working together. There is need not only to push ahead with separate individual actions such as the measurement of productivity within governmental agencies, but also we need a core group which is responsible for translating the meaning of those measures into action programs for the actual improvement of productivity.

Achieving this improvement requires the cooperation of government at all levels and frequently the cooperation of labor, management and public. Only with this sort of cooperation will we be able to counteract the often unintentional rigidities of many of our governmental systems—rigidities that inevitably are built into many sectors over the years.

It seems to me that we ought not to need a crisis such as food price explosion, the energy crisis (of this year) or the continuing high costs of local and state government operations to create changes in government rules and regulations. We need a continuing group to work at these supply and productivity questions.

Now we will not obtain the cooperation from these many institutions if we do not provide for the people who are dislocated—who either lose their jobs or must learn new skills. There is much to be improved in the way that we as a nation confront this difficult problem, a problem that is intense for the workers affected by productivity change.

Productivity in government is an issue to which the National Commission on Productivity has devoted the major part of its time, staff effort and resources in the past year and a half because:

> Government represents a large segment of the total economy, accounting for 21.6 per cent of total GNP and occupying one of every six American workers;

Government is one of the fastest growing sectors of the economy, where we add 450,000 employees at the state and local level each year—a number almost as big as the entire steel industry (615,000 total workforce) and half as big as the auto industry (954,800 total workforce);

Government productivity growth has been largely an unknown quantity as a consequence of inadequate measurement tools, a problem that afflicts much of the service sector of which government is a part;

The tax burden, or "cost," of government is often said to be approaching some vaguely-defined limit of public tolerance, as evidence by instances of growing taxpayer resistance, whereas the demand for new and expanded government services continues to grow, placing government, particularly at the state and local levels, in a fiscal vise;

The "quality" of many government and quasi-government services is widely perceived to be declining, despite rising taxes and fees; and

There is growing evidence that the inadequate "quality" of government performance of certain regulatory functions—if quality is judged by economic impact—is acting as a drag on

Productivity growth in certain sectors of the private economy (railroads, and food processing, for example).

The Productivity Commission, with the unusually broad cross-section of the nation's major economic interest groups represented by its membership, in a short time (a year and a half since Congress gave it start-up money), and a small staff (20), has identified many changes that could be made to improve productivity in government. And the Commission, in my view, has also contributed to the new dialogue and new spirit of cooperation between top labor and management in this country on the question of productivity improvement. The studies its task forces have made in sectors of the economy where lagging productivity has been particularly troublesome, such as in the food industry, railroads, health services and the public sector, are having—and have had—an impact on the evolution of government policies for dealing with these problem areas. In short, the Commission has performed a valuable function and has made a contribution toward tackling a problem that basically is as broad and as complex as the U.S. economy itself.

The point is, however, that the Productivity Commission is only a temporary organization. There is an opportunity for the Federal government systematically to organize itself to improve its own productivity and to leverage its spending so as to have a maximum positive effect on productivity in the private economy as well as to assist systematically local and state governments to do the same.

I might add parenthetically Mr. Chairman, that the Productivity Commission is even more temporary than my remarks suggest. Although the Commission has achieved a number of very useful results, the Congress so far has not seen its way clear to provide authorization and funding for this year. The strong support that the Commission is receiving from labor, management, and local governments should, it seems to me, be adequate testimony to its usefulness. I would urge this body to do what it could to continue the life of this Commission.

Japan, which has led the world in productivity growth for a decade, has an organization, jointly sponsored by industry and government, to concentrate on productivity improvement. Permanent national productivity organizations have existed for some time in many European nations. Of the 15 national organizations represented in the European Association of National Productivity Centers, 11 were in operation prior to 1955. Ironically, many were established at our behest during the period of the Marshall Plan.

PRODUCTIVITY IMPROVEMENT INITIATIVES IN THE FEDERAL GOVERNMENT

To return to the theme of my opening remarks, there are numerous examples of truly commendable productivity improvements in the Federal government—such as in the Bureau of Printing and Engraving and the Social Security Administration—some of which you heard about yesterday but these, although large, are isolated cases. The GAO/OMB/CSC program is the only Federal effort under way aimed at coming to grips with productivity improvement on a government-wide basis. Those who have directed this effort are to be congratulated.

The Productivity Commission has supplied substantial funding for this program as you know. Roughly half a million dollars has been spent on the program

to date, the Commission has provided $80,000 in fiscal year 1973 and plans to provide $100,000 in fiscal year 1974. The Commission is funding continuing efforts by the GAO/OMB/CSC Joint Study Group to extend coverage and uses of productivity indices, to improve their quality and to develop surrogate measures for functions not covered by productivity indices. The Joint Study Group has also initiated with Commission support, cooperative studies with State and local governments in Florida and Tennessee in the measurement and enhancement of productivity, building on the findings of the Federal study, in response to a resolution endorsed by the Commission at its meeting on September 29, 1972, urging such an effort.

But there is yet to exist a concerted effort to initiate productivity improvement in the Federal Government on a department-wide basis as a follow-on to the measurement program. There is no single on-going productivity program in the Government which is serving as a model for other agencies. No planning staffs have been assembled to work on productivity.

FEDERAL GOVERNMENT IMPACT OF PRODUCTIVITY IN THE PRIVATE SECTOR

Attention to the Federal Government's impact on productivity in the private sector also needs examination. A survey by the Commission staff last year, for example, showed that 177 Federal programs have a direct impact on productivity in the private sector, but that these programs bore little relationship to the size of the sector as a percentage of GNP or to its history of productivity growth.

These Federal programs moreover, affecting productivity are largely oriented toward technology development (63 percent of Federal productivity expenditures) when the more immediate productivity "problem" is the application of existing technology. Indirect effects of Federal programs are also misfocused from a productivity standpoint.

For example, the Medicare and Medicaid reimbursement mechanism—through which some $15-to-$20 billion annually is funneled to hospitals and physicians—often operates to impede productivity improvement in health care delivery, since payments are based on actual costs. Productivity improvement, because it could lead to reduced costs per patient would mean a lower reimbursement. The mechanism operates as a disincentive to productivity improvement in a sector of the economy where inflation has been serious.

"Productivity in the Food Industry," a survey completed by the Commission last year, showed that productivity in that industry is impeded by unnecessary administrative and other costs that result from the more than 2,000 separate Federal regulations applicable to food, many of which are repeated with variations by state and local jurisdictions and many of which conflict with each other.

The survey also disclosed, for example, that as must as a two per cent reduction in dairy product prices could be gained by elimination of redundant state and local government inspections of milk.

The duplication and conflicts among local, state and Federal sanitation inspection requirements for many commodities have a definite price impact by impeding commerce between a state or region where a given product can be produced at a comparative cost advantage and areas where the product costs more to produce. They may limit exploitation of economies of scale by demanding a variety of different processing and handling procedures.

No sector of our economy, however, has suffered more as a direct result of the impediments of government regulations than transportation, particularly the railroads.

A report prepared for the Productivity Commission and the Council of Economic Advisers by the Task Force on Railroad Productivity and submitted to us last month estimates that waste—in the form of inefficient and idle transportation resources of all kinds—as a result of regulatory policies presently costs shippers and consumers in the range of $4-to-$10 billion per year.

Regulations resulting in rates that have prevented the allocation among different modes of transportation on the basis of speed, damage experience and other characteristics have kept railroads from exploiting the considerable cost advantage they enjoy for long-haul movement of manufactured goods.

