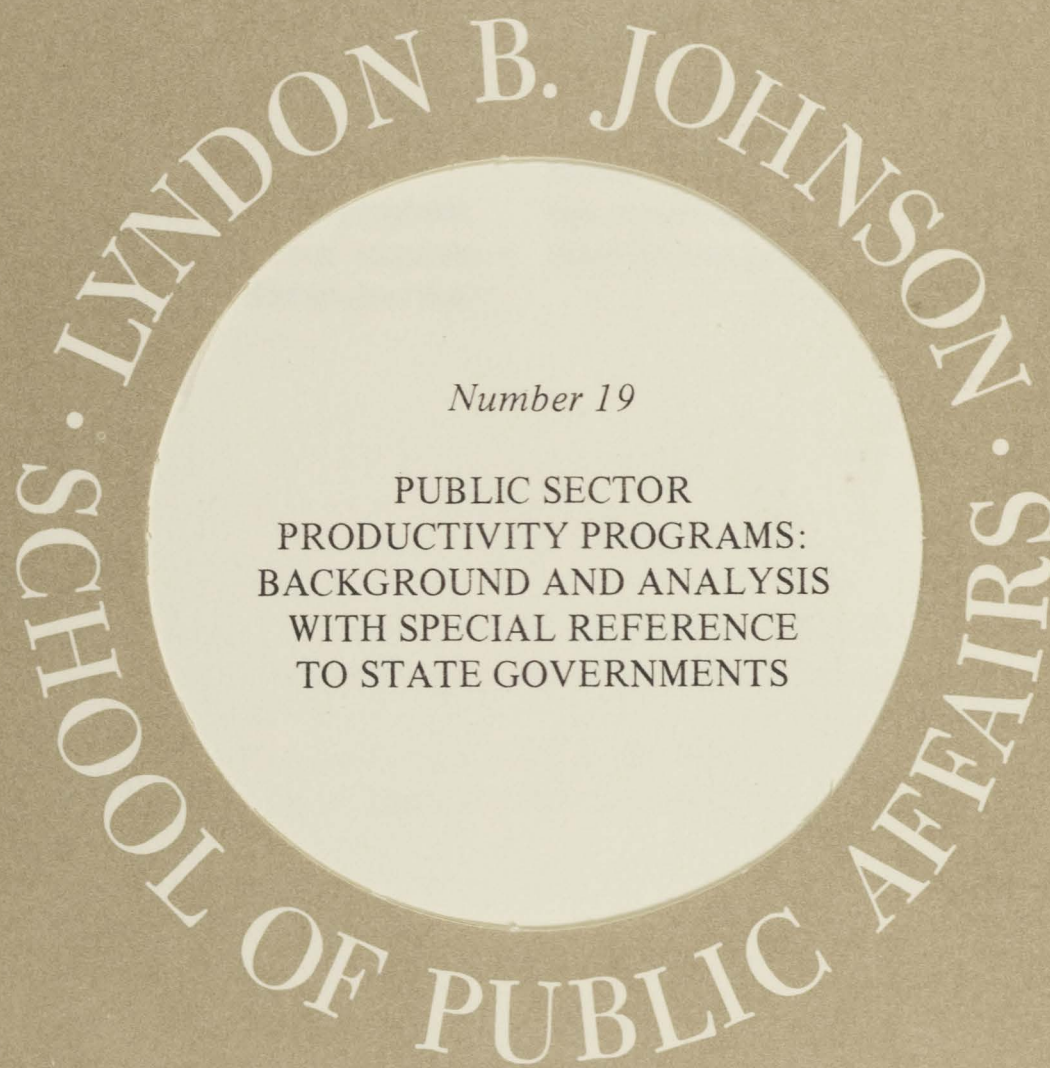
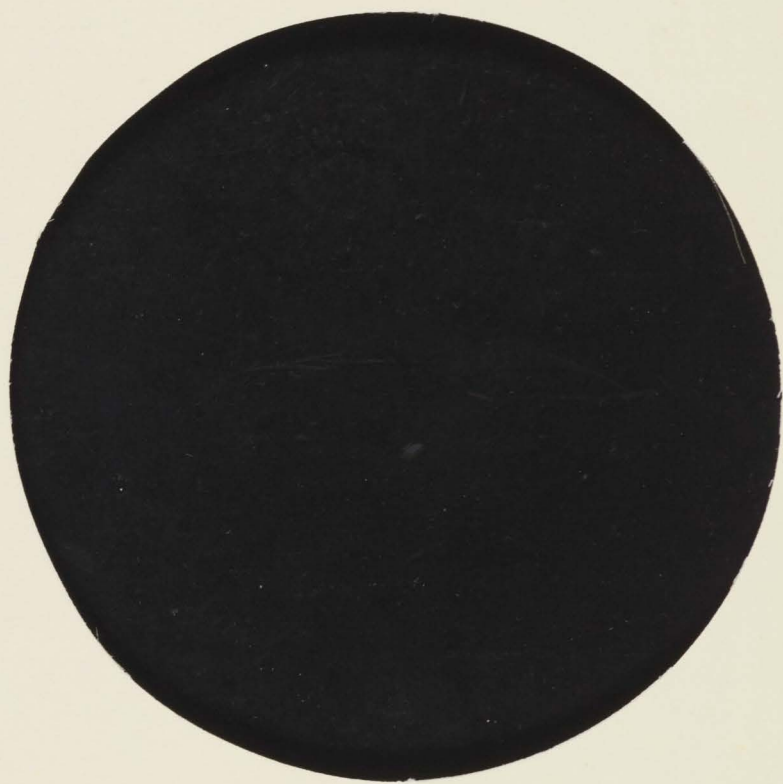


# POLICY RESEARCH PROJECT REPORT



THE UNIVERSITY OF TEXAS AT AUSTIN

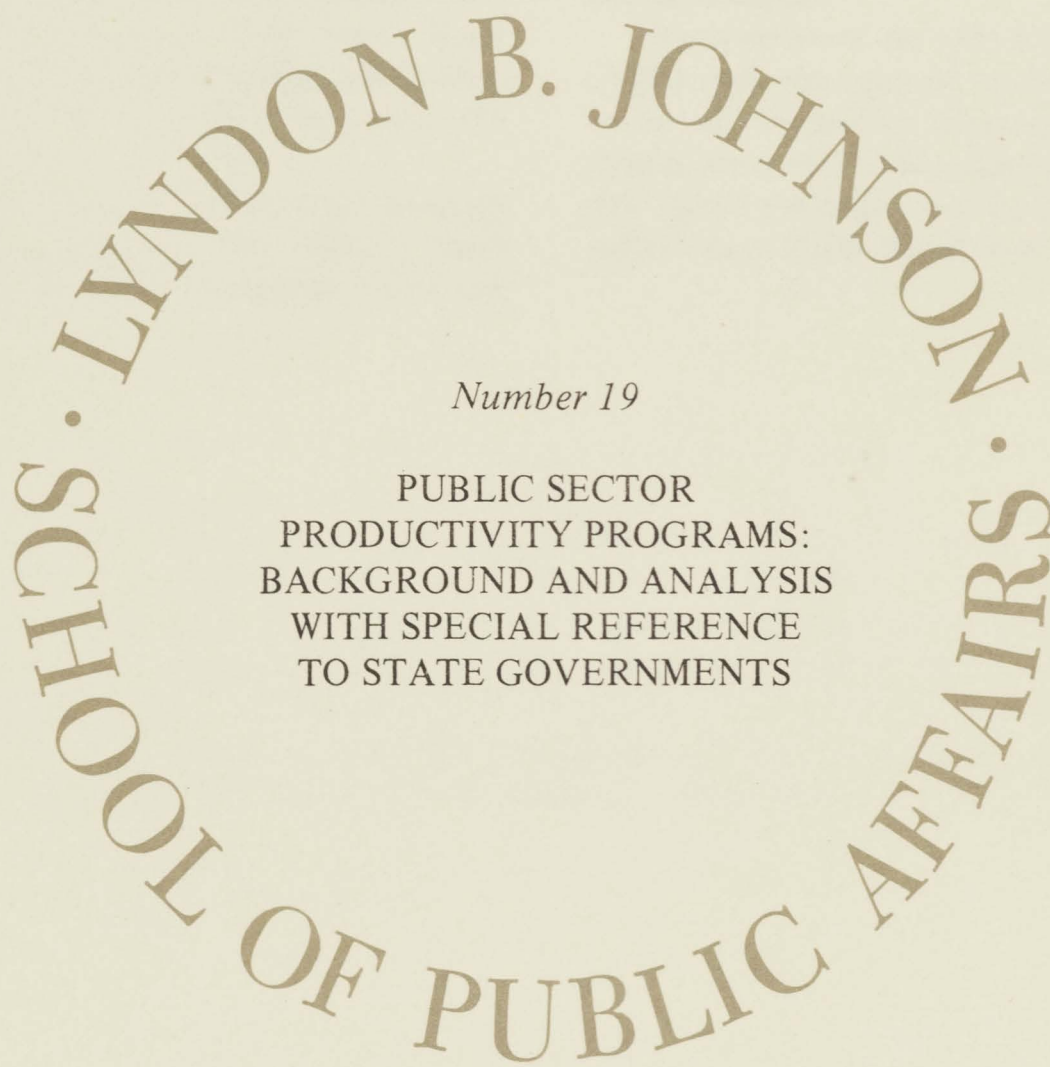






LYNDON B. JOHNSON SCHOOL OF PUBLIC AFFAIRS

POLICY RESEARCH PROJECT



*Number 19*

PUBLIC SECTOR  
PRODUCTIVITY PROGRAMS:  
BACKGROUND AND ANALYSIS  
WITH SPECIAL REFERENCE  
TO STATE GOVERNMENTS

*A Report by*

*Members of the State Governmental Operations Policy Research Project*

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*The University of Texas at Austin*

*1977*



Library of Congress Card Number: 77-620013

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# FOREWORD

The Lyndon B. Johnson School of Public Affairs has established interdisciplinary research on policy problems as the core of its educational program. A major part of this program is the policy research project in which a team of several faculty members, each from a different profession or discipline, and graduate students with diverse background work together on an important public policy issue. These projects are conducted in response to public and governmental needs.

This report on the public sector productivity programs was prepared by three members of the policy research project on State Governmental Operations. The project was

undertaken in response to research needs of the Joint Advisory Committee on Government Operations, established by the 64th Texas Legislature to conduct an evaluation of Texas state government and make recommendations for needed changes.

The intention of the LBJ School is to develop men and women with the capacity to perform effectively in public service and to develop information that will enlighten and inform those in decision-making roles. It is our hope that this report and others produced by the School will be of value both to policy makers and to the public.

Elspeth Rostow  
Dean



## PREFACE

This study is the product of a team of graduate student members of a policy research project on State Governmental Operations conducted by the LBJ School of Public Affairs. It explores a variety of issues which surround the design and implementation of productivity improvement programs in the public sector and examines productivity efforts in the federal government and in state government, with special reference to the State of Wisconsin. From this examination, its authors draw some lessons as to what might constitute an effective approach to productivity improvement efforts in state government. Though written under the general direction of the research director, the

findings and conclusions of the report represent the consensus of the research team.

This study was conducted at the request of the Texas Advisory Commission on Intergovernmental Relations, which provided staff assistance to the Texas Joint Advisory Committee on Government Operations during its deliberations. The School's participation in this effort was made possible by grants from the Office of Community Service, Coordinating Board, Texas College and University System of funds under Title I of the Higher Education Act of 1965 and from the University Research Institute of the University of Texas at Austin.

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# INTRODUCTION

Several characteristics of the 1970s have given rise to the development of public sector productivity programs, including an increasing number in state governments. Exactly what is meant by the term "productivity" is subject to debate and will be covered in detail later in this report. Generally, the term refers to the attempt to maximize desired output and at the same time minimize total and unit cost.

The recent proliferation of governmental productivity programs has been prompted by at least three factors:

1. There has been a growing concern about the productivity of the American economy, fueled by a decline in U.S. productivity relative to other nations. The size to which the public sector has grown in terms of its percentage of the gross national product and employment makes this sector an important potential source for improvement of national productivity as a whole.

2. The costs of providing public services have skyrocketed. Costs at the state level particularly have risen in recent years because of an increase in the responsibilities of state governments, larger numbers of and higher compensation for state employees, and inflation. These trends have been accompanied in many states by a decline in state revenues due to the recent economic recession. The result is that many states find themselves in severe fiscal difficulties.

3. The demand for greater government accountability in general is increasing due to a concern for the size and role of "big government."

This report discusses the meaning, history, and operation of productivity programs in the public sector, particularly with reference to state governments. This introduction is devoted to a discussion of the concept of productivity and an outline of the report.

## THE MEANING OF PRODUCTIVITY

Productivity is both an economic and a management concept. In the economic sense, it refers to the combination of resources used to produce goods or services. In the management sense, the term refers to the adequacy of the way in which a manager uses resources in order to produce specific products and services. Productivity is a concept with different meanings depending on its particular applica-

tion. For this reason, any attempt to deal in depth with the issue must clearly define the terms employed and their use.

Productivity will first be considered in the context of a simple system. Productivity measurement will be differentiated from other management tools and will be seen as a component of an organization's information needs. The special need for such measurement in the public sector will be noted. Finally, the concept of a productivity improvement program will be introduced.

Mark (1972) defines productivity as the efficiency with which output is produced by the resources utilized. Gissler (1972) notes the traditional definition as "output per man-hour." It is clear that these definitions imply a systems process in the traditional sense (see Churchman, 1961), i.e., an input-output relationship. The system can be shown graphically:



In the production system, inputs refer to such resources as personnel, space, and capital assets. Examples of outputs include physical goods, events, satisfaction, and services. Between the input and the output is some process of transformation. Work processes, schedules, layouts, management—these are the tools which create the output from the inputs (Balk, 1975a).

This simple systemic representation is sufficient to illustrate the more traditional definition of productivity. Various measures of productivity can be developed on the basis of this model. These measures attempt to compare the amount of resources used with the volume of products or services produced by the organization and thus to develop ratios of outputs to inputs. These are commonly known as efficiency measures.