Wasted capacity in trucking has also results. By prohibiting rates that would merely compensate truckers for the incremental costs of filling otherwise empty backhauls, our highways are cluttered with empty trucks resulting in an im-

measurable amount of waste in fuel and highway wear, totally aside from wasted truck capacity.

The task force report asserts: "Today, both trucking and railroading may be characterized as industries operating at about 50 per cent capacity relative to the generally accepted meaning of capacity in manufacturing industry." The total costs to society are unacceptably high.

> The cost of excess capacity in the rail industry has been estimated to be between $2.4 billion and $3.8 billion per year as of 1969, according to studies cited by the railroad task force.
>
> The cost of unused capacity in trucking is estimated to be $1.4 to $1.9 billion per year.
>
> The excess costs of long-haul freight movements (over 200 miles) by truck rather than by rail, which would be more economical, have been estimated to run anywhere from $500 million to $2.8 billion per year.

The best single "guess" of the report as to the total cost of regulations is $5.6 billion, with estimates ranging—as I said—between $4 billion and $10 billion.

It would be useful to note at this point that the principal authors of the task force report, John R. Meyer and Alexander L. Morton, both of Harvard University and the National Bureau of Economic Research, have estimated that the excess fuel consumption that occurs as a result of the misallocation of traffic as between trucks and railroads on long haul freight movements by itself totals between 110,000 and 125,000 barrels per day.

The inefficiencies of our transportation system have an inestimable impact on productivity in all other sectors of the economy. The Productivity Commission's survey of the food industry, for example, estimated that some $6 billion is spent annually for transportation to move food products to market. Poor transportation was cited as one of the fundamental factors contributing to high food costs.

The food task force report declared: "The productivity impact of poor transportation is pervasive in the industry.

Its impact is far greater than is indicated simply by rising costs of transportation or the frustration of unreliable scheduling. Fresh produce must be put into refrigerated cars within a few hours after it is picked, or it will spoil. Thus, failure to deliver a special food car to the loading point at the time it is promised can result in heavy financial losses. The grower, the processor and the retailer must all incur extra costs when they cannot schedule the timely delivery of food cars or when the cars they receive have been poorly maintained. More labor and equipment must be used. Inventory costs are higher. Loading and unloading operations are protracted. Higher losses due to damaged food, food of lower quality and shorter shelf life are all results of unreliable transportation."

The task force stated that it takes longer to move certain food commodities by rail today from the west coast to New York City than it did 20 years ago—even though rail rates for fruits and vegetables, for example, have increased more than 33 percent since 1967. While food shippers report there are not enough insulated boxcars and mechanical refrigerator cars to serve their needs, much rail equipment stands idle with the average rail car moving only 12 percent of the time and moving with a load only 7 percent of the time.

Clearly, it would be wrong to blame all of the ills of our transportation system on government regulatory policies. As Meyer and Morton have pointed out in a forthcoming article, "the most fundamental reasons for the railroads' decline have to do with basic economic technological trends." But they add:

> "Exacerbating all these trends, by preventing necessary adaptations that would normally be expected in a market economy, has been the rigidity, or even plain misdirection, of government regulation. The fundamental railroad problem, in fact, has been to adapt to adversity in a highly constrained, regulated environment."

Regulatory agencies in many sectors obviously perform a variety of indispensable functions. But when we look at national productivity, we must be absolutely clear in understanding that there is a price to be paid for the protections afforded by regulatory agencies. Surely, when it becomes clear that the cost to the economy of this "service" is becoming excessive or that the protection is no longer needed, it behooves us to consider modifying the regulations and minimizing the cost.

PRODUCTIVITY IN STATE AND LOCAL GOVERNMENT

Just as the Federal Government has impact and leverage on productivity in the private economy, so the Federal Government has significant influence over productivity in governments at the state and local levels. This leverage can be better used.

Neither the Executive Branch nor the Congress has stressed productivity in Federal programs with an impact on state and local governments that accounted for some $94 million in fiscal year 1973 expenditures:

The Law Enforcement Assistance Administration dispenses technology-oriented grants without any productivity assessment requirements attached to them.

The Environmental Protection Agency no longer has its program to improve solid waste management at the local level because it was viewed as beyond EPA's mandate.

The Office of Education has yet to determine how to address productivity issues in education, despite the capacity to do so through the grants mechanism.

The Department of Transportation has not yet developed productivity measures for mass transit.

The Emergency Employment Act made local government the employer of last resort without regard for the efficient delivery of services.

The stakes involved in improving productivity in government at the state and local levels are substantial. It is the growth in employment at the state and local level that accounts for the rapid increase in the size of the public sector. Federal employment has remained relatively stable. The Bureau of Labor Statistics estimates that state and local government employment, as a percentage of total workforce, will grow from the present 10.4 percent to 13.5 percent by 1980, whereas Federal employment will go from its present 2.0 percent to 2.2 percent in that period. State and local employment, the BLS estimates, is increasing each year by 450,000 as I mentioned before. Comparison with the total employment in the steel industry of 615,000, in the auto industry of 954,800 and in the banking industry of 1,167,000 provides some idea of the magnitude of the state and local sector's growth.

Expenditures by municipal governments on the primary functions of public welfare, health and hospital, debt management, police, education, sanitation, parks, fire and highways rose by over 60 percent between 1967 and 1971 from $24.4 billion to $39.1 billion, according to statistics gathered by the International City Management Association (ICMA) and the Census Bureau.

Yet productivity at the state and local level is an almost wholly unknown quantity. At the Federal level, at least, the GAO/OMB/CSC project has made major inroads on the measurement problem. But preliminary data developed for the Productivity Commission by the Urban Institute and the ICMA indicate that some cities outperform others of comparable size in certain services by as much as 1,000 percent. Their report to the Commission concluded:

"If the performance of all localities could be raised closer to the level of the top performers, the implications for service improvements and cost savings nationwide would be staggering."

As an illustration of the variations in service that occur, one city surveyed in the Urban Institute-ICMA study collected solid waste in 1971 at the rate of 908 tons per man, or 88 tons per $1,000 expended. But a city of approximately the same size just 30 miles away collected only 334 tons per man, or 35 tons per $1,000 expended.

One metropolitan area with 13 different local governments showed wide variations in solid waste service costs. In one community, householders pay $2.66 a month for three-times-a-week backdoor collection. In an adjoining community with similar dwellings, residents pay $3.76 per month for backdoor collection once a week. In a third locality, again with similar dwellings, the cost for twice weekly collection at the backdoor is $5.45. In short, some people get the same service as others for appreciably less money. Others get better service for the same amount or even less than householders in neighboring communities.

It has been estimated by the Productivity Commission's Advisory Group on Solid Waste Management that, for the United States as a whole, annual savings

could exceed $200 million a year. They also felt that virtually every community in the country can improve productivity in solid waste collection. Savings of 15 to 20 percent annually are being achieved in communities that have turned to up-to-date equipment and methods.

Similar variations occur in the law enforcement area, which the Productivity Commission is also studying. Expenditures on law enforcement, it was found, may vary by a factor of four and more for cities of similar crime rate and size. One city with 3,700 index crimes per 100,000 population spent less than $10 per capita for police in fiscal year 1970, while another with a similar crime rate and size spent $42. However, it must be said, that measuring law enforcement productivity is extraordinarily complex because of weaknesses in the basic data on crime and police outputs and because of the difficulty of measuring the effect of police activity as a deterrent to crime.

In the area of productivity at the state and local government level, the Productivity Commission, in addition to it Wingspread Conference, assembled solid waste management and law enforcement advisory groups made up of respected practitioners and experts in each field and each have developed productivity measures, identified best practices and suggested ways of getting them used.