Two general types of efficiency or input-output ratios are appropriately used as productivity measures. First are "single factor" ratios. These ratios show the efficiency of production in terms of a single input. Two common single factor ratios are "labor productivity" indexes and "capital productivity" indexes (Wise and McGregor, 1976). Another such measure is output per energy input (Mark, 1972). The second type of efficiency measure is "total factor" productivity (OMB, *et al.*, 1973). This measure aggregates a number of inputs, provides weights for them,



and compares them to outputs.

There are other gauges of efficiency which are not true productivity measures but, due to their frequent confusion with productivity measures, need to be mentioned here. First, "workload measures" show the amount of demand actually processed through the organization. Examples of such measures include number of licenses processed or social worker caseload. These measures show the magnitude of the expressed demand, but do not compare final output to input.

A distinction also needs to be made between true productivity measures and a secondary category of efficiency estimates, "work measures." Work measurement refers to "the analysis of the stages of activity and the requirements at each of these stages" (Mark, 1972). A work measurement system sets standards of performance for each aspect of the job, e.g., how each activity should take. Thayer (1972) notes that such systems imply "Taylorist" speedups. The New York State Senate Task Force on Critical Problems (hereafter referred to as NYSSTF, 1975) suggests that negative connotations of productivity may be a result of confusion between true productivity measures and work measures.

Efficiency ratios portray the traditional definition of productivity. However, several sources (Balk, 1975; NYSSTF, 1975) have expressed dissatisfaction with the traditional definition since it fails to include quality considerations. Efficiency measures reveal how *much* of the good or service was produced but not how *well* it was rendered or performed. Balk (1975) suggests an addition to the simple systems model presented earlier:

INPUTS → PROCESS → OUTPUTS ← STANDARDS

Standards refer to the goals, objectives, or expectations of the organization. This comparison of outputs to standards brings into play consideration of effectiveness. Effectiveness measures attempt to describe how well something is done in respect to the organization's goals. An example of such a measure would be the "percent of clients of a vocational rehabilitation program that are employed as of 60 days after completing the program" (Urban Institute, 1975). An efficiency measure for such a program, in contrast, might be limited to the number of clients processed in comparison to the costs involved.

Balk (1975) argues that a comprehensive representation of productivity requires a combination of efficiency and effectiveness measures. He presents a simple equation to illustrate the concept:

$$\text{PRODUCTIVITY} = \text{EFFICIENCY} + \text{EFFECTIVENESS}$$

Hatry and Fisk (1971) note that productivity measures which emphasize efficiency over effectiveness are "uninformative and even grossly misleading."

Once measures are developed and implemented, Balk (1975) lists five uses of the resulting data:

1. *Cost Reduction and Service Improvement*: Studies of productivity relationships help managers to locate specific problem areas and take appropriate action.

2. *Ongoing Control of Operations*: Productivity concepts help managers gauge the effect of relocating resources and encourage the setting of goals.

3. *Planning and Budget Justification*: As productivity data is collected and trends of efficiency and effectiveness are recorded, a rationale is developed to project future trends and rationalize budgetary allocations.

4. *Improvement Motivation*: Productivity analysis results in the continuous development of performance standards and expectations which are communicable to employees and managers. This has a motivational effect of its own.

5. *Accountability*: All of these uses enable government agencies to communicate their successes and problems in resource management to the executive, the legislature, and the public.

The necessity for measurement of efficiency and effectiveness is especially important in the public sector. In the business sector the profit statement reflects the fundamental viability of the enterprise or organization. The market mechanism will ultimately determine whether or not the private enterprise is efficient and effective in the production of goods and services. Also, compared to governmental entities, the private firm provides a rather narrow range of products and services. Thus, the typical private enterprise finds itself in an environment in which it produces a limited group of specific and tangible products, in which it is guided by the overriding goal of profitability, and in which the market mechanism provides the appropriate feedback in determining efficiency and effectiveness.

Government exists in a different environment. A wide variety of goods and services are provided by government, including the fulfillment of indefinite and changing social perceptions. No single overall goal, such as profitability, can be used as the standard of performance for the public organization. The goals and objectives of public organization derive in part from notions of equality, democracy, and justice, which cannot be converted into a balance sheet. Furthermore, the public organization lacks a feedback mechanism as clear and demanding as the market in gauging efficiency and effectiveness.

Despite these differences, government has a responsibility to use limited resources wisely, to strive toward the achievement of public ends, and to remain accountable for its performance. The measurement of productivity can thus serve a crucial function in the public sector by providing some indication of which programs are adequate and effective.

However, measurement alone will do nothing to improve program performance. It provides only a tool for locating problems in the system and indicating where management must intervene in the work process in order to make an organization more efficient or effective.

Using only a traditional, efficiency-oriented definition of productivity will not be sufficient to maximize program performance. In fact, even measurements which allow for both efficiency and effectiveness will only serve an identification function. A "productivity improvement program" moves beyond measurement to a strategy of intervention in the work process.

### FOCUS OF THE REPORT

Chapter I of this report presents a history of the productivity movement in the Federal Government as a model of a productivity program from concept to operation. After a look at the development of productivity efforts over the years, the development of productivity measurement in the last decade-and-a-half is traced. Next, current federal programs related to productivity enhancement are described. Then federal programs which offer assistance to state and local governments are treated.

Chapter II is devoted to the evolution of productivity improvement programs at the state level. Following an account of the historical context, the status of productivity measurement in state governments is described. The next section is a summation of present improvement programs, including general conclusions drawn from the experiences of seven states. The chapter concludes with a detailed case study of productivity efforts in Wisconsin, which has instituted the best known program in this area.

Chapter III provides an operational perspective on state government productivity programs. It represents the "les-

sons learned" from our surveys, interviews, and literature review. A beginning section discusses the conceptual and political requirements for starting a program. After a review of various structural concerns, the chapter discusses a large number of possible components of an enhancement effort. The concluding sections contain some thoughts on the crucial subjects of measurement systems and motivation.

A comment about references is warranted. We have gained considerable insight from the documents examined in the course of our research, and we have drawn frequently and fruitfully upon these sources in preparing this report. Because it was not possible to devote substantial attention to many topics mentioned herein, it is hoped that the reader will refer to the sources cited for more extensive examination.

We have attempted to attribute fully comments and ideas facilitated by the contributions of others. This attempt has been made difficult, however, due to the nature of our research. We have relied heavily on interviews and discussions, and on such sources as internal memoranda, budget documents, and unpublished material. Inevitably, a great deal of our thinking has been shaped by a mix of various ideas. This is reflected in some sections of the report, particularly in the case study, where attribution is not fully possible.

We would like to conclude this introduction by expressing our appreciation to the many individuals who gave generously of their time and knowledge during the course of our research. Particularly to be noted are those involved in developing and managing the productivity enhancement programs being started in state governments throughout the nation. It is our hope that this report adequately reflects the background and present circumstances of these efforts and contributes to their further refinement.



## CHAPTER I

# THE FEDERAL PRODUCTIVITY MOVEMENT

### BACKGROUND

The awareness of the need for efficiency in government operations dates back to the founding fathers (Balk, 1975c); however, concerted efforts to improve Federal Government operations began in this century. Four highpoints of the public sector efficiency movement will be discussed here:

- The Taft Commission on Efficiency and Economy—1912.
- The Brownlow Commission—1936.
- Two Hoover Commissions—1949 and 1955.
- A steady stream of management improvement efforts beginning in the 1960s.

#### *The Taft Commission*

This commission was convened on March 8, 1911, to study ways of reorganizing the legislative and executive branches to facilitate an efficient budget system. The commission presented six recommendations in 1912 dealing with the submission and format of the annual budget, the necessity for annual reports from the agencies, the necessity for uniform accounting procedures, and the necessity for an executive budget. President Taft presented the recommendations to Congress in 1913, but nothing resulted from the study until the Budget and Accounting Act of 1921, which created a national budget and the Bureau of the Budget to oversee the process.

#### *The Brownlow Commission*

Properly called the President's Committee on Administrative Management, the "Brownlow Commission" derives its popular name from its chairman, Louis Brownlow. This commission was appointed on March 22, 1936 to study executive branch operations. The commission was established as a result of President Roosevelt's realization that the proliferation of New Deal programs had created administrative problems never before encountered. The recommendations of the commission included reorganizing the 100 or more independent federal agencies into 12 executive departments; strengthening the managerial agencies of the government; improving the merit system;

and establishing a postaudit of all expenditures. Several of the recommendations were enacted in 1939.

#### *The Hoover Commissions*

Named after chairman Herbert Hoover, the two Commissions on the Organization of the Executive Branch of the Government called for greater power for executive departments rather than the fragmented bureaucracy extant at the time. This increased authority was generally to be achieved through consolidation and reorganization of the departments. One important recommendation of the second Hoover Commission was the advisability of program budgeting over traditional budget systems. The adoption of this technique by the Defense Department in 1961 signaled the beginning of a new era of program evaluation in government.

#### *Recent Developments*

Newland (1976) notes five related trends in contemporary federal management: (1) productivity measurement; (2) planning, programming, budgeting (PPB); (3) management by objectives (MBO); (4) performance evaluation; and (5) social indicators.

The history of the productivity measurement effort in the Federal Government will be considered later in this report. It should be noted once again, however, that measurement is a necessary component of a productivity improvement program. Measurement can identify changes in productivity as a result of the use of other management tools.

Planning, programming, budgeting (PPB) was installed in the Federal Government in 1965. It attempted to foster "rational" policy making through the use of cost-benefit analysis and similar tools. However, the system soon came into disfavor with many agencies. Several reasons for this disfavor, including excessive quantification, have been suggested. Newland (1975) notes that it became associated with "time-consuming, rigid, and uniform "processes" which were inconsistent with day-to-day management.

MBO was in operation in several agencies in 1970 when the movement to secure its adoption throughout govern-

ment began. The agencies using MBO prior to 1970 were the General Accounting Office (GAO), Internal Revenue Service (IRS), National Park Service, and the Federal Aviation Agency. A Presidential order in 1973 marked the extension of the technique to all federal agencies; Newland (1976) notes that the thrust of the MBO movement was to establish a method of continuous program review and clarification of program objectives.

Several authors (Page and Sherwood, 1976; Newland, 1976) point out the similarities in goals and proponents of MBO and PPB. (For a further discussion of the relationship of MBO and PPB see *Public Administration Review's* January - February, 1976 Symposium on MBO.) Where PPB was once viewed as "the answer to all our problems" (Havens, 1976), MBO and program budgeting are now viewed as "coexisting in the complex of federal management budgeting and politics" (Newland, 1976).

A fourth and related management development has been the growth of performance evaluation. McCaffery (1976) points out that at least 37 laws requiring program evaluation were passed from 1968-1972. The Legislative Reorganization Act of 1970 directed the GAO to include in its audits a review of program results. The GAO responded by publishing *Standards for the Audit of Governmental Organizations, Programs, Activities, and Functions* (1972). This publication outlines three types of reviews necessary in a governmental audit. First is the financial and compliance review. This is the traditional examination of the fiscal operations and statutory compliance of the agency. Second, an efficiency and economy review seeks to determine how well agency management has utilized inputs in producing its product. Third, the GAO calls for a review of program results to determine if desired outcomes are being achieved. As a result of these standards, emphasis on programs (rather than traditional objects of expenditures) has increased, objective-setting has become more widespread, and measurement has gained increasing attention (Newland, 1976).

A fifth management technique is the attempt to quantify society's needs and trends via social indicators. Census reports and other private reports fill the need for social indicators to a limited extent.\* However, with the exception of one report published by the Office of Management and Budget\* (OMB), no coordinated federal effort to isolate and report on social indicators has been undertaken.

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\*For example, Newland (1976) mentions the *Monthly Labor Review* and the *Annual Manpower Report of the President*.

\*Statistical Policy Division, Office of Management and Budget, *Social Indicators, 1973*. (Washington, D. C.: U. S. Government Printing Office, 1973.)

## THE DEVELOPMENT OF PRODUCTIVITY MEASUREMENT

Fabricant (1952) notes that the mechanization of production in the private sector prompted a number of statistical studies of man-hours compared to output in various industries. The governmental responsibility for the conduct of these early productivity studies was given to the Division of Productivity and Technological Developments of the Bureau of Labor Statistics. The Bureau's studies, which were confined to the ratio of inputs to outputs, were expanded in 1959 to include most major industries.

Efforts to measure the productivity of government were limited to a few isolated attempts in scattered agencies during the 1950s. These measures were simple output-per-employee figures. In 1960, John Kendrick, a consultant to the Bureau of the Budget, began calling for studies to determine "the feasibility of a program of productivity measurement in selected federal agencies" (Kendrick, 1971). His ideas were presented at a management analysis conference in 1962 and soon gained wide acceptance.

On October 11, 1962, President Kennedy issued a memorandum to all agency heads calling for improved personnel practices in order to minimize the cost of government services. One result of that memo and the increasing attention to Kendrick's ideas was the first attempt by the Federal Government to develop a productivity measurement program. The Bureau of the Budget undertook a five-agency effort aimed at developing productivity measures for each agency or its major components.

There were three objectives of the program:

1. To determine in what kind of federal organizations productivity measurement may be feasible.
2. To determine what is the most practical way of measuring Federal Government productivity.
3. To determine in which areas of application productivity data promised to be most useful.

The results of the study were (BOB, 1966):

1. Valid measures were developed in four of five agencies.
2. In those four instances, indices were developed that measure the relationship of man-hours used to final products.
3. In some cases, measures of output to total resources used were developed.

Four conclusions were reached:

1. It is feasible to develop operational systems of productivity measurement.
2. The principal requirement for measurement in an organization is that both its outputs and inputs can be measured.
3. It is possible to develop a productivity measurement

system at a relatively low cost.

4. Productivity data may provide both a useful summary indicator of the productivity of the organization and a framework for the evaluation and planning of productivity improvement.