The law enforcement advisory group reported that some police departments have been making significant attempts to improve service through increased professionalization, training and technology but that too often the normal response to demands for more and better crime prevention has been to add more men or hardware rather than to attempt productivity improvement. One round-the-clock walking beat or post means adding five patrolmen at a cost of approximately $80,000 a year. One patrol car with two officers 24 hours a day costs at least $175,000 a year. Law enforcement expenditures at all levels of government, at last count, (1971) already accounted for some $6.1 billion in public expenditures and occupied more than half a million employees.

Yet, the advisory group found that in some police departments, patrolmen spend as little as six per cent of their time on crime-related activities and the group's report declared that productivity can be improved in the patrol force simply by reducing their court appearance and clerical time and by changing the deployment of the force to match high crime time and areas.

It was found, for example, that in New York City 678 police officers appear in court every day. Over a year's time this accounts for some $13,560,000 in expenditures. On a given day, there are more policemen in court than there are on all the streets of the Bronx. Yet, an analysis of 169,000 court proceedings, showed that the officer was *probably* not needed in court in 45 per cent of those cases, as Mr. Edward Hamilton, Deputy Mayor of New York no doubt indicated to you.

Clearly, productivity improvement could slow the projected increase in employment at the state and local level or it could result in additional services. The BLS has predicted that, without productivity improvement, annual compensation to state and local employees will increase from the present $85.1 billion to $127.1 billion by 1985. A one-percent increase in productivity annually would reduce the 1985 projection to $111.7 billion.

Yet, although some notably successful productivity improvement program have been initiated—the Wisconsin and New York City programs being among the best known—fewer than one percent of the 78,269 local political jurisdictions are involved in significant productivity improvements efforts.

Why are these efforts not more widespread? The Productivity Commission convened a conference at Wingspread in Racine, Wisconsin last summer with some 50 top state and local government officials to find out and, in summary, they gave the following reasons:

The incentive structure for elected officials and managers discourages productivity improvement.

The know-how for measuring and improving productivity is not easily developed or transferred.

The analytical capability is lacking.

Elected officials are almost always too deeply occupied with current problems and crises to do long-range planning. The realities of political survival emphasize short-run results even if the actions taken to achieve those results are counter-productivity in the long run.

The incentive structure for appointive officials, moreover, is equally adverse to productivity improvement. The lack of comparative performance data encour-

ages maintenance of the status quo. Basing salary and status on the size of the budget and number of people managed encourages exaggerated increases in staff and budgets. The lack of rewards for innovative achievements discourages experimentation. The high penalty for failure to meet emergencies encourages the hoarding of resources and high contingency budgets. And the continued reliance on the line-item budget results in high accountability for inputs and little accountability for outputs.

Productivity know-how is not easily developed or transferred, we learned at Wingspread, because the benefits of internal development of new techniques do not accrue to incumbent officials who, on average, have short tenures. As a consequence, there is a general lack of experience with successful innovation. Outside technological innovation for the state and local government "market" has been slow in developing because the science community is still new to state and local problems and manufacturers shy away from the market uncertainties involved. Innovations that have occurred are poorly transmitted and poorly received. Demonstration projects have tended to demonstrate little more than the ability to select successful sites rather than how to apply useful technology. And there is a resistance to "not-invented-here" technologies. Finally, there has been a resistance to committing the money and making the search for talent required to develop the analytical capability needed to improve productivity at the state and local level.

The disincentives for productivity improvement are being eroded away, however, by new political pressures. Many officials at Wingspread saw the growing public concern about getting its money's worth out of government as a political issue of rapidly increasing importance. One Wisconsin State official asserted that:

> "The factors which make productivity improvement a matter of vital concern in this state last year will make it the *most pressing management* issue for all levels of government in the 1970"

A mayor added:

> "Productivity has got to be on the front burner of public discussion—more importantly, on the front burner of political discussion and political campaigns. I would hope the day of the critic has passed. . . . That ought to be true for any candidate for mayor, any candidate for governor, any candidate for chief executive of any office, indeed, any candidate for the United States Congress.

THE WORK OF THE PRODUCTIVITY COMMISSION

Productivity improvement, whether in the private or public sector, is still a long way from assuming the dimensions of a movement, as in Japan, or a "national crusade"—a phrase my predecessor as chairman of the Productivity Commission, Peter Peterson, liked to use in discussing this subject.

In the Productivity Commission's second annual report he stated:

> "We must resolve as a Nation and as individuals to use our precious resources more prudently, more imaginatively and more productively than we have ever done before through the progressive improvement of our tools, our materials, our work skills and—most important—through ever more constructive combinations of men, money, materials, and methods. That is the meaning of productivity growth."

Having described some productivity "problems," what, you may wonder, if anything, has the Productivity Commission done about them. As I said at the outset, because of the enormous magnitude of the problem, one should be quite modest in his expectations for results from a temporary commission. Against that standard let me give you a brief catalog of the Commission's programs and accomplishments.

In the area of Federal productivity improvement, the Commission has—as I outlined earlier—supported the activities of the GAO/OMB/CSC program with a substantial amount of funding. That program, as you know, has led to important measurement breakthroughs at the Federal level and we are sponsoring efforts to apply those at the state and local levels.

Following up on the findings of the Commission's survey of productivity in the food industry, the Commission staff undertook as one of its major efforts the development of improved rail service for fresh fruits and vegetables from California where more than 50 percent of the nation's fresh produce is grown to the

eastern seaboard. Working with grower organizations, railroads, rail union, Eastern supermarket chains and the Department of Transportation, a special experimental coast-to-coast unit train for fresh produce was developed. The advantage of such a train is that it avoids scheduling problems caused by delays in intermediate rail yards. This experiment, which has been under way since October, appears to be operating successfully. While the movement of perishables from California after October normally would drop below the volume needed to make such a train economical, the service improvement has attracted new shippers and, as a consequence, the train still is operating as of this date. The railroads involved in this experiment are the Union Pacific, Southern Pacific, Chicago and Northwestern and the Penn-Central. The Santa Fe railroad, responding to the competitive pressures, has initiated its own rapid service for fruits and vegetables from California. We have been told by growers and food chains alike that the unit train represents the first breakthrough in fruit and vegetable shipment in many years. As a result of our work on the unit train, it has become obvious that much of the delay, uncertainty and costs in the shipment of perishables have been incurred in the final stages of distribution. We, therefore, are now working with various railroads to determine if a change in location of eastern terminals and in final distribution methods might result in further improvements.

The Commission has undertaken a comprehensive study to identify the best practices, productivity improvement opportunities and barriers to productivity improvement in major departments and functions of hospitals. A final report containing a summary of best practices and recommendations for research and policy is anticipated early next year. A related project to develop a model health insurance contract containing incentives for productivity has also been undertaken.

The Commission has also funded several pilot Quality of Work experiments to test how greater cooperative efforts between employees and management might improve the work environment and the productivity of both management and labor. The results will be carefully measured and evaluated to guide the Commission in promoting this particular approach to productivity improvement. The Eastern Coal and Gas Co. and the United Mine Workers have agreed to form a labor management/work quality committee in one Eastern coal mine. The Jervis Corporation and the United Auto Workers have undertaken a quality of work project at a Tennessee plant. A community-wide quality of work project has been undertaken in Jamestown, New York, under the auspices of the Executive Director of the Labor/Management Committee of Jamestown and the Productivity Commission. Other projects are being explored.

The Commission initiated, at the request of the GAO/OMB/CSC Joint Study Group, a prototype project in the Bureau of Disability Payments of the Social Security Administration to demonstrate the use of industrial productivity improvement techniques in the Federal government setting. The objectives of the program are:

To demonstrate the effects of selective changes in the work environment on the organizational health—as reflected in employee attitudes toward work, turnover, absenteeism—and performance—and as reflected in measurable improvements in productivity;

To develop an understanding of the concepts and methods of making work environment changes among agency managers and employees;

To extend an appreciation of the policies, practices and insights of the program to other Federal agencies and to state and local governments.

The Washington Naval Finance Center, the Defense Supply Agency and the Bureau of Engraving and Printing are serving as demonstration sites as well as the Social Security Administration.

Finally, I believe the Productivity Commission has made a contribution to a new spirit of cooperation on the question of productivity. To achieve actual changes in practices, attitudes and procedures, either in the private or public sectors, requires the patient development of a workable consensus among the nation's major economic interest groups. The leaders of these groups—have a major contribution to make simply by underwriting and even authorizing the give-and-take process at other levels in their organizations that will lead to constructive change. The Commission is a device through which top leadership

can—and have—provided the spark to begin the difficult process of turning what has been antagonism and hostility into cooperation in the interest of higher productivity.

We have too fee such devices in our society, Mr. Chairman.

NCOP PROGRAM, 1973–74

Area and project	Objective	Status
Food:		
Survey	To identify productivity opportunities in the food industry and to develop ways of achieving these improvements.	Completed.
Unit train	To start unit train service for fresh produce from California to the East Coast, on a profitable basis for the railroads and with reliable and rapid service to growers.	Initiated Oct. 8, running everyday.
	To speed distribution once produce has arrived at Eastern terminals.	Peat, Marwick, Mitchell, & Co. study initiated.
Freightcars	To reduce freightcar shortages	NCOP to convene a working group.
Seafood	To identify barriers to increased productivity	Study complete, pamphlet published.
	To induce changes in national fisheries policy	Met with Secretary Dent late November.
Health:		
Hospital productivity	To identify best practices, productivity improvement opportunities, and barriers to productivity improvement in the major departments of hospitals.	6 task force reports finished; 1 task force report in process.
Model provisions	To use the market power of corporate and union expenditures for health insurance, by developing a model insurance contract with incentives for productivity performance.	Racine is 1st site; implementation expected May 1974; 2d site tentatively chosen.
Trade:		
Cross cultural management comparisons, United States/Japanese.	To identify where and why Japanese management has achieved higher productivity.	Stanford Graduate School of Business underway.
International productivity assessment study tours.	To observe the quality of working life and its effect on productivity by managers and workers.	1st study tour to Japan, completed July 1973; followup awaiting funding.
Shoe industry study	To understand the competitive position of the footwear industry in international trade, by developing international comparisons of output/manhour, hourly compensation, and unit labor costs.	BLS draft complete.
Productivity statistics	Chartbook on productivity, an international perspective	Draft complete.
State and local:		
Law enforcement	To identify major opportunities for improving productivity and the barriers that must be overcome; to provide an analytical capability and necessary data for conducting productivity analysis.	Study complete; report being printed.
Productivity assessment teams.	To introduce productivity measurement and its use in public management decisions in cities that will establish performance criteria, assembled or generate data to measure and evaluate productivity changes and identify barriers to change—as well as disseminate improvements to other cities.	ICMA analysts at work in 2 cities—St. Petersburg working on overall measurement; Nashville/Davidson working on problem areas.
6 cities	To stimulate support for productivity improvement activity on the part of local jurisdictions by bringing together key administrators and resource personnel to discuss problems of implementation.	12 cities asked for such support, ongoing sorting down to 6.
Nassau County	To support a joint effort by Nassau County and its principal public employee union to establish multimunicipal productivity bargaining, to demonstrate the efficacy of productivity bargaining in the public sector.	Assistant project director not yet named; Department of Labor just assigned staff to monitor project.
Solid waste	To develop productivity measures, to identify major opportunities and key impediments to productivity improvement, and to identify ways in which management ment could be improved.	Study complete, preliminary report published July 1973
Attitudes toward productivity: Harris study.	To provide data from a national survey relating work attitudes and work structure to productivity.	Analyses complete; to be published in January.
Education:		
New York food service productivity and development center.	To support the establishment of this joint labor/management center, for improving productivity in food service, through research, consultation and information.	NCOP input ending; project needs outside funding.
Survey of productivity in secondary education.	To describe status of productivity in public education.	"White paper" in draft.
Centers for productivity in education.	To design and set up 3 centers which attempt to increase productivity in secondary education by providing technical experts in collective bargaining and by offering training to labor, management and legislators concerned with educational bargaining.	Harvard planning proposal submitted and being reviewed.

NCOP PROGRAM, 1973–74—Continued

Area and project	Objective	Status
Behavior and productivity:		
Social Security Administration.	To demonstrate productivity changes due to changes in work structure and participation.	Implementation of several changes underway.
Bureau of Engraving and Printing.		Report of data and analysis to academy.
Defense Supply Agency—Construction supply.		Questionnaire being administered.
DSA—Contract administration.		1st step interviews being conducted.
Navy regional finance center.		Analysis of data underway.
Scanlon plan study	To evaluate the effectiveness of sharing increased earnings due to higher productivity as a spur to increased productivity.	Final report submitted.
American Society for Personnel Administration (ASPA).	To determine how personnel policies are changing to affect productivity.	Design of questionnaire in progress.
Quality of work:		
Bolivar	Pilot demonstration project to test the value of joint labor/management councils as a means of fostering greater cooperative effort between employees and management to improve, the quality of the work environment and the productivity of both management and labor.	Baseline data due Dec. 15.
Jamestown		New full-time man hired; evaluation procedures not finalized.
Mines		Interviewing to establish baseline.
Capital: Urban Institute study and census.	To determine degree of productivity differences among manufacturing plants in the same industry due to capital and indirect labor.	Working paper submitted for review.
Measures:		
Construction	To identify needs in productivity measurement	Conference held, proceedings published.
BLS	To improve productivity measurement and expand coverage to a wider proportion of the economy:	
	7 Case studies in service industry	1 published; 2 ready to be published; 4 underway.
	Chartbook on domestic productivity	Published.
	Measurement of quality change in household appliances.	Underway.
OMB/GAO/CSC	To support a program to develop overall measures of productivity for the Federal Government, and to determine how Federal productivity might be enhanced and improved.	Phase II completed and published June 1972 Phase III (Plan of Action) underway, SSA and other projects as followup.
Research: Productivity research	To identify needs for research in productivity	Conference held; proceedings in draft.
Public information:		
Ad campaign	To increase national awareness of the importance of productivity.	Ongoing.
Publications	To publish pamphlets on topics in which the NCOP program is active (list attached).	12 published, 6 not yet completed, 3 on hold, 3 not yet started.
Labor management:		
Labor/management committees.	To determine whether and how labor/management committees work.	1,700 contracts studied; case studies in draft.
Dinners	To bring togetherjsmall groups of Commission members to discuss productivity problems in some major sectors of the economy.	Pending free dates.
Manpower adjustment	Case studies to evaluate process and experience of manpower adjustments to prooductivity change.	In planning stage, due to start January 1974.

Chairman PROXMIRE. Thank you very much, Mr. Dunlop.