The success of the project would seem to dictate its immediate expansion. However, PPB was at the same time being formally adopted in federal agencies. The expertise of the analysts who had been working on the productivity measurement program was required to assist the PPB movement. Thus, the measurement program was abandoned for several years.

The rebirth of the program occurred in 1970 as a result of pressure from the Joint Economic Committee, chaired by Senator William Proxmire. Proxmire requested the General Accounting Office (GAO) to investigate the feasibility of measuring productivity in the Federal Government. The result of Proxmire's request was a three-phase effort under the leadership of an intragovernmental team of analysts representing GAO, OMB, and the Civil Service Commission. The three phases were (OMB, *et al.*, 1973):

Phase I: Determine the extent and use of measurement systems in the Federal Government.

Phase II: Determine the feasibility of further developing productivity indices.

Phase III: Refine the indices and implement improvements directed towards productivity enhancement.

The conclusions from Phase I were that existing systems could generate enough data to construct a composite productivity index for the Federal Government and that a Joint Productivity Task Force should be established to begin the data collection process (Ardolini and Hohenstein, 1974). The Phase I investigators found that over 50 percent of the federal sector was covered by measurement systems but that little use of the measures was made by top management.

In Phase II of the project, the interagency task force, assisted by the Bureau of Labor Statistics, began the effort to "develop overall productivity indices, to study ways to improve use of existing measurement systems, to study ways to improve use of unit cost measures and capital project planning, and to document and encourage good practices in applying measurement techniques" (Joint Financial Management Improvement Project [JFMIP], 1974). The data for Phase II were obtained from 17 agencies and covered Fiscal Years 1967 to 1971. The data collected from the agencies represented 114 organizational elements, 604 outputs, 1,560,000 total man-years and 54 percent of the civilian employment of the Federal Government (JFMIP, 1974). Besides the emphasis on traditional productivity measures (i.e., unit cost and efficiency data), the Phase II investigators placed great stress on effectiveness questions. Analysis of the Phase II data showed an average

overall productivity growth of 1.9 percent a year (OMB, *et al.*, 1973).

Four major recommendations resulted from the Phase II effort. First, OMB should distribute guidelines for evaluating measurement systems to the agencies. Second, the Civil Service Commission should provide special training in productivity analysis. Third, the development of effectiveness measures should be encouraged through assistance to agencies by OMB. Finally, a "productivity bank" should be considered for financing fast payback projects whose effect would be increased productivity.

Phase III began on August 7, 1972, when OMB sent out a data call to all agencies having 200 or more employees. Specifically, agencies were to submit quantitative output measures for Fiscal Years 1967-1972, the related man-years of employment for each measure, the total wage cost associated with each measure, and comments on how the data were affected by work complexity, work quality, or other factors. Indices were then constructed and returned to agencies for verification.

The expansion in coverage during Phase III is shown in Table I-1:

Table I-1  
Comparison of Phase II and Phase III Coverage

| Item                              | Coverage Achieved         |                            |
|-----------------------------------|---------------------------|----------------------------|
|                                   | Phase II<br>Base: 1967-71 | Phase III<br>Base: 1967-73 |
| Number of agencies                | 17                        | 45                         |
| Number of organizational elements | 114                       | 187                        |
| Number of outputs                 | 604                       | 776                        |
| Man-years                         | 1,560,000                 | 1,727,000                  |
| Percentage of total man-years     | 54                        | 60                         |

(Source: OMB *et al.*, 1973)

The overall annual increase in federal productivity from 1967-1973 was found to be 1.68 percent. Cumulative gross savings attributable to productivity improvements were estimated to be \$1.49 billion.

Some of the conclusions of Phase III were (JFMIP, 1974):

1. It is practical to measure productivity for large segments of the federal sector and there should be a continuing program for measuring and enhancing productivity with an annual report to the President and the Congress.
2. Productivity indices should be used primarily as trend indicators.
3. The most important use of productivity indices is in analyzing the causes of productivity change.



4. It can be expected that there will be fluctuations, both up and down, among federal activities from year to year.

5. The annual report should deal with trends in cross-agency functions rather than identifying individual agencies and activities.

On the basis of the Phase III recommendations, OMB took action on July 9, 1973, to continue the measurement program and expand federal productivity improvement efforts. Responsibilities were assigned to various agencies (JFMIP, 1974; Ink, 1974). OMB was placed in charge of general policy guidance for the project. Collection of data and construction of the productivity indices was the task of the Bureau of Labor Statistics. The Civil Service Commission was to oversee the personnel management aspects of productivity. The General Services Administration had responsibility for mechanization, measurement, facilities, and equipment. Finally, the Joint Financial Management Improvement Program\* was to coordinate the project and provide a report to Congress on the success of the effort.

The federal productivity measurement effort has grown from a five-agency program in 1962 to a program covering more than 61 percent of federal employees today. The complexity of the measures now reflects increased concern with effectiveness and quality issues. Finally, as the next section will attempt to illustrate, the federal effort has moved beyond mere measurement to the beginning of a coordinated management improvement effort.

#### CURRENT FEDERAL PRODUCTIVITY-RELATED PROGRAMS

Dunlop (1974) points out that in 1973 at least 19 agencies of the Federal Government operated some 173 programs (spending approximately \$3 billion) which were felt to be directly improving productivity. The programs discussed here are those which have received the most attention. They will be discussed in two groups: (1) Those agency programs which are directly related to the formal federal productivity effort. (2) Various other federal programs which offer assistance to federal agencies, states, or localities.

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\*The JFMIP is a joint program of the GAO, GSA, Civil Service Commission, Department of the Treasury, and OMB. Its purpose is to promote the development and use of improved management techniques in planning, executing, and analysis of factors causing productivity change, preparation of the annual report, and expansion and refinement of measurement.

#### Formal Agency Programs

The agencies involved in the federal productivity effort have sought to meet their delegated responsibilities through a number of activities.

1. *Office of Management and Budget (OMB)*. As noted, the role of OMB is that of general policy guidance and coordination. Workshops to inform agencies of available technical assistance are also a responsibility of OMB.

2. *Bureau of Labor Statistics (BLS)*. BLS is responsible for the collection of the data used in the construction of the productivity indices. Other than that, its role in the interagency effort is limited.

3. *The Civil Service Commission (CSC)*. CSC performs several activities designed to enhance productivity in the public sector. Among them are:

i. Clearinghouse on Productivity and Organizational Effectiveness. The purpose of the clearinghouse is the dissemination of information relating to the human aspects of productivity to all levels of the public sector. The clearinghouse is supplemented by the "Termtrex" data bank which places the most recent information on training and productivity measurement in the CSC library.

ii. Research and demonstration efforts. Eight industrial and social psychologists are examining such techniques as job redesign, performance appraisal, and flexible working hours. The information will be channeled through the clearinghouse as conclusions are reached.

iii. Bureau of Training. The Bureau is updating its curriculum to stress productivity issues. The Management Services Training Center has two courses which deal specifically with the concepts of productivity and productivity measurement, and several other courses designed to teach skills which will have an impact on the productivity of the organization. The courses are generally open to both federal and state administrators.

The CSC is also reviewing contracts between the Federal Government and federal employee unions to determine the extent of productivity related provisions. Survey findings have shown such provisions were present in 35 of the 2,548 contracts examined. The provisions generally deal with work standards and measurement, cost reduction programs, and labor-management productivity commissions.

4. *General Services Administration (GSA)*. GSA carries out a research function and serves as a clearinghouse for some technical aspects of productivity. Topics of interest include the collection of productivity measurement data, acquisition and management of capital investments, and the improvement of productivity work measures. The conclusions of the research will be communicated through the CSC clearinghouse and serve as the basis for technical assistance.

5. *Joint Financial Management Improvement Program*

(JFMIP). Besides ongoing analysis of the federal productivity indices, JFMIP is also active in encouraging the refinement of productivity measures in state and local government. In conjunction with the National Center on Productivity and the International City Management Association, JFMIP has provided assistance to a number of cities and two states. The assistance has been aimed at helping these jurisdictions develop productivity improvement programs.

6. *The National Center for Productivity and the Quality of Work Life*. The Center has supported the JFMIP with \$50,000 in grants. Beyond that, the Center's support to the JFMIP project has been limited to occasional technical assistance. The Center was created by executive order on July 10, 1970, as the National Commission on Productivity to "point the way toward greater productivity growth" (Frank, 1972a). It was given statutory authority in 1971. The 13-member, blue-ribbon panel was provided a staff and directed to develop recommendations for productivity improvements for both public and private sectors. The Commission soon encountered substantial criticism due to its inactivity. From 1970 to 1972, the Commission members met only three times (*Business Week*, 1974), although the staff undertook a number of studies. However, the Commission failed to translate the staff recommendations from those studies into official recommendations.

The result of the dissatisfaction with the Commission was Congressional refusal to renew its functions for a short time in 1974. During this time it continued to function as the Office of Productivity under the Cost of Living Council. When the Commission was reinstated as a Center on June 8, 1974, its responsibilities were broadened to include improving the morale of the American worker. The increased responsibility was reflected by the addition of "Work Quality" to its title. Other changes included a budget increase to \$2 million annually, expansion of the board to 25 members, and the appointment of Vice-President Rockefeller as its chairman.

Recent legislation has expanded the duties of the Center even further. Its new name, the National Center for Productivity and the Quality of Work Life, signifies a change to a more nearly permanent organization. The Center will attempt to coordinate public and private productivity efforts and serve a strong public information function.

Recently the Center has taken a more active role in providing information and technical assistance to state and local governments. In cooperation with the International City Management Association (ICMA), the Center publishes a *Jurisdictional Guide to Productivity Improvement*. The guide seeks to provide information concerning innovative municipal projects designed to increase productivity. A "Technical Report Clearinghouse" is also operated by the Center and ICMA to make available low-cost technical

reports concerning the projects listed in the guide.

The Center has also sponsored a number of workshops for state and local governments to provide technical information about productivity measurement and incentives and to provide a forum for the exchange of ideas. Finally, the Center has undertaken or supported research in a number of specific organizational areas. The results of these projects are then published by the Center and made available to interested persons.

In summary, the role of the Center in research and public information has become much more pronounced since its reorganization. The future plans of the Center include further expansion of these efforts.

### *Other Federal Programs*

Besides the agencies which have some direct responsibility through the JFMIP and related programs, there are a number of other federal activities that deserve attention. Three such programs are conducted by (a) the National Science Foundation; (b) the Department of Health, Education, and Welfare; and (c) the Department of Housing and Urban Development.

1. *National Science Foundation (NSF)*. The NSF's Productivity Division has undertaken evaluations of the literature on productivity, job satisfaction, and industrial organization, as well as research on specific areas of government operations. The goal of the effort is to synthesize and distribute the Federal Government's store of productivity-related information (Averch, 1974).

Grant monies are also available to organizations to support public sector productivity research. The Research Applied to National Needs (RANN) Program provides funds for the study of Social Systems and Human Resources. Elements of that program include productivity of service and delivery organizations, improving the use of resources, and economic productivity. A pilot program in Washington State (to develop human services delivery productivity measurements) was funded by RANN.

2. *Department of Health, Education, and Welfare (HEW)*. The JFMIP Report (1974) notes that HEW has three programs in operation to help states develop their administrative capacities. First, HEW is working on programs designed to help chief executives plan and operate human service programs. Second, HEW is trying to develop local information systems and effectiveness measures in order to build states' analytic capacity. Finally, through the Urban Observatory program, HEW is trying to relate the research and analytic capabilities of universities to local governments.

3. *Department of Housing and Urban Development (HUD)*. Two HUD grant programs offer possible assistance to state or local governments. First, the "701" Compre-

hensive Planning Assistance Program can be used to enhance public management capabilities. For example, a 701 grant was used by the City of Palo Alto, California, to finance a productivity improvement program (Haywood, 1976). Second, HUD has \$1 million available in the Community Development Block Grants Innovative Projects Program, which includes government productivity improvement as an eligible category. Monies are available for state or local projects that will decrease costs or increase quantity or quality of services.

***Conclusion***

The Federal Government operates many programs aimed at improving productivity at all levels of government. Clearly, the effort to improve the operation of government has grown from occasional commissions and sporadic programs to a concerted (if not totally coordinated) effort. The goals for the future of the effort include the expansion of the measurement base within the federal sector and increased support for the efforts of state and local governments to enhance their productivity.



## CHAPTER II

# THE STATE PRODUCTIVITY MOVEMENT: WISCONSIN AS A CASE IN POINT

### BACKGROUND

Productivity improvement in state government has paralleled to a considerable extent the experience of the Federal Government described in the previous chapter. State efforts at administrative reorganization began before the federal Taft Commission. The People's Power League of Oregon was the first state panel to study reorganization, publishing reports in 1909 and 1911 (Grant and Nixon, 1975). As the influence of the Taft Commission spread throughout the states, however, the use of the commission to study efficiency and economy became a common organizational tool. By 1935, 30 states had investigated their state administration, and by 1938, 26 states had remodeled administrative structures in some way (Grant and Nixon, 1975). The two Hoover Commissions prompted similar flurries of administrative activity. By 1952 a total of 33 states had established "Little Hoover" commissions. This trend has accelerated in recent years. Grant and Nixon point out that of the 37 substantial reorganizations in the history of state administration, one-third occurred between 1965 and 1972.

The evolution of specific management techniques at the state level also parallels the federal sector trend. The first state productivity measurement program was undertaken in New York State. Kendrick (1971) suggests that the effort was a result of the Bureau of the Budget's success in the 1962 tests. Grant and Nixon note that as the "PPB effort gained national prominence through its use in the Defense Department . . . the idea spread quickly to state and local governments." Between 1970 and 1974 more than a dozen states established performance evaluation divisions (Pierce, 1975). The use of MBO and social indicators has also increased in state government management.

### PRODUCTIVITY MEASUREMENT IN STATE GOVERNMENT

One of the first major attempts to identify the status of productivity measurement in state governments was a 1975 joint project of the Urban Institute and the National Association of State Budget Officers (NASBO). Funded by the National Commission on Productivity with additional

assistance from HEW, the study surveyed budget officers in all 50 states and examined the states' budget documents to determine the frequency of use, sophistication, and inhibitors to efficiency and effectiveness measures. Thirty-two states responded to the survey.

The findings of the study were not encouraging (Urban Institute, 1975). Specifically, the report found:

1. The amount of productivity information, whether effectiveness or efficiency, appeared to be sparse in generally available state documents, especially state budget documents.
2. The sophistication and adequacy of both effectiveness and efficiency measures were found to be generally lacking.
3. State budget officers did not feel they had sufficient information available to them on either efficiency or effectiveness.
4. Some states felt information-sharing programs among the states would be useful.
5. A major problem seemed to be the failure to link program data to program outcomes.

The study found that nowhere were there "productivity indices" similar to those at the federal level. Specific types of information lacking at the state level were noted:

1. Degree of client improvement after clients have left state programs.
2. Direct feedback from present clients and former clients, as to their satisfaction with state programs.
3. Extent to which the state is meeting the total relevant need in a program area.
4. Accessibility to citizens of services.
5. Effects on major clientele groups of various subdivisions of the state.
6. Efficiency measures that relate successful outcomes to inputs.
7. Measures of unintended, detrimental effects of government programs.

Data representing these topics were found to be seldom if ever employed. Table II-1 shows the breakdown of budget officer satisfaction with current productivity measures. The table indicates significant dissatisfaction in most areas, especially with effectiveness measures.

TABLE II-1

Summary of Responses from State Budget Offices (32 states) to the question: "Please give us your ratings, from the point of view of the state budget office, of the adequacy of current efficiency and effectiveness measurement in your state."

| Efficiency                       | <i>Excellent</i> | <i>Good</i>  | <i>Fair</i>  | <i>Poor</i>  | <i>No Opinion</i> |
|----------------------------------|------------------|--------------|--------------|--------------|-------------------|
| a. Transportation                | 1                | 14           | 9            | 3            | 5                 |
| b. Corrections                   | 1                | 4            | 13           | 9            | 5                 |
| c. Health                        | 0                | 8            | 16           | 1            | 7                 |
| d. Education (Elementary & Sec.) | 0                | 5            | 8            | 13           | 6                 |
| e. Education (Higher)            | 0                | 9            | 7            | 11           | 5                 |
| f. Parks & Recreation            | 1                | 10           | 10           | 6            | 5                 |
| g. Economic Development          | 1                | 8            | 7            | 10           | 6                 |
| h. Public Assistance             | 1                | 11           | 7            | 9            | 4                 |
| i. Other Social Services         | 0                | 8            | 10           | 8            | 6                 |
| j. Regulatory and Licensing      | 1                | 6            | 7            | 11           | 7                 |
| <b>Number of Responses</b>       | <b>6</b>         | <b>83</b>    | <b>94</b>    | <b>81</b>    | <b>56</b>         |
| <b>Percentage of Total</b>       | <b>1.9%</b>      | <b>25.9%</b> | <b>29.4%</b> | <b>25.3%</b> | <b>17.5%</b>      |
| Effectiveness                    | <i>Excellent</i> | <i>Good</i>  | <i>Fair</i>  | <i>Poor</i>  | <i>No Opinion</i> |
| a. Transportation                | 0                | 7            | 9            | 10           | 6                 |
| b. Corrections                   | 0                | 2            | 14           | 11           | 5                 |
| c. Health                        | 0                | 4            | 12           | 10           | 6                 |
| d. Education (Elementary & Sec.) | 0                | 3            | 12           | 10           | 7                 |
| e. Education (Higher)            | 0                | 6            | 8            | 12           | 6                 |
| f. Parks & Recreation            | 1                | 4            | 9            | 11           | 7                 |
| g. Economic Development          | 1                | 5            | 9            | 11           | 6                 |
| h. Public Assistance             | 0                | 4            | 9            | 15           | 4                 |
| i. Other Social Services         | 0                | 2            | 10           | 14           | 6                 |
| j. Regulatory and Licensing      | 0                | 4            | 5            | 14           | 9                 |
| <b>Number of Responses</b>       | <b>2</b>         | <b>41</b>    | <b>97</b>    | <b>118</b>   | <b>62</b>         |
| <b>Percentage of Responses</b>   | <b>0.6%</b>      | <b>12.8%</b> | <b>30.3%</b> | <b>36.9%</b> | <b>19.4%</b>      |

Note: For the survey of state budget offices, higher education was added to the list of state services, and social services were divided into two components.

Source: Urban Institute, *The Status of Productivity Measurement in State Government*. Washington, D.C.: Urban Institute, 1975.

Many organizations have begun efforts to expand the use of productivity measures in state government. The Urban Institute, for example, has been conducting research in two states and a number of cities in the use of clientele satisfaction studies to determine program effectiveness. (This program is discussed in more detail in the Wisconsin case study to follow.) Several universities conduct research in the technical aspects of measurement and worker satisfaction. Cornell, UCLA, the University of California at Berkeley, and Columbia all have such programs supported by the Ford Foundation (Averch, 1974). Two other major efforts are the State Government Productivity Research Project at the State University of New York (Albany) and the Quality of Work Center and the Institute for Social Research at the University of Michigan. Finally, such groups as the International City Managers Association, the Council of State Governments, and the National Association of Counties have taken an interest in the area of productivity. Many have received funding from or are working in conjunction with another group.

#### PRODUCTIVITY IMPROVEMENT PROGRAMS IN STATE GOVERNMENT

The important distinction between productivity measurement and productivity improvement programs was introduced in Chapter I of this report. Productivity improvement programs in state governments are even less developed than productivity measurement.

In 1974, the National Association of State Budget Officers (NASBO) surveyed the states to discover which of them had productivity programs. Seven, in addition to the District of Columbia, were listed as having such programs: Florida, Illinois, New York, Ohio, Vermont, Washington, and Wisconsin. In subsequent research, Minnesota was also found to be active in the area.\* To discover the nature and scope of those programs, we contacted each of these states in December, 1975, and asked a series of questions designed to further specify their activities. Short descriptions of six of the state programs were developed and conclusions drawn about the general nature of the state productivity efforts. Those conclusions are presented here.

*General Conclusions.* The conclusions drawn from this brief survey of state productivity efforts cover the following topics: (a) stimulus; (b) organizational location; (c) status of measurement; (d) use of the program; (e) savings accrued; (f) problems identified; and (g) advantages of the programs.

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\*It was later discovered that North Carolina has also recently commenced a productivity program. However, time constraints prevented us from contacting that state during the study.

*Stimulus.* Three main forces seem to lie behind these states' productivity programs.

The late 1960s brought a movement toward program budgeting in these states. A program budget shifts the focus from budget inputs to program outputs. In many cases, output measures of agency activity were developed as part of the program budget process, thus laying the groundwork for productivity programs.

The early 1970s brought financial and revenue problems to many states. Development of productivity programs was seen as one way of making government more efficient and of doing "more with less."

Development of productivity programs in these states seems to have involved the support of an influential elected official. This is most frequently the governor, but can be a legislative leader or other persuasive official.

*Location of the program.* Productivity programs were generally housed in the office or unit responsible for formulation and execution of the budget. Only two of the states surveyed, Wisconsin and Minnesota, had productivity programs placed outside budget offices. However, both of these states used productivity programs in budgeting. Most of the states surveyed have a strong executive budget process, with productivity programs housed in the executive branch.

*Measurement.* Because most of these programs are in their infancy, measurement technology is not far advanced. Most state programs appear to be equipped to at least crudely treat the efficiency part of productivity, but have not yet been able to address the effectiveness issue. Wisconsin, however, is currently attempting to develop quality-of-work measures and programs.

The inputs to agency activity are defined largely as financial and personnel resources. Output measures, however, are generally developed by each agency, subject to the approval of the state budget office. Thus each agency uses different output measures which depend on the functions of the agency, and inter-agency productivity comparisons are difficult or impossible.

*Utilization.* The states surveyed used productivity measures for a variety of purposes, but in all cases a main function of the productivity program was to provide information for budget purposes. Another use is the setting of performance targets for agencies, programs, or individuals. A certain level of productivity, for example, might be expected of an agency in the following year.

Further, incentive programs have been established in some states which credit productivity savings to employee salaries or agency budgets. These programs have met with varied success.

Finally, productivity data allow for comparisons of actual agency or program performance with goals or targets, a key to effective evaluation. A significant gap between an agency's goals and its performance may be used as a kind of early warning signal.



*Financial savings.* Most of the states surveyed stated that their programs were too recent or undeveloped to identify financial savings resulting from their productivity efforts. Wisconsin, however, reported that 36 of 37 agencies had shown productivity increases and that 27 agencies together saved some \$33 million in general purpose funds as a direct result of its state productivity program (Clark, 1975).

*Problems identified.* All surveyed states have experienced difficulties in establishing valid and reliable output measures. Some respondents indicated that there was a tendency to use indicators which put the agency in a good light, but which did not really reflect increased productivity. Most indicators seemed to be developed by trial and error. Adequate measures of quality of output (and thus of effectiveness) have not yet been developed, although, as reported above, Wisconsin is presently working on such indicators.

Three additional problems were suggested by the survey, but were not specifically mentioned by the respondents. First, state agencies may have an incentive to be not entirely honest in their reporting. Though budget officers review the choice and reporting of indicators, program managers remain the most knowledgeable sources of program information. If budget levels are dependent on demonstrated productivity, the incentive for deception is high. Second, if the search for qualitative measures fails, and quantitative measures are used in their place, it is possible that what appears as increased productivity may hide a deterioration in quality of service. Processing more clients, with less attention to the special needs of each, for example, may result in greater efficiency—but may not be in the public interest nor consistent with legislative intent. Third, it appears that some productivity programs have been developed without adequate investigation and planning, and that the difficulty of deriving suitable measures and productivity indicators has been underestimated.

*Advantages.* Though few concrete savings have yet been reported, the claims of Wisconsin and New York at least suggest that productivity efforts may produce savings. Further, initiating productivity programs may sensitize agency heads and other executive branch officials to problems of waste and resource allocation.

### WISCONSIN'S PRODUCTIVITY PROGRAM

Four factors were present in the early 1970s which significantly contributed to an appropriate climate for the Wisconsin state government productivity effort. First, Wisconsin had a tradition of competent, efficient, and innovative state government, a tradition of which its citizens were justifiably proud. The heritage of the Progressive movement (associated with the La Follette family) and other aspects of the state's political culture helped to create an emphasis on honest and accountable government

that is unique in its pervasiveness.

Second, the governor's term of office had recently been increased from two to four years. With more time to devote to management issues, with a chance to see more goals accomplished in his term, and with additional freedom from political deadlines, the governor now had the necessary leeway to institute and oversee longer range programs.

Third, the election of Patrick Lucey as governor in 1970 brought to the office a man with extensive business as well as government experience. Though he assumed power in an era of major state government expansion, Governor Lucey was ahead of his time in emphasizing the need for austerity and productivity. Moreover, since he was known to be a liberal Democrat, his advocacy of "productivity" would spark less resistance from those who had been hostile to the "conservative cost-cutting" attempts of the Republican legislature in the late 1960s.

Fourth, a declining rate of population and economic growth was fostering a changing mood among taxpayers; their expectations of government appeared to be shifting from more services to more efficiency. This demand for belt tightening, particularly noticeable in 1973 and beyond, made "austerity" a popular catchword instead of a cold-hearted threat.

The most important element was the leadership provided by the governor. In Governor Lucey's first State of the State Address, he spoke of the need for austerity in the face of growing inflation and unemployment. His administration pursued a course of "fiscal restraint"—a freeze on non-essential state hiring; wage settlements well below private industry levels; a limited number of new programs; limits on spending of state funds by local government; and a merger of state higher educational institutions into one system. It is interesting to note that these actions in Lucey's first two years as governor occurred when Wisconsin's available revenues were still relatively large. Approximately \$1 billion in surplus funds were used in these years primarily for local assistance (equalization of school financing; relief to property taxpayers; other state aids and shared tax payments). So the governor's rhetoric and actions in the name of austerity anticipated the worsening economic conditions, the coming fiscal crisis in many states and localities, and growing taxpayer concern about spending.

### *Productivity Program: History and Concept*

What has come to be considered the Wisconsin "productivity program" was introduced by Lucey in an April, 1972, speech to the Milwaukee Chamber of Commerce. He outlined the need for state government to adopt productivity principles similar to those in the private sector. To carry out these principles, he stated that "as a matter of

public policy, all state agencies will be required to improve their management efficiency in the 1973-75 budget years, maintaining essential public services, but cutting service delivery costs by at least 2.5 percent annually."

Governor Lucey emphasized the need to maintain the level and quality of important public services. The governor differentiated the productivity mandate from conventional budget cuts which eliminate low-priority programs, reduce salaries, cut positions from the payroll, or otherwise contribute to what he called "something with deservedly negative connotations—the speed-up." Instead, Lucey called upon state employees to "work smarter, not harder."

The theoretical rationale for the 2.5 percent reduction in the base budget per annum during the 1973-1975 biennium has been explained by Robert Lampman (1972):

This unique budget rule grows out of the insight that, since productivity increases at a yearly rate of 2.5% in the private economy, there is some ground for believing that public service agencies realize, or can be expected to realize, similar productivity gains. If they are, in fact, producing 2.5% *more* output each year with a given quantity of inputs, then it may follow that public agencies can produce a *constant* output year after year with 2.5% fewer inputs each year. In that case, taxpayers would capture the productivity gain in the form of reduced taxes. On the other hand, if public agencies are failing to achieve a productivity gain as high as 2.5% per year, then a base budget cut, according to spokesmen for the rule, will induce efforts by public managers to improve the rate of productivity gain of their agencies.

The operation of the mandated productivity program was apparently based on two principles. First, by requiring agencies to reduce their budget base without reducing services, the program forced managers to be more efficient. Second, the governor and his staff did not impose their own ideas about where improvements should be made on the agencies. The agencies were directed to make these managerial decisions themselves.