Mr. Dunlop, you are the most logical person to testify on this and to give us information on the Productivity Commission, because I think more than anybody else you represent the leadership in the fight against inflation. You are head of the wage-price control operation. And I think you can see what a disaster we seem to face. Here we have the wage-price control operation, if not dismembered. cut down, and we have to do it sometime, but at any rate you have made agreements with the automobile industry, fertilizer, and many other industries, to eliminate wage-price controls, and we know that this law is going to expire on April 30, and by April 30 it may be largely academic anyway, because you may have decontrolled a great deal of industry.

We have the enormously inflationary impact of the energy crisis, the energy shortage.

We still have a food problem coming up. One expert, Mr. Seevers of the CEA, for example, who is probably one of the most competent people in the Government in the food area, tells us that this month and next month, in January, we are likely to have, we may have a resurgence in food prices. And now we have the one solid long-term answer that at least to almost all economists makes sense, and that is, to concentrate on productivity and try to improve productivity as a means of holding down inflation so that you can make somewhat higher wages, and yet with greater productivity not have your wage costs up so that you have this cost-push inflationary impact. And now you tell me that because the House has taken the position that they don't want to renew the life of the Productivity Commission, it is just about dead. I am just wondering, in view of this crisis situation—you say the Senate has acted favorably on it—what you think we can do, and we would like to do all we can to give it a new lease. It sound pretty desperate.

What I am saying is that this whole anti-inflation effort somehow seems in every area to be grinding to a halt at the wrong time.

Mr. DUNLOP. I like the emphasis you placed upon the Commission work——

Chairman PROXMIRE. I might say that we have talked to House members of this committee. Chairman Patman of this committee is working to try and help us, but so far he hasn't succeeded.

Mr. DUNLOP. I appreciate that. I have spoken to Chairman Patman on more than one occasion about this matter, as have a number of others, I am sure. But it does seem to me that if the present incarnation loses its legislative authorization and budget, then I am not in a position to do anything because the opportunities for action on the Hill are not yet passed. This week, as I said, a miracle is still possible. But if the demise happens, I will certainly urge on the executive branch of the Government that we reconsider what we can do without that legislation.

You will recall that the Commission was originally set up under an Executive order. It does seem to me that maybe a review of the situation with perhaps new forms and new arrangement for the future might very well be a suitable subject for subsequent legislation. In other words, I, for one, am strongly of the view that efforts in this area ought not to be allowed to die, and it will surely be my recommendation that some further steps be taken.

Chairman PROXMIRE. Can something be done with the institutions we have now, with the Council of Economic Advisers, with your Agency? Do you have the staff and the professional competence, or do they have it, to move in this area? Or do they have so many other responsibilities and you have so many other responsibilities that you couldn't do it?

Mr. DUNLOP. Those are the sorts of questions, Mr. Chairman, that we are reviewing. I have hoped still through today—and I haven't entirely given up hope—that a fruitful legislative resolution of the matter can be made. If not, you may have my assurances that the

possibilities of continuing this and other activities will be very carefully explored by me and my associates. And I will see what we can do. I can't say more now, because we have been spending so much of our time in trying to get action in the House that we have not adequately done our contingency planning, though we have been thinking about it.

Chairman PROXMIRE. Isn't it very difficult to recruit and retain good men when it is known that the Commission is a temporary agency that may go out of existence? I know for example, that you have a fine staff director in John Stewart, a partner in McKinsey and Co. on leave. How many economists do you have on this staff, statisticians and other professionals?

Mr. DUNLOP. Maybe Mr. Stewart can answer that better than I can, Mr. Chairman.

Mr. STEWART. Yes, we do have an economist.

Mr. DUNLOP. May I answer your first question. The answer is, yes, it is very difficult to recruit competent people for a task that is essentially a long run one, a continuing one, with a very short lease on life, and if I may add, when there is continuing uncertainty about its existence.

Chairman PROXMIRE. Mr. Stewart.

Mr. STEWART. Yes, Mr. Chairman, we do have an economist.

Chairman PROXMIRE. You have one economist?

Mr. STEWART. That is correct. We have a working relationship with the Council of Economic Advisers on major economic questions. They cooperate with us on projects. But I think, more importantly——

Chairman PROXMIRE. You have statisticians?

Mr. STEWART. We have no statisticians on the staff.

Chairman PROXMIRE. Do you have social scientists?

Mr. STEWART. We do have people working in the areas of social science, yes. We have a doctor working in the area of health, a professional. And we have people with experience in State and local governments working in that area. And we also have engineers.

Chairman PROXMIRE. How many professionals do you have altogether?

Mr. STEWART. We have 12 professionals. The balance are administrative people.

Concerning the economists, as we put together a team, for example, the food team last year, one of our first steps was to call around the country and find the outstanding economists in specific areas. John Morrissey (on my right) did this. And as we set up the meat panel, the fruit and vegetable panel, and the seafood panel and dairy panel, we made sure that we identified some of the best people in the country to include on our team. In doing this we had a large number of economists represented on our panels.

The vice chairman of that effort was Mr. Leo Mayer from the CEA. And the meat panel was chaired by an economist from southern California, James Stephenson. The fruit and vegetable panel was chaired by an economist from Florida. So that we have drawn heavily on the economic fraternity.

Chairman PROXMIRE. These panels that you are talking about, were these volunteers from the industries primarily? They weren't full-time Government employees? Or were they on a per diem basis?

Mr. STEWART. It varied. For example, James Stephenson was a per diem basis. But people like Leo Mayer and Ronald Knudsen, staff economists from the Department of Agriculture, are full-time employees of the Government, and were devoting a major part of their time to our effort during the few months that we had this project underway.

Chairman PROXMIRE. Do you feel that you were able to make useful, significant contributions in giving a greater understanding of productivity, what could be done by the private sector and the Government sector to improve productivity, especially in these crash areas where you say you have teams to do something about the sudden rise in prices?

Mr. STEWART. I suppose that we were encouraged by the work we were able to do, and discouraged by the amount remaining to be done. For example, all four panelists told us that the most critical problem that the farm people faced was transportation of food. John Morrissey has been working with four railroads, with two major rail unions, with the large grower organization in California, and the large food chains in the East to try to improve rail services as a result of that panel recommendation. And starting on October 15 or so John was able to start the best rail service from the West in transport of fruits and vegetables that we have had in 20 years.

Mr. DUNLOP. It is a unit train.

Mr. STEWART. Yes. This train is running, and it has been running on time since mid-October. It has about 100 cars a day of the approximately 200 that come East each day. The service is 6-day service from the west coast, which is the first time in 20 years that the service has been that good.

So in such a specific instance, we are able to make progress, we are able to achieve the kind of cooperation that we were mandated to do by the Congress. And we are encouraged.

Mr. DUNLOP. Do you want to explain the way in which that unit train influences productivity, which is what we are about, in terms of the reduction, the spoilage and thereby the reduction in costs to the consumer as well?

Mr. STEWART. As the panel pointed out to us, last year, over the past 20 years——

Chairman PROXMIRE. I suppose the principal contribution would be the example set, the fact that you can do this, and therefore we should do this on a much larger basis to improve productivity. And, of course, productivity improvement helps everybody, it helps the consumer, it helps the corporation, it helps the labor people, and everybody benefits really in the long run.

Mr. STEWART. As a matter of fact, once this train starter, a second railroad began service in the spirit of competition, in order to maintain its market share. In fact, the second train is doing slightly better than the one we started, which we would have to look on as encouragement.

Chairman PROXMIRE. Mr. Dunlop, I understand that you suggested the Productivity Commission might serve as a kind of stabilization agency. Were you quoted correctly? Don't you think that the Commission has enough cut out for itself without taking on that kind of function?

Mr. DUNLOP. I have not proposed that the Productivity Commission as it has been known take on the stabilization functions. As you notice, we do think that there are some impacts on bottlenecks and supplies and transportation and so forth which the Productivity Commission could very well do. My own view is that stabilization ought not to be mixed up with the problems of productivity; or vice-versa, that the productivity efforts ought not to be mixed up with the continuing interest in stabilization—although I would argue that a productivity job well done will make a contribution to making the economy less inflation prone than it would otherwise be.

Chairman PROXMIRE. I have some more questions. I will yield to Senator Schweiker.

Senator SCHWEIKER. Thank you very much, Mr. Chairman.

Mr. Dunlop, in your testimony you do refer to work the other countries are doing, and you specifically cite Japan and some of the Western European countries. Do you have any more details as to the kind of things Japan or the other countries are doing that might be applicable to this country that we might utilize?

Mr. DUNLOP. I could cite you a number of things. Perhaps it might be best if Mr. Stewart talked about the Japanese case, because he has been particularly interested in that one, and then I will supplement it.

Mr. STEWART. The Japanese Productivity Institute was set up, I believe, in 1953, at the urging of the United States, as part of the Marshall plan at that time. It now consists of about 400 members. It does work which is similar to the work done here by business schools, AMA, and research organizations. During the past 20 years it has sent, I believe, just under 20,000 executives and professionals to the United States to study technology, methods of management, and the way in which we organize our industries. This information has been taken back and digested in Japan and applied in many cases.

The Japanese Institute, as I understand it, also contracts to operate the other 11 productivity institutes in Southeast Asia. They are operating those for the local governments.

The European institutes vary. The French one is moving heavily toward economic education of the French population. The German productivity institute is heavily involved in machine tool development. So there has been quite a variety of objectives for these various institutes.

Mr. DUNLOP. That was the point I wished to make. Each of the countries seem to develop their centers in a somewhat different way, depending on what at the time of their development they perceive to be their most urgent problem.

You will recall that not only in Japan but throughout Western Europe there were inspection teams that came to this country after World War II. And those team reports, by the way, are some of the most interesting reports on the way in which Western Europe sought to recast its industry, both at the independent industry levels, and even more at the plant levels, to take into account the technology and practices of modern American management.

Senator SCHWEIKER. What kind of things might the Productivity Commission undertake? One thing that comes to mind—I was the author of a bill in 1966, I believe it was, in the House, that in essence

set up for the service personnel a cash-award suggestion system. The President has a quota on this every year, and so far I think it has saved about three-quarters of a billion dollars in terms of cash awards for suggestions. Now, this is just the Defense Department personnel that my bill covered. The other departments have had similar programs operating. I am wondering if maybe we should upgrade this program to something a little more national in focus and let the Productivity Commission take that concept and enlarge it, or whether this is not the kind of thing to which you would envision giving some real administrative responsibility, and also some clout?

Mr. DUNLOP. What I would say to you is this—that in my judgment it is important to have a group of people who are in consultation with others in the Government in various agencies, but whose actual time is devoted to trying to improve productivity. In some cases a suggestion system may be useful, and in others it will not.

I spent some time within the last month with the admiral in charge of the Bureau of Yards and Docks, who was very much interested in exploring with me in detail what could be done to improve productivity in some of the shipyards from which they purchased services. And having spent several hours with him and his associates on this matter, I came away with the view that there were a great many things which might be done in that situation to improve the performance. And you had a management that was interested in doing so, and needed some help, partly on labor-management matters, and partly on other questions, which would have the kind of impact that was important.

So it seems to me that the thrust I am trying to give to this is that I do not believe that any single program will work in any and all circumstances. But I do think that each situation should be reviewed with people interested in those matters working directly with the managements and people involved, and making preliminary measurements, and outlining activities that can be done. It is, I think, the experience of this country and all others that there are very few institutions that you cannot—by taking thought and concentrating—substantially over time improve performance. And that is the heart of the matter rather than any one single necessary tool which may be appropriate in a given situation.

Senator SCHWEIKER. I think just the experience with my bill shows that there is really a gold mine here, because these are just suggestions from servicemen. And they are only awarded something under 10 percent of what the first year savings are, and they have earned three-quarters of a billion dollars since 1966 on just a fraction of the years' savings. Now, my point is this, that if we really had a national program going such as you envision, which covers everything, as opposed to just a good idea or just a new way of doing things, and then maybe have some kind of reward. Less than 10 percent is a very small reward—I know Senator Percy mentioned yesterday Bell & Howell's 50-percent break. I think we are awful low on what we are giving now for the program that we have, but it seems to me that there is a lot of creativity that we could harness.

Chairman PROXMIRE. Senator Percy also indicates that this was one of the best things Bell & Howell did. It was marvelous. They give employees who made suggestions that were accepted 50 percent of the

first-year savings, and the company kept 100 percent of the savings after that, and it worked out fine, and they made some very fine awards to their employees, but it was well worth it.

Senator SCHWEIKER. I think that is true. And I think the fact is that three-quarters of a billion dollars would just outline the skeleton of the field. And it show what might be done in many other areas.

There is one other avenue that I would like to pursue 1 minute. Your testimony mentioned that we in Government, by the laws we pass, and the way the laws are administered, discourage, or provide a disincentive for productivity. I think this is a very valid point.

You cite medicare and medicaid. I concur with you. I think we have built in a disincentive. And I think it also carries over to some of our private insurance programs. My recollection is going to the doctor's office and getting a bill, but before they bill you they want to know who is paying. And it is not the amount of the bill, it is who is paying the bill first. And in essence, if I answered it by saying, well, I am not covered, this is my own money, I am sure, from the impressions I get, it would probably be cheaper and a lot less than if someone else is picking up the tab other than myself.

Now, this applies not only to medicare and medicaid but to private health insurance plans. I think that is a very good point, and I think we in the Congress ought to be looking, when we write laws, to see that we somehow build into the law ways to counteract that, because it just burns my hide when I find out that the real charge of my bill is who is paying for it, not what the work art is. And when you get into Government insurance or Government health insurance at $15 or $20 billion, that is a pretty heavy charge.

So I think that is a very valid point that we ought to consider in terms of working into laws, and at least administration of them the way they operate, so that this doesn't happen, but is a syndrome of what happens when we pass a law here.

Mr. DUNLOP. I can make two comments on that, Senator Schweiker. The Productivity Commission at this time has about 85 people working on various teams seeking improvements in health productivity. We bring them together to work on a series of problems.

I might also add that from the Cost of Living Council's point of view the control over the costs is one of the central continuing concerns of the Council. We have out for comment at the moment a new set of regulations with respect to hospitals particularly, where this problem of the impact of a cost reimbursement method in the past, and cost reimbursement procedures generally, have tended in this industry, as in others, to divert attention away from productivity, as you have rightly commented. We are interested in productivity improvements by rearrangements of the provisions of care in the Productivity Commission, and it is very much a concern in the Cost of Living Council.

Senator SCHWEIKER. That is all that I have. Thank you, Mr. Chairman.

Chairman PROXMIRE. Mr. Dunlop, you indicated that the Productivity Commission should not take over the stabilization program in your view. Can you tell us what you expect to happen to the stabilization program. We are all concerned about this, and what a tough problem this. I have great sympathy with your position. As you may know,

I fought on the floor of the Senate to prevent it being killed a couple of weeks ago. And I think it would be a disaster if we just cut it off without giving you a chance to do the skillful job you have done in phasing-out in some areas. And we wonder what is going to happen to this wage-price control effort?