By forcing agencies to determine their own approaches toward meeting the productivity targets, the governor avoided the political mistake made by the Joint Finance Committee of the Wisconsin Legislature in the late 1960s. At that time, the Committee engaged in widespread budget-slashing of specific agency programs. This effort, which was considered arbitrary and punitive, was deeply resented by many administrators and elected officials. In addition to being politically shrewder, Lucey's mandate also was designed to encourage creative responses from the responsible agency managers who best understood the operations of their units.

The productivity effort was to be conducted and coordinated through the Department of Administration. (Lucey's speech and directive apparently came as a surprise

to department officials.) This department, which has been called the Wisconsin equivalent of the federal Office of Management and Budget, has statutory responsibilities to coordinate management services, to provide assistance to state agencies in a number of areas, and to conduct central budgeting, planning, accounting, engineering, purchasing, personnel, and records management functions. The department's influence has grown in recent years because of its roles as the chief policy advisory arm of the governor and as the developer of the state program budget.

Governor Lucey's productivity program was widely praised by citizens and the media as a decisive, tough, and innovative move. The key to this favorable reaction was that the program was promoted as an effort to increase government efficiency, not as a ruthless budget cut. By this time "austerity" and "productivity" were popular buzz words, and the governor was marching at the head of the parade with those words emblazoned on his banner.

The response from some state agencies, however, was not as laudatory. After the growth psychology of the 1960s, austerity was a shock to some state employees and to the advocates of some state programs. This organizational hostility became apparent when proposals were later presented to close institutions or reduce payrolls. But, the impact of employee resistance was relatively limited, perhaps because of the way in which the program was "sold" and because strong public employee unions were not yet a force to be contended with.

### ***Program Operation***

As mentioned previously, the Wisconsin productivity approach was built into the biennial budget-making process. The Governor, through the Department of Administration (DOA), directed all departments of the executive branch to reduce their base budgets by 2.5 percent each year during the 1973-1975 budget cycle. On a cumulative basis, this was a 5 percent reduction over the two-year period. The savings targets were to be realized during this period, so the agencies had some lead time to implement the necessary changes.

Budgets of all general fund, program revenue, and segregated fund state operations were included in this process. Debt service and costs identified as aid to individuals, organizations, and local governments were excluded from the mandatory reductions, although agencies were still expected to propose some means of controlling costs in the local assistance and aid to individuals categories. These categories, to be discussed later, are important, because they comprise approximately two-thirds of the state budget.

All agencies were asked to send proposals to DOA on how they could accomplish the savings. They were reminded that essential service levels were not to be cut. To



this end, the budget preparation instructions specifically differentiated "real" productivity from mere cost reduction, and emphasized that quality of services was also not to be reduced. Agencies were encouraged to organize productivity teams of supervisors and workers in all of their major work units. Budget and planning experts from DOA worked with the agencies to some extent to review policies and practices that affect productivity, and to validate responses developed to the instructions.

The process by which this occurred varied from agency to agency, but two brief examples of agency responses may be illuminating. The Department of Health and Social Services, the largest state department in terms of expenditures, did not create a department-wide productivity office nor a centralized program to meet the budget targets. Also, the department's budget officers were not the primary locus of responsibility for this effort. Instead, the mandate was passed further down to divisions, bureaus, and institutions within the department. The impetus for developing proposals, and the extent to which the proposals were innovative and systematic, thus fell basically upon the various division leaders.

The Department of Agriculture integrated the governor's directive with its internal management-by-objectives program. A decision was made to involve not only first-line supervisors, but also non-supervisory employees. A request for suggestions regarding productivity improvements brought a heavy response from employees.

Agency productivity reports were submitted to the Department of Administration, which then earmarked the accepted productivity savings in the state's budget document. The budget proposals were submitted to the Joint Finance Committee of the Wisconsin Legislature, and in turn to both houses. Despite criticisms that the cuts would reduce the quality of existing programs and cause new state needs to be ignored, the popular support for the austerity campaign carried the day. The 1973-1975 budget, featuring the productivity program, was adopted.

The Wisconsin budget formulation system is a continuing process. So, preparation soon began for the 1975-1977 biennial budget. It was decided to continue the productivity effort, although with some modifications. Experience with the earlier program led to several changes, reflected in the budget instructions for the next biennium.

First, the amount of the mandated cut was decreased. Many agencies felt that the 1973-1975 program was a one-time effort and were reluctant to continue the process. There was a widespread feeling among state employees that "the orange had been squeezed about as much as it can stand", and that further sizable cuts would cancel or dilute the quality of many programs or result in large-scale employee layoffs.

Therefore, agencies were required to reduce base-year

budgets by a minimum of 1 percent annually during the 1975-1977 budget period, as opposed to the earlier 2.5 percent. Again, there was an emphasis on the attainment of savings through real productivity improvements. Although this was a smaller figure than that of the previous budget period, the additional cuts were coming from an already reduced base.

A second change occurred in the list of budget categories where cuts were mandatory. Under the new instructions, only state operations funded by general purpose revenues were required to submit productivity improvements in their budgets. Segregated and program revenue funded agencies were asked to utilize the productivity improvement policy "to the extent possible". As before, aid to local governments and individuals was excluded.

Third, agencies were encouraged to propose reinvestments of up to one-half of the total productivity savings for management improvements and innovative program changes, as long as the minimum 1 percent net reduction was maintained. The reinvestment feature was designed to encourage more creative responses as part of a long-range management improvement effort. Because of its unique nature, the program deserves detailed attention.

The objectives of the Productivity Reinvestment Program were enumerated in a July 23, 1974 memorandum to all agency heads from then DOA Secretary Joe Nussbaum:

- Innovative changes in program operations, such as a demonstration project, which offers the potential for future productivity improvement or more effective delivery of services;
- Investment in management improvements, such as training and development of managers, management and activity information systems and projects, and productivity related equipment purchases;
- Investment to accomplish other 1975-1977 executive policies, such as conversion of facilities to improve their utilization and means of increasing federal support for state programs; and
- Improved means of measuring and evaluating the results of public programs.

The productivity savings were to be reinvested on this basis:

|                                     |                                |
|-------------------------------------|--------------------------------|
| 0-1% savings over the previous year | 0% for reinvestment            |
| 1-2% savings over the previous year | 100% of the savings reinvested |
| 2% + savings over the previous year | 50% of the savings reinvested  |

The program received substantial publicity, but met with limited success. Only four agencies identified sufficient savings to qualify for productivity reinvestment. These agencies' funds were placed in reserve for their use



according to the guidelines. During the 1975-1977 budget hearings, the Legislature was under pressure to cut expenditures and saw the proposed reinvestments as unnecessary new programs. The savings which had been earmarked for the agencies were thus removed, causing those agencies which had participated to become disillusioned with the reinvestment program. Had additional legislative input been sought at the beginning of the program, the savings may not have been cut.

Fourth, agencies were asked to identify the 10 percent of their programs that had the lowest priority in terms of departmental objectives. Although the precise intent behind this request is not known, Governor Lucey's 1975 remarks on the subject of public priorities in an age of austerity may shed some light:

Government at all levels will have to develop the capacity to admit failure . . . to acknowledge that there are some jobs that government is currently doing that are so marginal or are being done so inefficiently that we should phase them out. We must also recognize that some services we have traditionally provided may now be outmoded or less important than others which also make a claim on limited revenue sources . . . We should be seeking a lean government . . . that can shift its resources to the most compelling needs of its citizens without adding to a tax burden that is already too high.

So the mandated productivity goals were again sent to the agencies, answered, and sent on to the Legislature. By this time, the full force of the recession, the taxpayer revolt, and the spreading governmental fiscal crisis had hit Wisconsin, making Governor Lucey's call for a "lean years" budget particularly appropriate. After a long and stormy battle in the Joint Finance Committee and in the Legislature, the budget, with its new productivity program partially intact, was adopted.

## EXAMPLES OF PRODUCTIVITY SAVINGS AND PROGRAMS

### *Agency Responses*

Some agencies did make productivity savings. For example, in the Department of Health and Social Services, savings were made by the institution of technological improvements in health services and through the relocation of regional vocational rehabilitation headquarters. Savings were achieved in the Family Services Division by a functional job analysis which reviewed civil service job classifications against job descriptions prepared by employees in those classifications and by using more paraprofessionals in client services. The department also switched its computer operations from cards to tapes, with a substantial savings in salaries. The caseload of probation and parole officers was increased from 40 to 44, with

resulting savings in salaries. Substantial savings were found by reducing mileage traveled by department employees and by reducing energy consumption in institutions.

The Department of Transportation insisted that county governments performing contract maintenance work on state roads use only one man per truck. The department also made savings by switching computer operations from keypunch to tape, and by measuring the programmers' output and accuracy at various tasks and redeploying the work force in line with the results. In addition, the department measured the performance of its troopers (as to the type and number of violations reported), driver license examiners, and engineers, and made the necessary adjustments.

The Office of the Commissioner of Banking established a new field office in Milwaukee, resulting in an increase in service at an overall savings in cost. Bank examiners operating out of Madison previously spent considerable time traveling to Milwaukee. The establishment of the Milwaukee office reduced travel costs while allowing more time for bank examination.

The Office of the Commission of Credit Unions now uses a statistical sampling procedure to check accounts, rather than checking each one individually. This provides the same general results, but offers a broader statewide program requiring fewer personnel.

The Department of Natural Resources expanded its central automotive pool to include trucks and other equipment. It reorganized its fish and game staff, consolidating the divisions into one bureau. It reduced the number of forestry bureaus from two to one. The department also improved management of its workload and used limited term rather than seasonal employees in some jobs.

The University of Wisconsin system instituted an annual curriculum and degree program review which eliminated a number of low-priority courses and programs not attracting sufficient student participation. The university system is engaging in regional planning emphasizing the development of academic specialty areas by individual campuses. The long-range intent is to eliminate duplication of specialized curricula at several regional campuses.

The university system is also developing a highly efficient inter-library loan program. By the use of computers, individual campuses will have access to the library resources of the entire system, thereby reducing substantially the book-buying requirements. Other university consortia save resources by sharing faculty members and videotape facilities.

Savings were attained in the university system by greater use of computers, closed-circuit television, and other technology for instructional purposes. The Higher Education Aids Board accelerated loan collections and returned the balance in its revolving account to the state as a

productivity contribution. The system's energy conservation policy resulted in annual savings of \$1.5 million.

The most controversial aspect of the university's response to the productivity mandate involved increased faculty teaching loads, part-time teaching assignments for some administrators, and, particularly significant, layoffs of faculty and staff members. Over a four-year period, 1,132 positions were vacated. While many of the layoffs could be contributed to a decline in enrollment, some must be attributed to the productivity-inspired budget cuts. (In practice, of course, it is difficult to separate the causes.) Most of the layoffs applied to faculty and academic staff, while attrition was used to reduce the number of classified employees. Many of the tenured faculty who were laid off have been rehired, some after retraining and relocating in the system. The personnel cutbacks led to a law suit and charges that the quality of instruction has deteriorated.

Larry Clark of Wisconsin's Department of Administration, described general agency patterns of response to the productivity mandate (1975):

1. The administrative department with the biggest budget—Health and Social Services; \$1 billion—had the largest percent savings except for one new department. This may indicate that the bigger the department, the more fat to be trimmed. The Department of Health and Social Services 'saved' \$11.8 million for the biennium, 11.9 percent of its base budget for agency operations. Only the Department of Business Development had a higher gross percentage savings, 15.9 percent. Business Development has 18 employees compared to 9,689 in Health and Social Services.

2. Most of the other departments stayed around the 7 percent savings mark for a cumulative total.

3. Independent departments which traditionally have had strong, special interest constituencies made an average effort. Included in this category is the university system, one segment of government over which Wisconsin's chief executive has little budgetary influence.

Overall, it is difficult to generalize about which functional activities bore the brunt of the forced budget reductions over the four-year period. There was no clear, consistent tendency for one area of expenditure to be called upon to supply the savings.

Some agencies concentrated on more stringent allocation of supplies, equipment, and travel opportunities. Purchases were deferred and employees placed in smaller offices. A smaller number of agencies instituted technological improvements, restructured their internal units, or expanded their planning and control capabilities.

Other agencies emphasized personnel savings. Since the vast majority of expenditures for state operations is taken up by personnel costs, productivity efforts were especially

felt in this area. But with the exception of the university system, the savings were apparently not realized through layoffs or higher workloads for the most part.

In his 1976 State of the State Address, Governor Lucey noted that the number of state employees remained essentially stable after five years of austerity. It appears that the bulk of personnel cuts was achieved by attrition, absorbing or freezing vacant positions rather than attempting to fill them. Other savings were attained through the redeployment or reclassification of positions. The layoffs which did occur could have been due to the recession or declining institutional populations.

### ***DOA Role***

As previously noted, the Department of Administration provides management services and coordination for Wisconsin's agencies and serves as the governor's staff for budgeting, planning, and other executive responsibilities. Therefore, it was logical that the productivity effort should be coordinated through this agency. (The success of DOA's coordination effort will be discussed later.)

DOA responded to the governor's emphasis on productivity in a number of ways in addition to the activities already noted. A major priority was the implementation of Section 16.42 of the Wisconsin Statutes, which requires that all agencies submit to DOA a clear statement of purpose for each program or subprogram, specific objectives and proposed dates of achievement, plans for implementation and resources needed, legislation required to carry out the program, and information pertaining to fiscal impact. In short, the statute requires comprehensive goal setting and planning.

Not surprisingly, this statute has caused some difficulties. First, it involves an enormous amount of work. Most agencies had never attempted such an exercise. Second, how the information will be used is not clear. Finally, the statute does not contain any means of forcing compliance. The result has been only a minimal satisfaction of the statutory requirements to date.

The Legislative Audit Bureau (LAB), sensing these difficulties, requested legislation giving it authority to establish goals, objectives, and performance standards for those agencies which had not already done so. Such legislation was passed in 1975. However, some feel this was not adequate, since it does not address the inherent difficulties in establishing goals and objectives and may, in fact, be an inappropriate responsibility for an auditor, who will eventually have to evaluate the goals he or she may have established.

Three other programs illustrate the range of DOA responses to the productivity effort. First, the Employee Relations Division's Bureau of Human Resources operates a Career Executive Development Program. The program seeks



to provide broad experience to management talent seeking a career in Wisconsin government. Associated with the program is the Executive Assessment Center. Those who attend the center are tested on their ability in certain management functions (e.g., risk-taking). A profile of scores for each participant is developed and subsequent workshops are planned to supplement managers' skills in weak areas.

Second, the State Employees Merit Award Board administers an award program to encourage unusual and meritorious suggestions and accomplishments by state employees, thus promoting efficiency and economy in the performance of the functions of state government. Since the establishment of the Labor-Management Productivity Commission (to be discussed later), the amount of money budgeted for merit awards has significantly decreased. This is due to the state employee unions' desire to have across-the-board pay increases. Only non-contract employees are now included in the program. The annual budget has decreased to \$6,000.

Third, the Urban Institute is presently conducting an experimental program in cooperation with the DOA. The Institute provides technical assistance and funds for the development of new effectiveness measures in certain areas. The measures will include client surveys and follow-ups, among other devices. Indicators are being developed for such agencies as the Department of Transportation and the Department of Health and Social Services' Family Services Division and Corrections and Parole Division.

### ***Legislative Response***

1. *Legislative Audit Bureau (LAB)*. The role of the LAB in relation to Section 16.42 has already been mentioned. The bulk of LAB's productivity-related effort, however, is devoted to performance auditing. In 1975, 26 performance audits were conducted. Agencies to be audited may be selected in a number of ways: potential for increased efficiency; potential for increased effectiveness; degree to which the program can be affected by management decisions; statutory requirements; LAB time constraints; agency size; requests or complaints; follow-ups; or needs of department.

When an agency appears "healthy" as a result of an audit, this implies: (1) its operations meet legislative intent, (2) its goals and objectives match, and (3) its performance and measurement criteria are effective. If an agency does not appear "healthy", a report to the legislature provides information and recommendations.

2. *Legislative Fiscal Bureau (LFB)*. Among other responsibilities, the LFB provides fiscal and program analysis for the legislature and its appropriate committees when requested. These reports may focus on agency productivity. The LFB also prepares and submits the Legislative Budget Document.

3. *The Legislative Council*. The principal function of the Legislative Council is to give careful study to various problems of government and present the results to the Legislature. Council committees investigate specific problems and formulate reports. Two of these committees may have some relationship to the productivity programs. First, the Review of Performance and Program Audit Procedures Subcommittee is wrestling with the problems of Section 16.42 discussed earlier. Second, the Collective Bargaining Impasses in Public Employment Subcommittee may have to deal with questions raised by the Joint Labor-Management Productivity Commission, to be discussed later.

### ***Other Important Programs***

Two programs are not readily classified but deserve mention—The Labor-Management Productivity Commission and The Administrative Officers Council.

1. *The Labor-Management Productivity Commission*. During the last round of state employee contract negotiations, this Commission was established to solicit suggestions for productivity improvement and distribute verified savings from the adopted suggestions back to union members. Savings accruing from an employee's suggestion are evenly divided among all the union members in the state.

Some observers have voiced doubts about the effectiveness of the program although it is only now beginning to function. There are 30,000 state employees in Wisconsin. In order to provide adequate savings to make the reimbursements a real incentive to suggestions, substantial areas of expenditure will have to be affected. The most substantial area of state expenditure is, of course, personnel. It is doubtful that union suggestions would result in the sizable reduction of personnel costs. Therefore, the future of the program does not seem bright.

2. *The Administrative Officers Council (AOC)*. The AOC is a council composed of the heads of administrative agencies. These individuals have recently become interested in the area of productivity. A definition of that term has been established and a committee on the subject has been organized. The Council promises to play a vital role in the future clarification and coordination of productivity efforts in Wisconsin.

## **ASSESSMENT OF WISCONSIN'S PRODUCTIVITY PROGRAM**

### ***Positive Impacts***

The Wisconsin experience with productivity can be credited with a number of important accomplishments. During the 1973-1975 biennium, 36 of the 37 agencies (regardless of source of funding) showed productivity savings. Twenty-seven of 28 agencies using only general



purpose revenues (from state sales and income taxes and state fees) saved \$33 million according to DOA figures. If all agencies meet the required savings during the current biennium, this will mean that over the four-year period at least 10.5 percent of the beginning base budget of the programs involved in the effort will have been cut.

Moreover, these reductions in costs were apparently not accompanied by an overall decline in the quality or level of services provided by state government. Several state employees claimed that the cuts had reduced agency performance, but admitted that their claims were difficult to document. The more common reaction was that if any deterioration of quality had occurred, it was minor and affected by variables other than productivity cuts. The absence of comprehensive, dependable evaluation information makes judgement on this subject especially difficult.

Some modifications in program operations, especially the elimination of wasteful or unnecessary practices, were adopted in the name of enhanced efficiency. In addition, a pervasive awareness of the need for austerity and a widespread concern for productivity have spread through much of the state bureaucracy and have been supported by public opinion. It has prompted several attempts at far-reaching changes in certain areas of state government.

The strongest case for the positive impact of Wisconsin's program has been made, not surprisingly, by Governor Lucey. In describing the impact of the austerity campaign, he recently noted (1976):

The decisions we have made in the last five years, however painful, have enabled Wisconsin to weather the nation's economic troubles without the drastic and devastating actions that the times have required of other states . . . Over the past two years, more than 20 states increased taxes. Wisconsin has not. Wisconsin will not . . . Many states and municipalities have been forced to increase their borrowing substantially, sometimes just to cover operating costs . . . Wisconsin, however, has resisted the temptation to borrow beyond its means . . . When the state does borrow, the interest rate is low because of the state's reputation for fiscal integrity . . . To balance the budget, some states have had to resort to massive public employee layoffs and wholesale reductions in state programs . . . Wisconsin has fared much better. Local assistance, school aids, and property tax relief are all at record levels. The Homestead Tax Credit Program is helping more people than ever before. The number of state employees has remained essentially stable . . .

Five years of austere and moderate public policy have served us well . . . This year, many states must ask themselves whether they can continue to provide some vital public services. Wisconsin can ask itself how to continue to deliver all its essential services more effectively and more efficiently.

Of course, these results cannot be attributed solely to the productivity program. Some of the cost savings were

due to other factors. Some agencies would have adopted innovative changes without the call for productivity from the Governor and DOA. But it seems clear that the statewide scope and significant proportions of the improvements would not have occurred without the leadership of the governor and the heavily publicized thrust for productivity. Such widespread savings and management reforms are not a normal phenomenon in state government.

### *Negative Impacts*

The Wisconsin productivity program was not without shortcomings, which limited its effectiveness and prevented it from realizing its full potential.

Problems plagued the productivity effort from the beginning and deserve to be understood in any account of the Wisconsin experience. In the first place, conceptual confusion limited the program's effect. Clarity of purpose is important in any such undertaking. First, it facilitates communication among those involved. Second, it minimizes possible frustration with the program if all have a clear understanding of their role. Third, it enables meaningful evaluation of the program as to its successes and failures.

Unfortunately, this clarity was lacking in Wisconsin since the term "productivity" and the purposes of the program associated with that term were not commonly understood. In Wisconsin, no operational, consistent definition of productivity emerged. Different individuals defined the term and interpreted the governor's program in diverse ways. This confusion explains in part the diversity of agency approaches to the productivity mandate. A lack of consensus has also been noted within agencies or even among personnel in particular programs.

A few top administrators in DOA and elsewhere had a relatively clear, well-developed vision of productivity improvement. Productivity, as defined by these administrators, involved both the efficiency and effectiveness of state government. The goals of the program, according to these leaders, entailed a comprehensive effort including both management development and budget accountability.

However, the emphasis of the program as it was communicated to the agencies was on maintaining services at less cost. There did not seem to be a systematic attempt to articulate the broader definitions and goals, or at least these concepts were not generally understood at the agency level. More importantly, the necessary motivation, consultation, and support services for the development of a more comprehensive program were not present.

The result was that the governor's program was widely viewed by state employees as simply a series of budget cuts. This perception, as shall be seen, was not far from the mark, because "productivity" in many ways was a slogan and a selling point rather than a well-conceived package of reforms.

This points to a second major weakness of the program: the Wisconsin effort lacked detailed preliminary or ongoing planning and a long-range perspective. There was not a careful analysis prior to program implementation to ensure that the resulting efforts were well-conceived, clearly articulated, or widely accepted. Rather, the program can be characterized as a "quick and dirty" response to gubernatorial urging. Agencies were cognizant of this perspective, for most employees saw the productivity program of 1973-1975 as an isolated, one-time effort, and tended to react accordingly.

DOA was aware of this shortcoming, and attempted to adopt a longer-range viewpoint in planning for the 1975-1977 productivity program. The reinvestment option with its promise of future savings, was one indication. Also, the department instituted a statewide management improvement program in 1974, although the fruits of this endeavor are not yet apparent to the outside observer.

Of course, there are restraints on state government that make long-range planning hazardous. These include the legal inability to commit resources beyond a limited period of time; uncertainty about the state's future fiscal picture or program needs; the short-range perspective of elected officials; the pressures from interest groups demanding immediate action; and the traditional attitudes of many bureaucrats. In short, the overall atmosphere of state government is not conducive to long-term planning and this was reflected in the Wisconsin experience.

Third, as noted, this was not a comprehensive productivity campaign. It was not directed at discovering and correcting systematic barriers to productivity improvement, nor was there a vigorous examination of the various elements that contribute to a "productive" agency, including both efficiency and effectiveness. The Wisconsin experience can be seen as a somewhat successful effort to eliminate "fat" in agency budgets, but this does not mean that the savings were achieved through far-reaching improvement or modifications in overall agency performance.

Costs were reduced in many areas, to be sure. But DOA was not certain if the savings occurred in the areas indicated by agencies in their productivity proposals submitted during the budget formulation stage. There was not a thorough follow-up to see where the actual productivity savings occurred. More importantly, there was no follow-up to see how the cuts affected the quantity and quality of state services.

The actions taken by agencies under the rubric of "productivity improvement" were not analyzed as to impact and long-run costs and benefits. Valuable information from this experience, which could have been used to shape future management improvements, was simply not collected, assessed, or disseminated as far as could be determined.

The statewide productivity program, therefore, was not able to move very far beyond the initial supervision of the budget cuts. It was basically limited to the attainment of dollar savings, without a close review of the nature and complexity of agency tasks, the setting of adequate performance standards, or the monitoring of agency effectiveness in meeting those standards. As in other states, the program budget system has still not replaced the incremental input-oriented thinking of its users. It is clear that the Wisconsin productivity effort was more oriented toward securing efficiencies than to promoting a fully productive state government.

A fourth weakness, the lack of supportive services from DOA and others, contributed to many of the failings. For instance, in tackling the goal of productivity improvement, agencies can benefit by sharing ideas and reviewing the work of others, especially examples of what has proven successful. Yet DOA had no apparent mechanism for such coordination and no organized system to transfer successes from one state agency to another. The department attempted to prepare a series of reports on this subject, but the project was not carried out.

The absence of a centralized reporting system meant that DOA was not familiar with many projects launched by Wisconsin agencies. More than that, it meant that agencies lacked information on what their counterparts were doing. For example, both the Department of Transportation (DOT) and the Department of Health and Social Services (HSS) realized savings by punching computer data on discs rather than cards. The change occurred first in DOT. If a coordinating procedure had been in effect, HSS might have adopted the change earlier. Also, the idea might have spread to other agencies and thus increased savings to taxpayers.

In other cases, necessary supportive services were available but not well integrated into a common strategy. There were several statewide efforts related to productivity development in Wisconsin state government, as described in the earlier section citing examples of productivity programs in that state. While these efforts offer a promise of real progress, their effectiveness could no doubt be increased if they were integrated. Although many aspects of these programs are connected, there is presently a dearth of officially recognized linkages among them. Agency managers thus are faced with a plethora of overlapping, repetitive demands coming from different institutions, using varying terminology, and requiring different paperwork.

In still other cases, such as technical assistance and training, these supportive services were not available in sufficient quantity or quality. Although administrative officials stated that technical assistance would be forthcoming to agencies as they attempted to meet the productivity mandate, the actual availability of such assis-



tance is in question. DOA apparently provided budget instructions, a booklet presenting examples of productivity improvements from other jurisdictions, and the services of a handful of management analysts. But several officials in the line agencies reported that technical assistance was primarily a paper promise.

DOA representatives have admitted that the department has delivered little technical assistance. The effectiveness of the few management analysts available for consultation is reduced by the sheer size of state government. There is no central policy or provision for management systems experts to continually examine priority areas for productivity improvement, much less the full range of state activities.

An important area where adequate assistance was lacking is personnel training. Many commentators have noted that the key to productivity enhancement lies with day-to-day management and performance of activities. To improve these elements, a basic requirement is skill development and attitudinal change, so that productivity in the broad sense becomes a goal of state employees. Training is certainly a part of this process. Yet this aspect of productivity was not emphasized by DOA, although that Department's Bureau of Human Resources is now developing promising programs such as the Career Executive Development effort mentioned earlier.

This discussion about the lack of ancillary services is not meant to imply that DOA and other central support bodies are totally responsible for the failures. DOA has suffered from limited resources, the press of other obligations, and numerous administrative changes. Compared with large businesses in competitive fields, the state has neither the authority nor staff to adequately evaluate all of the policies and practices affecting productivity. The qualified personnel necessary to assist in the improvement of hundreds of state services would be sizably larger than anything currently available.

Still, some of the services could have been provided without substantial new funding, and existing activities could have been better coordinated. DOA could have contributed more overall guidance and direction. But a comprehensive productivity effort would no doubt require leadership and support from the governor and legislature beyond that provided to date.