Mr. DUNLOP. Mr. Chairman, I don't know. I would be happy to tell you the little I do know about it. As it seems to me, basically we are in the process of continuing control on a tough basis under phase 4. We find that people become impatient here and there, although I think the polls still indicate that the people of the country are substantially supporting a continuation of controls programs. At the same time we are trying to decontrol, as we were instructed to do by the President, on a sector-by-sector basis. And if I may say so, Mr. Chairman, up to this point it has been my firm determination to try to cure something for the country each time we sign an order for decontrol. That is to say, some commitment with respect to supply, to capacity, to output, to the starting up again of plants that had previously shutdown, and some commitment as to future pricing or forms of price behavior.

Chairman PROXMIRE. And this is going to continue to be your way of operating——

Mr. DUNLOP. Some improvement in labor-management relations in a particular sector, as in cement, that concerned me.

This is my perception of what is right, and I intend to pursue it.

Now we have no prearranged schedule. I am literally trying to feel my way, and my associates with me, as to what happens when we do something, and to see its consequences, retaining always the right to go back if the consequences seem to be unduly inflationary, and spreading.

Chairman PROXMIRE. And you maintain that right now?

Mr. DUNLOP. Exactly right.

Chairman PROXMIRE. And you might even move back into automobiles if they don't conform?

Mr. DUNLOP. In conformity with the explicit language that was worked out with their commitments.

Now, my notion is that we intend to pursue that course through the months immediately ahead. The question of where all that will be in the spring and in particular in April when the matter of the future of such a program is before the Congress, I must say I don't know at this point.

Chairman PROXMIRE. How about the areas of obvious, clear shortage in energy, for example, would you expect that to be taken out from under the wage-price stabilization program, and is that wise? Many of us are concerned with that, for fear that they may just want to solve the problem of higher prices.

Mr. DUNLOP. Mr. Chairman, as you know, the statutory authority for continuation of the control in the petroleum area continues to February 1975. I have previously expressed my view that I think it would be unwise to remove controls in that area at this time, and I may say for the foreseeable future.

Chairman PROXMIRE. How about other shortage areas? I am thinking about areas like health.

And then you have different kinds of problems, as you know better than anybody else, in construction.

Mr. DUNLOP. Well, with respect to areas outside the energy or petroleum field particularly, I think it is a little bit too soon for use to express a final judgment. I do think that there are areas in the economy where there are substantial potentials for continuing inflation. But that of course—the question to ask is really very much intertwined with the question of the future of the Stabilization Act, or a legislative base for a stabilization program. And I don't know the answer to that, and perhaps no one does. I am certain in my own mind that there will be some sectors which we will want to keep under control, certainly down near the time when the act would be ——

Chairman PROXMIRE. In addition to the energy areas?

Mr. DUNLOP. Yes, I think so.

Chairman PROXMIRE. Can you give us some examples?

Mr. DUNLOP. I think, Mr. Chairman, if I responded I would make an awful lot of people unhappy, and if you don't mind, I would rather say that I think there are sectors, and several of them are fairly obvious, but I would rather not indicate them, because we probably have petitions for decontrol pending from those sectors and a great many others, and I would not want in this public way to respond to a petition pending before the Cost of Living Council, if you don't mind.

Chairman PROXMIRE. You foresee the possibility of a situation where, except for energy, which is aside and apart, fiscal policy and monetary policy could be adequate to meet inflation problems by next spring, by April 30, when the law expires?

Mr. DUNLOP. Mr. Chairman, I don't know. I think, in addition to the two elements that you mentioned, I think there is one very important additional element, if I may refer to that. And that is the state of the economies of Western Europe and Japan. A great deal of our inflation this year has been due to world prices, as you know. And we are uncertain as to what the energy crisis will do to those economies, and their level of industrial activity, and hence the level of prices of a number of their products which are worldwide, and hence upon our own prices. And until we see how all that works out I think it is peculiarly difficult this year to foresee what events are likely.

Chairman PROXMIRE. You talk about this other element, and I certainly subscribe to that, the fact that if the economy slows down enough abroad, the world economy, if we have a worldwide recession, it could have an effect on inflation here. On the other hand, we went through that experience in 1970 when we had a recession and we had a worse inflation than we had during a period of expansion. It is a different kind of inflation in a recession caused by cost-push. Isn't it very likely that we might have that kind of a problem? And that was exactly the kind of situation where wage-price controls seem to be appropriate.

Mr. DUNLOP. I think that while the future is murky, the scenario that you cite is a definite possibility. I am unwilling at this point to project as far forward as April, but it is certainly possible to have an economy—we have had it before, as you point out—in which we have declines in gross national product associated with forward thrusts in prices. There is no question about that.

Chairman PROXMIRE. Mr. Dunlop, I apologize. There is a rollcall now. I will be back as rapidly as I can. I just have a couple of more

questions that I would like to ask. I appreciate your patience. It will take me about 10 minutes to go over and come back.

[A short recess was taken.]

Chairman PROXMIRE. The subcommittee will come to order. Mr. Dunlop, you keep referring to the Commission as temporary in your statement. Should it not be permanent—I am talking about the Productivity Commission—in view of the fact that as you say, enhancing productivity is a long-term project, and we can recruit and retain able people better if we have really a permanent lease on life? I know the Congress has not funded you well, but I often wondered if the administration has its heart in supporting it.

Mr. DUNLOP. I am of the view, Mr. Chairman, that some continuing—in that sense permanent—organization in the Government to do the sort of things which the Productivity Commission has been trying to do should be created, yes.

Chairman PROXMIRE. So you think it should be a permanent commission, and not necessarily this particular Commission, is that it?

Mr. DUNLOP. Yes. One might prefer a different form, one might want variable people on a commission. In that sense, the particular form might be different than the present one. But there should be a continuing body, Mr. Chairman.

Chairman PROXMIRE. The productivity opportunities just seem really enormous here. Just in the area of the Federal Government's allocation of research and development, for instance, that would have an impact on productivity. I am not talking about the defense sector, but about the other sectors. We find that obligations, for instance, are concentrated in Agriculture and Transportation. For example, agriculture represents, I understand, 4 percent of the GNP but has 21 percent of the Federal productivity obligations. And manufacturing has 36 percent of the GNP, on the other hand, but has only 2 percent of the Federal productivity obligations. And transportation has only 5 percent of the GNP, but almost half, 42 percent of the productivity obligations. I realize that those shouldn't be one for one. There are many reasons why you want crash programs in certain areas and why for various reasons we have to move ahead to other areas. But there doesn't seem to be much of a recognition of the significant areas to our overall productivity, and economic program, and the allocation of Federal funds. Why is this?

Mr. DUNLOP. I agree with what you said, particularly with the caveat that proportionality is not necessarily an ideal measure. I suppose it is so because of the kind of emphasis on productivity, and the emphasis on technical change. And the emphasis on picking out areas where it is possible to improve productivity at this particular period in history at an accelerated rate is not the kind of thinking that typically gets into these matters. It is, I grant you, not the only point of view that should prevail, but I do believe that a more systematic infusion of attention to productivity is essential in our public life.

Chairman PROXMIRE. Let me give you an example of the enormous opportunity disclosed yesterday by Mr. Staats. And I would like to have your comment on it. He pointed out that out in Joliet, Ill., they have an ammunition procurement depot. And they decided that they

would allot $500,000 on any basis they wanted to for investment to improve productivity. It had a sensational result. They were able to save $1,800,000 with that $500,000 in a year, in other words, it paid for itself in less than 4 months. Obviously they had more that they could have brought out that didn't pay themselves over quite that period of time but the opportunity for investments are really enormous, and Mr. Staats made the point that where the Federal Government really falls down in improving productivity is in its failure to have a rational, balanced notion of the payoff that you can get from investment. This is an area where, as you know, private enterprise devotes a whale of a lot of attention and talent and effort, and where the Federal Government, partly for budgetary reasons, but for other reasons, seems to be badly neglecting an opportunity to greatly increase efficiency.

Mr. DUNLOP. I am sure that throughout the public sector one could pick examples of the sort that Elmer Staats mentioned in his testimony of yesterday. I am looking at the table to which you had reference to now. That, of course, is very much the experience in the private sector. One of the problems is to get managers and to get funding so that people can make the kind of commitments which draw forth both the energy and efforts of labor and management. But also sometimes it involves capital expenditures, which are one way by which you save and create productivity. It isn't all simply in the reduction of labor costs. Many times it is in the development of capital expenditure which will save a good deal of future expenditure. So both laborsaving and capital saving types of activities are possible.

Chairman PROXMIRE. And then the point is made that the Federal programs affecting productivity are largely oriented toward technology, and not toward applying technology that we have, making use of it. For instance, in the distribution of expenditures, technology is almost two-thirds, 63 percent; management and organization only 17 percent; capital only 15 percent; research and other, 5 percent, on other than technology. So here you have a lost opportunity that would greatly reduce Federal spending and provide the same services for less money, or more service for the same money. We seem to me neglecting it seriously, isn't that correct? Isn't it an area where the Productivity Commission can be helpful, too?

Mr. DUNLOP. Yes, and ought to be.

Maybe Mr. Stewart would comment on one or two ways in which we have dealt with that area that you mentioned. Could I ask him, Mr. Chairman?

Chairman PROXMIRE. Let me just make on point before he comments on that. One of the arguments made is that the average time that a Secretary is in office is only 22 months. And in that period of time he wants to make his mark and do a good job, as all of us would do, but he doesn't really have an opportunity to look at this on a long-term basis where productivity changes would pay off. Those usually take a few years to pay off. And it seems to be one inhibiting factor that we have to find a way to overcome, isn't that right?

Mr. DUNLOP. I think that is right. In the meeting of the Productivity Commission that we had earlier this fall, Mr. Chairman, we discussed the impact of that sort of political constraint on the development of law enforcement productivity and in local communities and cities with elected officers and mayors, and so forth, wishing to concentrate their efforts on matters which would pay off during the period of their term rather than with a longer run perspective. So I suspect that this problem is true both in Federal and in local and State governments as well.

Chairman PROXMIRE. Mr. Stewart.

Mr. STEWART. I would just make one comment. As we have worked with the various Government departments, we have found that there is in food and health and law enforcement a great deal of technology, and people understand that technology will make a difference to productivity. It takes relatively little catalyzing effort—whether the effort comes from hearings such as these, from a Commission such as ours, or from the private sector—to apply that technology.

Chairman PROXMIRE. By small, I am sure that it is not too small now by far, by a great deal.

Mr. STEWART. It is a small fraction of what we should be able to achieve from existing technology.

Chairman PROXMIRE. It just seems that there is no permanent Federal agency that has a clear role in productivity. Your outfit, the National Commission on Productivity, with a $2 and a half million budget, has uncertain legislative status. The OMB productivity program is deemphasized, shifted to GSA. It just doesn't seem to be enough, in view of the great opportunity.

One of the most distressing areas here is the State and local area, where we are devoting increased billions—we already have a revenue sharing program of $6 or $7 billion, and we are going to have a special revenue sharing with increases, and we have all kinds of grants. And we have dispensed literally billions of dollars over the years. And yet the key programs all lack a productivity element, even though that should be central to it, but it seems to be absent.

I mentioned this in my earlier question that the Law Enforcement Assistance Agency, which started off with $10 or $15 million, and is now more than a billion dollars, and will be a multibillion dollar program within a few years. And it started off as a research program, and primarily productivity program, and it ended up with supplying hardware with practically no productivity elements that were cranked into it.

We have the EPA, it has dropped its local program to improve local solid wastes and productivity because it was viewed as beyond the EPA mandate.

And we have the Office of Education, which has not figured out how to address productivity issues in education.

The Department of Transportation has no productivity measures for mass transportation at a time when they should be moving in this area, because there is such inducement for mass transit improvement.

Health, Education, and Welfare proposal doesn't have anything to say about productivity.

The Emergency Employment Act made the local government employee of last resort without regard for the efficient delivery of services. And so on. I have a number of examples here. Does the Productivity Commission expect to be able to move here, or is this something the Council of Economic Advisers—I understand that they have provided some input in the area of efficiency and productivity for State and local government? Which agency is responsible here?

Mr. DUNLOP. Mr. Chairman, during the past year the Productivity Commission has had a very active and central interest in the local and State government area. We had some very interesting reports on what we have done at our last meeting. The areas which we have concentrated upon particularly are the areas of garbage or waste disposal, and the area of law enforcement, where very large sums of money are expended. It seems to me that those developments are ripe for generalization widely throughout the country.

Chairman PROXMIRE. And you feel that this is also true in the Federal programs?

Mr. DUNLOP. Yes sir.

Chairman PROXMIRE. And I could give many examples there.

The Federal Government seems to not have addressed productivity issues in many key areas: Manpower adjustment and training, capital formation through tax and monetary policy, and technology application. Are these not areas, too, where this could be addressed with great benefit?

Mr. DUNLOP. We have one part of our program I mentioned dealing with capital side of this. Clearly that is an important part, and it has always been an important part of productivity.

Chairman PROXMIRE. Just one or two more questions here.

In reviewing yesterday's testimony by Comptroller General Staats, I noticed what appeared to be a huge omission in coverage of agencies taking part in the productivity studies. In the "Total man-years" column for the Department of Defense, the figure 1,169,200 appears. The staff tells me this accounts for approximatey the total of DOD civilian employees. What about the nearly 2½ million military employees? This pool is nearly as large as all the rest of the agencies combined. Shouldn't we be measuring and improving productivity here, too?

Mr. DUNLOP. I would have thought so, certainly.

Chairman PROXMIRE. Do you think that is another area——

Mr. DUNLOP. Surely.

Chairman PROXMIRE. You see, I pointed out yesterday that if you take the DOD as an example, we measure about 30 percent of their productivity; and if you take all the other agencies as a whole, we measure about 80 percent. I can't understand why we shouldn't be able to get as effective measures in Defense, any technical reason we shouldn't be able to get it there as well as in civilian agencies.

Mr. DUNLOP. I can understand where in some of these activities it shouldn't be difficult. But it seems to me that there are a large range of these activities which are measurable. And I am notified that work is underway to try to extend measurements to those areas.

Chairman PROXMIRE. Mr. Dunlop, I want to thank you very, very much for your most helpful testimony this morning. And I want to reiterate that I will do all I possibly can to see that the Productivity Commission has every chance of survival. I intend to talk to Mr. Patman again, and I will certainly do so, and urge him to try once more. Because this is so essential. The amount involved is relatively very small. The potential saving is enormous. Talk about a benefit-cost ratio, it would be easy to show a 100 to 1 here without any real difficulty at all.

I am very impressed by the people we have in the Productivity Commission now. We have neglected that in the past. And we have great competence there. I hope we can find some way of retaining the very capable man who was here this morning who is here testifying. I hope you don't leave and aggravate that turnover problem that we have recognized. Thank you very much.

The subcommittee will stand adjourned.

[Whereupon, at 12:50 p.m., the subcommittee adjourned, subject to the call of the Chair.]

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