The lack of supportive services leads to a fifth major shortcoming, the absence of a central full-time productivity office and staff. Wisconsin's productivity effort is decentralized. Although DOA had the official responsibility for carrying out the governor's directive, the primary concern was with budgetary responsibilities. The staff assigned to productivity worked only part-time on this subject. A variety of productivity-related functions were spread across a number of DOA bureaus, other central administrative units, and the various line agencies. The result was

confusion about purpose and responsibility and a tendency for agencies to avoid interaction.

A further limitation was the lack of more widespread participation in the formulation and development of the program. Several agency managers complained that the program of mandated budget cuts was presented to them without any opportunity for comment or suggestion. (The absence of on-going consultation and assistance between DOA and the agencies has already been noted.) In addition, the program might have benefited from the type of citizens' advisory committee that Washington State formed for its productivity drive, although lack of public support did not seem to be a problem in Wisconsin. A more serious drawback was the failure to involve the legislature closely. The results of this failure were already demonstrated by the productivity reinvestment program example.

The drawbacks to Wisconsin's productivity effort outlined so far represent problems at the statewide level. Confusion of purpose, lack of planning, limited perspective, absence of supportive services or a central office, and limited participation—these are problems that plagued the program as it was developed and implemented by central administrative and political units.

It is also appropriate to consider more closely the difficulties faced at the agency level. Agencies were essentially on their own in attempting to meet the mandated base budget reductions or adopt systemic changes. Innovative attempts at far-reaching reforms have arisen in a sporadic and unintegrated manner from some agencies which tackled this challenge on their own initiative and with their own resources. A more common reaction among agencies, however, was to view productivity as a limited, but troublesome burden. Without centralized support and direction, many responded by perfunctory elimination of some of the "fat" that can be found in most programs. In these instances, there was not an examination of overall management structure and style, human resource development policies, agency objectives, etc.

In short, the base budget cut could bring true productivity enhancement, but this depended on the actions taken by agency managers. Several factors limited their ability or willingness to make such changes.

First, the across-the-board budget cuts in both biennia were seen by some as arbitrary directives, without consideration of the differing needs and past performances of the various state agencies. The hasty preparation of the executive mandate, and the absence of a long-range, comprehensive approach, were apparent in the undifferentiated instructions sent to all agencies.

Second, the confusion over what constituted productivity improvement created some controversy. Some agencies, particularly the university system, saw timely capital investment as a way to attain long-term productivity by



reducing future costs. Certain proposals to this effect were apparently not accepted as meeting the official mandate, at least in the 1973-1975 biennium. The viewpoint of some university spokesmen that higher education was an investment in long-run future productivity and, thus should be treated differently from other state activities, was also not accepted.

This confusion over definitions and objectives is illustrated by the responses of agencies to the mandated productivity improvements. Some of the productivity proposals submitted by agencies were disallowed or criticized as not being "true productivity" savings. The Department of Administration rejected some productivity claims, for instance, that were considered to entail reductions in services.

Declining workload demands and concomitant reduced costs were also claimed as productivity savings by some agencies. The rationale was that enhanced agency performance caused the reduction. In some cases DOA rejected the claims, but in others the savings were approved. This practice appears to be questionable, given the difficulty of establishing the relative influence of better institutional care or more effective agency actions as opposed to other social variables in contributing to the reduction.

Examples of these dubious savings include the Department of Health and Social Services, which claimed a \$3.7 million lowering of costs for institutional care as a productivity gain. The major cost savings was for food, since institutional population was declining. The savings apparently resulted from fewer clients rather than improved productivity. The Department of Transportation previously employed an engineer who spent part of his time seeking federal grants for the construction of sewage facilities. As the rate of sewage plant construction decreased, due to an adequate supply of such facilities, the position was dropped. The savings were claimed as productivity. In the same department, money had been appropriated for some time for a management training program. With a tightening job market, high quality personnel were more readily available, and the need for the trainee program was reduced. The elimination of the program was also claimed as a productivity savings.

Third, some agencies complained that the requirements to submit productivity proposals, coupled with other budgetary information, created an excess of complex paperwork, much of which would not be used. A major problem, especially in the beginning, was the separation of valuable forms from irrelevant paperwork.

Fourth, several factors led agency people to question the good faith of the productivity effort. These include the contrast between the rhetorical emphasis on a comprehensive productivity campaign and the actual situation which has been depicted, resentment about the ultimate fate of

the promised reinvestment monies, and the heavily publicized budget increases for gubernatorial and legislative staffs.

One official described the productivity effort as a two-track approach: sweeping rhetoric about systemic changes coupled with the reality of relatively small savings at the margin. Legislators in particular were seen as looking for an image of prudent public officials, while not delivering on their pledges. This overselling of the program created negative attitudes at the agency level, and tended to poison the understanding and trust necessary for real changes. Consequently, "productivity" has negative connotations for many.

Fifth, these factors meant that there was a lack of compelling motivation for administrators and employees to examine agency productivity in depth. Both positive and negative incentives are needed to overcome the commitment to existing operations and the growth mentality pervasive in state government. But there are at present no effective rewards for agency efforts to produce at the same level but with lower costs. The productivity reinvestment plan and other employee incentive mechanisms have not been very successful. In fact, the official who diligently cuts costs might find himself penalized with a pattern of lower appropriations while his more wasteful counterparts continue to receive excessive funding.

This discussion of the weaknesses of Wisconsin's productivity program should be concluded with a review of several problems in the political environment of Wisconsin state government with which any such program would be faced. The problems here are perhaps less susceptible to resolution than the problems already noted.

First, the governor, legislature, and DOA are unable to exercise firm control over some state expenditures. In Wisconsin, only five of the state's major departments are headed by persons appointed by and responsible to the governor. Boards or commissions govern many state agencies, creating somewhat independent spheres of influence. As mentioned earlier, these independent departments made only average efforts to achieve productivity savings. Governor Lucey has promoted a move to a cabinet system of direct executive leadership and unless such a system is adopted, the prospects for a vigorous statewide productivity campaign will be hampered.

More importantly, the productivity effort to date has of necessity been limited to state operations only, although these activities account for less than one-third of the total state budget. The remainder is comprised of state aid to individuals and local governments through shared taxes. Although there are apparently no legal restrictions on enforcing productivity standards on such local units, the political and administrative burdens would be high.

The effects of this limitation can be seen in two areas of

state government. First, the budget of the Department of Health and Social Services (HSS) goes in large part to individuals and local governments. (The major programs are Aid for Dependent Children, mental health, social services, and medical assistance.) To achieve the mandated budget cuts, the department was forced to concentrate on the smaller part of its funding that went to state institutions.

Second, the University of Wisconsin System was held responsible for meeting the budget cuts, with resulting controversies. However, another statewide education effort, the vocational-technical system, is operated by local governments (although with state aid), and was thus not responsible for meeting the demands of the governor's program. This situation troubled university officials and other observers.

The governor and other state officials have attempted to increase the presently minimal supervision over state funds going to local governments and individuals. Governor Lucey has been committed to property tax limits to restrain spending by local governments and school districts, with the result that the statewide average mill rate declined in 1975. The legislature provided a "sum certain" expenditure ceiling on 1975-1977 funding for social services programs, rather than the previous "sum sufficient" approach, when eligible services were funded whatever their cost. The legislature also made HSS responsible for allocating such services on a contractual basis. Another statutory change was the requirement of uniform standards for purchases by social services and mental health units using state funds.

The welfare assistance program has also been subject to new billing checks. This federally mandated expansion of quality control specifies performance targets and tolerance levels, and uses statistical samples to ascertain mistakes. In addition, a small number of HSS employees will have full-time responsibility for advising county welfare departments on productivity-related management concerns. Another change affecting the AFDC program will be the use of flat rates rather than grants for the delivery of services. It is hoped that this change will simplify administration and reduce errors regarding ineligibility and incorrect payments.

There have been several new cost controls on the state's

target social program, medical assistance. Governor Lucey in 1974 imposed a freeze on the price the state would pay for prescription drugs, physicians' services, and other benefits, although not on nursing home care. In his 1976 budget message he requested that 10 new positions be approved in HSS to better control the medical assistance program and strengthen the independent medical review program for nursing homes. This new unit would attempt to conduct additional utilization reviews, identify fraud, and systematically determine areas for productivity savings. Other changes in this field include the development of a new computerized Medicaid Management Information System, the proposed substitution of generic for brand-name drugs, and legislative proposals to require certificates of need and mandatory prospective rate-setting for hospitals.

These cost control and program supervision measures indicate that the governor, legislature, and other state leaders are concerned about their lack of control over substantial amounts of state monies. They realize that the state must improve the productivity of local governments before it can reach its overall goal.

A second major constraint is imposed by civil service restrictions. These statutory and contractual restrictions decrease the flexibility of administrators to shape personnel policies in a manner consistent with productivity improvement, according to a number of agency officials to whom we talked.

For instance, managers used to possess some discretion in selecting employees to be laid off. Under the new collective bargaining contracts, layoffs are based entirely on seniority. It is felt that layoffs under the new process could be seriously harmful, depriving agencies of the skills and energies of younger workers.

Also, managers have lost much of their ability to reward productive employees with merit increases in salaries. Employee unions want increases based on a broad, flat schedule. As a result, only a miniscule portion of salary monies are presently available for merit increases. Since personnel costs are the largest single state expenditure, these restrictions and others may limit productivity gains.

## CHAPTER III

# PRODUCTIVITY PROGRAMS: AN OPERATIONAL PERSPECTIVE

“Productivity improvement” is becoming a popular catchword for many officials in an age of growing doubts about the financing and performance of state government. A heavily publicized campaign to enhance productivity seems to be a natural response to some of the pressures on state government referred to earlier. But there are some important elements that need to be considered before this general concern can be transformed into a successful program.

### CONCEPTUAL AND POLITICAL CONSIDERATIONS

This section examines the major conceptual and political issues which need to be considered in the initial establishment of a productivity enhancement effort. The conceptual issues include clarity of definitions and objectives; the value of a long-term, comprehensive approach; choice of initial targets; and the importance of careful planning.

Perhaps the overriding need is for a clear set of definitions, goals, and objectives to be devised and communicated to all of those involved in the program. As discussed in Chapter I, “productivity” implies different things to different people. Therefore, this term (or whatever phrase is used to describe the overall program) must be precisely clarified in light of the particular context. We recommend against an extremely narrow and confining definition, and instead urge consideration of a broad concept of productivity entailing a concern for the efficiency, effectiveness, and quality of public services (Newland, 1975). If such a perspective is used, however, it must be explicitly stated so that there is no confusion or misunderstanding. The Wisconsin case study presented earlier demonstrates this point.

Likewise, the goals and objectives of the program must be defined, and this requires careful scrutiny of the needs and capabilities of state government and of the possibilities and limitations encompassed in the notion of productivity improvement. The purpose of the effort must be clearly stated, realistic, and relevant to these concerns.

Goals should be tempered by the knowledge that productivity is not a precise, short-term remedy for fiscal crunches, nor a panacea for all that ails state government.

Rather than a “quick fix” that can rectify problems of an inadequate tax base or inept administration, productivity improvement is a long-term task that requires continuing attention. It is not a trendy technique nor a one-dimensional innovation, but is multi-dimensional and promises to pay off over time (Committee for Economic Development [hereinafter referred to as CED], 1976; NYSSTF, 1975).

A productivity program should not be oversold in its initial stages, for exaggerated promises may result in later frustration and even the abandonment of the effort. Many agencies in Wisconsin, for example, believed that more was implied in the announcement of that state’s program than was actually delivered. This feeling in some cases created negative attitudes toward the endeavor.

This is not to say that governments cannot attain savings in response to immediate financial crises. But such savings are not really an improvement in “productivity” unless they are achieved through a favorable modification in the ratio of resources used to produce the same level of *successful* results. This implies a type of managerial analysis, well-conceived innovations, and focus on quality not ordinarily found in hasty budget cuts or personnel layoffs. Also, governments need not wait until the advent of pressing crises to secure the benefits of enhanced productivity. The goals of a productivity enhancement program should be directed at securing improvements over an extended period of time, rather than the one-shot effort typified by “Little Hoover” Commissions or crash austerity programs. The changes in processes and attitudes that a longer-range program can deliver will contribute more to the viability of government than a whirlwind of reform that is soon forgotten.

Similarly, the program should concentrate, to the extent feasible, on a comprehensive examination of state government operations rather than one or a few topics that are of current interest. The components of a productivity improvement program cover a wide range and the elements involved in productivity are many. “Putting all of your eggs in one basket” may not only ignore crucial areas deserving attention, but may be politically dangerous if the results of this concentration are disappointing or threatening to powerful interests.



Of course, the resources and energies available to the effort will not be unlimited. Therefore, long-range and comprehensive goals must be brought into focus especially in the beginning stages by more limited objectives with specified dates of attainment. The scope of the program's initial activities must be determined and priorities selected. The publication *So, Mr. Mayor, You Want To Improve Productivity*, recommends that improvement programs begin with specific problems in certain areas of operation, and lists several useful criteria for choosing such areas (National Commission on Productivity [hereafter referred to as NCOP], 1974). Above all, it is important to choose initial areas where program success can be demonstrated. The productivity effort will more readily gain the support of influential political forces if savings and improvements can be shown in the period after implementation begins. This was a major plus for Wisconsin's program, because \$33 million was saved in the first two years. However, the State of Washington, another leader in the state productivity movement, is beginning to see legislative interest wane due to the lack of early demonstrable results.

Attention to the initial limited objectives should not obscure the overall goal of a comprehensive effort to augment the performance of state government. Early favorable results in meeting objectives may provide a base for the establishment of the long-range campaign. For instance, a few carefully selected pilot projects can be used to demonstrate achievements, test program models, and remove misapprehensions. If the necessary political leadership is also present, successful initial experiences can lead to an expanded effort and a fuller commitment.

The Wisconsin effort did not entail systematic analysis prior to implementation to insure that the resulting efforts were well-conceived, clearly articulated, or widely accepted. State agencies were cognizant of the hurried and somewhat arbitrary nature of the program, and tended to react with hostility.

Planning can be a useful exercise in reviewing state needs, determining appropriate goals and objectives, clarifying the requisite operational elements of a program, combining concept and structure, and thus providing the groundwork for a successful program. The sophistication and duration of the initial planning stage will vary, of course, depending upon the political environment and analytical capabilities of each state. But it should be remembered that substantial productivity improvement takes time to plan, test, and accomplish.

In addition to developing a sound conceptual base, the productivity effort must elicit political support to get off the ground. Visible, high-level commitment is critical, for, as Balk (1975d) has noted, the actions and perceived interests of policy makers are central factors in motivating employees, creating environmental pressures for change,

and establishing modes and incentives for productivity improvement. In Wisconsin the initiative and continued support of the governor was the key force behind the program.

This commitment must be backed by a willingness to invest the time and resources needed for a serious campaign. Agency personnel will be aware of the difference between glib rhetorical promises and a firm resolve to improve the operations of state government. The former is limited to press releases, general resolutions, and vague directives; the latter is characterized by specific objectives, clear assignment of responsibilities and deadlines, the availability of an administration infrastructure and supportive services, and an effective system of rewards and penalties.

Another aspect of leadership commitment is the willingness to accept and implement needed changes. The initiation of a productivity program will be a meaningless gesture unless state officials are serious about utilizing the knowledge obtained to change programs and modes of delivery and to shift resources to the most compelling needs.

Commitment is needed from others besides top state officials. The State Government Productivity Research Project at the State University of New York at Albany has devoted considerable attention to the environmental factors in state government which are important to the efficacy of improvement programs. This group has noted that long-term advances depend upon more than good agency management techniques and bureaucratic will power. The program must be supported by the overall institutional fabric of state government. The major influences upon agencies include other agencies, the governor's office, the legislature, employee organizations, civil service bureaus, agency constituencies, the media, federal agencies, and the public at large (Balk, 1975a and b). Without reviewing in detail the roles of these groups, several points should be made.

First, the formulation of the productivity effort should include broad-based input from affected parties in state government. This can be accomplished through advisory committees, hearings, informal meetings, the circulation of preliminary policy statements, and a variety of other means.

Two groups within state government in particular merit special attention. State employees, those who will ultimately be responsible for enhancing productivity, must accept and understand the program, or it is doomed to failure. Middle-level managers and first-line supervisors, who are often closely tied to rank and file employees, must be oriented and reassured as to program goals and operations. Their ideas, and those of employees generally, will be valuable in devising a statewide program and will be essential in implementing it at the agency level. Also, the

legislature should be involved in the formulation and evaluation of the program. An example of what can happen when it is not involved was presented in the incident concerning the productivity reinvestment program in the Wisconsin case study.

Second, a public constituency for productivity must be courted or, perhaps, created. Fosler (1975) has noted that at present the advocates of productivity improvement are a weak interest in the political arena and that the main impediment to such improvement is the lack of incentives in the political system for dealing with such issues.

The political forces which are potential obstacles to an improvement program, on the other hand, wield substantial power. State government politics is often oriented to the awarding of various types of benefits. State workers seek pay increases, communities and interest groups seek state assistance for programs, and agencies try to receive increased budgets. These groups may have strong support for their goals—goals which may not be consistent with those of the productivity program.

Obviously, everyone who fits in one of these categories is not selfish and opposed to “progress” or the “public interest.” But a productivity effort, with its careful analysis of existing programs and resource allocations, will undoubtedly face opposition from some vested interests.

Since politics provides the principal force for change in state government, the productivity-related issues need to counter opposition and/or apathy by demonstrating broad political appeal—that is, proven success in achieving productivity should be able to command campaign funds and votes. To reach this end, Fosler (1975) urges a political strategy which includes a more intense and continuous appeal to and mobilization of traditionally supportive groups and the enlistment of new groups.

Such groups could include public interest and government reform organizations, business associations, political parties, universities and research centers, and others. To reach them, productivity must be defined in terms relevant to their interests. Perhaps the program could solicit voluntary assistance, such as the lending of managerial talent.

To better tap potential support from the general public, publicity should be given to the program’s goals, components and, especially, to any successes. The average citizen will not respond to the word “productivity” or to esoteric administrative reforms, but will be interested in tax issues, the delivery of services, and the perceived overall performance of state government. The improvement program can also serve as a vehicle for providing information about state government to the public.

Third, the attention of the public and all of the affected parties needs to be focused on issues broader than the particular improvement program underway. Systematic

productivity gains will be more likely in jurisdictions which have an institutionalized commitment to good management and to good government (Bell, 1975). This is a somewhat intangible factor, subject to the history and political culture of the state as well as many socioeconomic variables. But such commitment can and should be nurtured, for it provides a breeding ground for a more permanent concern for productivity enhancement.

## STRUCTURAL CONSIDERATIONS

This section deals with five issues: (1) which organizational locations in government can best provide overall policy direction for the productivity program; (2) discretion versus control; (3) the relationships among agencies in the productivity program; (4) reorganization of the structure of state government; and (5) intergovernmental aspects of productivity enhancement.

First, the respective roles of the executive and legislative branches in developing and implementing a productivity improvement program should be considered. In all of the states with a recognized program in this field, the impetus has come from the governor, and the legislative contribution has been secondary or negligible. This situation arises, no doubt, from the traditional administrative responsibilities of the chief executive and the state legislature’s preference for concrete problem-solving rather than analysis of general management needs. Yet, as Crane (1975) points out in his paper on the limitations and strengths of legislatures in this area, productivity program leadership does not *have* to come from the executive. Legislatures have greatly enhanced their institutional capacity to deal with productivity issues in recent years. He notes the potential for legislative action in stimulating productivity programs in states such as Texas, where the legislature dominates policy making and budget formulation.

Although leadership in productivity will likely be found in the executive branch in most states, legislatures can have an impact by the adoption of supportive statutes and resolutions, the provision of necessary resources for the conduct of enhancement programs, and, particularly, the exercise of effective oversight. Through the growing use of performance post-audits and program evaluation, and the capacity to link these reviews to budget decisions, legislative bodies can hold managers accountable for productivity. In fact, without legislative support, it is unlikely that a productivity program will survive.

A second structural issue is the extent to which the productivity effort is centralized. There is a need for some central control to establish program limits and priorities which correspond to the resources available and the elected officials’ view of the public interest (NYSTF, 1975). Also,



assistance and encouragement will have to be provided from a statewide locus—given that many agencies will lack the necessary skills, have responsibilities that already tax their resources, and will be hostile to threats to the status quo. At the same time, sufficient flexibility must be allowed for agency managers to achieve results and display initiative, since the people in the agencies will be most knowledgeable about present operations.

A tight line must be walked between unresponsive autonomy and stifling overregulation. The National Commission on Productivity (1974) made recommendations in this regard. In organizing a productivity improvement program, it urges chief executives not to delegate totally the operation of the program to existing staff organizations but to keep central direction close to the top. Talent should be provided on a full-time basis to run the effort. These experts would work with the agencies to assign coordinators to each improvement project, to develop work plans with specific objectives for each project, to regularly monitor and provide status reports, to resolve problems and examine trouble areas, and finally to evaluate the results. At the same time, technical assistance would be provided to the agencies to help enable them to meet productivity targets.

Under this type of arrangement, managers could still manage. Their scope for action and creativity need not be overly restricted with centrally imposed techniques that might not be appropriate in their agency's setting. Instead, they should be held accountable for results and provided with the assistance needed to achieve results. But the ultimate fate of the projects would depend on the individual coordinator's judgement and talent, as well as that of the other agency employees. The role of the central staff vis-a-vis the agencies should be one of encouragement, assistance, reporting, plus serving as a visible reminder of the executive commitment to the project.

A central productivity office on a statewide level is an important element of a successful campaign. (The lack of such an office in Wisconsin was a serious drawback to that effort.) Such an office could serve many functions, including:

- providing policy direction and clarity of purpose;
- planning for comprehensive and long-range approaches;
- collecting and disseminating information and ideas;
- monitoring progress, identifying successes and failures, analyzing results;
- supplying management consulting and other supportive services, or referring agencies to appropriate locations to obtain them;
- conducting special training or workshops;
- coordinating related activities;

- developing incentive programs; and
- acting as a liaison with efforts nationally and in other states.

A third consideration is the coordination of agency productivity projects. While the particular circumstances relevant to improvement vary from agency to agency, some innovations may be transferable. Changes in management systems, work techniques, and personnel policies, plus certain capital investments, may prove to have applicability outside of the agency in which they were originally introduced. In addition, managers and project directors can benefit from the experiences of others, i.e., from the difficulties and successes that their counterparts have faced.

For these reasons, some type of coordination and innovation transfer mechanism should be established. The focus of such a mechanism does not have to be limited to topics directly linked to the identified productivity program. Other development projects which are related to productivity improvement, but perhaps not explicitly made a part of an official program (such as agency Management by Objective experiments), can also benefit from a pooling of ideas. As Porter (1975) has pointed out, productivity can bring together diverse groups (industrial engineers, budget analysts, management experts, personnel officials) and thus integrate many related concerns.

Fourth, statewide productivity efforts should include a review of the state program structure, where applicable. The more efficient and effective provision of public services can often be strengthened through a reorganization and rationalization of state departments and agencies. A number of states have effected real economies and improved their operations through a thorough study and revision of outmoded organizational structures.

A fifth set of issues relates to intergovernmental aspects of productivity enhancement. Chapter I described federal programs which make financial and technical assistance in this field available to state and local governments or which serve research and clearinghouse functions. These sources have greatly expanded in recent years.

However, the federal role in assisting state government productivity efforts could be further enhanced. The recent report of the Committee for Economic Development (1976) offers some recommendations, including a redesign of federal grant programs; more attention by the national government to general management improvement and personnel policies; and increased research and development assistance, particularly in the use of science and technology at the state and local level. In addition to direct productivity enhancement aid, federal agencies exert influence over state operations in their functional areas through funding, regulation, and reporting requirements. The effect of these mechanisms on productivity deserves further study.



As noted earlier, a number of states have adopted productivity improvement drives in recent years. Cooperation among these various efforts would serve to further develop the "state of the art" and provide greater recognition to the national interest in this subject. Such cooperation has occurred to some extent in the form of workshop presentations and informal contacts. A clearinghouse on state government productivity, which has been proposed on several different occasions (see Balk, 1975b), would further this interchange of ideas. The various national professional and program area associations to which state managers belong could devote some of their energies to this subject, especially to developing comparable measures of common activities.

Finally, state governments are going to be increasingly concerned about the productivity of their local governments, as more state funds are transferred to this level. The Wisconsin case study illustrated some of the problems involved and approaches that can be taken in tackling this issue. The Committee for Economic Development (1976) has proposed several actions that states can adopt, including the enforcement of accounting and budgeting standards, the institution of structural changes, provision of management and training assistance, and the establishment of official bodies to examine productivity on a statewide basis.

#### COMPONENTS OF A PRODUCTIVITY PROGRAM

*Location of Program Direction.* As implied earlier, a central office will need to possess the necessary skills and analytical tools to operate a program and to assist in the exploration of the various components of productivity improvement. More than that, the central office should have sufficient authority to insure compliance with program goals and objectives.

Both Washington and Wisconsin have provided this power by connecting their programs to the budget process. Resource allocation through this process has increasingly emphasized cost-benefit and similar analyses, as reflected in the use of program/performance budgets, zero based budgets, and management by objectives. Since budgets are major control mechanisms in government, tying agency performance to appropriations through the reporting and review of appropriate measures is a way to obtain leverage for good management and productivity. The link to the budget prevents agencies from ignoring or downgrading the productivity effort. Moreover, the emphasis on accountability for verifiable results will be more fruitful than a forcing of generalized solutions on all state operations.

But several difficulties exist in this approach. First, budget systems are not inherently designed or applied to foster a concern for efficiency and effectiveness. Tradi-

tional decision-making patterns, regardless of budgetary formats, tend to focus on agency competition for funds and incremental changes. Expanded use of the budget as a means of promoting productivity will necessitate a shift in emphasis to programmatic concerns, the budget execution phase, legislative oversight, and perhaps a quarterly allotment cycle on the basis of agency performance (NYSSTF, 1975).

Second, associating the productivity program too closely with budget controls may engender resentment and result in the reporting of misleading aggregate data by the agencies. The many components of productivity improvement may be ignored as managers devote attention to preparation of self-serving reports. So, use of budgetary controls must be supplemented with other mechanisms.

The areas where agencies can find and implement desirable changes are many. Various authors have presented lists of the elements or causal factors in productivity improvement (see the writings of Walter Balk, as well as G. M. Betal, 1973; JFMIP, 1974; NYSSTF, 1975). It should be obvious that different methods and techniques will be found to have differing validity in different states or agencies. But a broad breakdown of the components of a comprehensive program should include the following topics: (1) capital investments; (2) service delivery mechanisms; (3) management improvement; and (4) human resources. (Two overall factors which affect the success of a program, measurement systems and motivation, are of such overriding importance that separate sections of this chapter are devoted to them.)

*Capital Investments.* New and improved capital goods—and the research, development, education, and training required to create and use them—are estimated by leading economists to have contributed 40 to 60 percent of the productivity increases in the private sector (OMB, *et al.*, 1973).

The most frequently cited causes of productivity changes in the Federal Government are process factors, particularly capital investment and new technology (JFMIP, 1974). New equipment is the most effective way to increase productivity for large groups of people employed on a stable basis (GAO, 1975). Quantum leaps in productivity are generally due to technological innovations (NYSSTF, 1975).

Because improved technology and the availability of capital per worker have been major sources of productivity growth in the private sector, the federal program has paid special attention to capital investment. Yet there is some doubt as to whether this priority is warranted at the state level, which is generally more service-oriented and labor-intensive. Hopes for major advances at this level, therefore, should not necessarily be placed on the substitution of capital equipment for workers (CED, 1976). State govern-

ments can, however, augment their performance to some extent through better use of equipment, facilities, and technology. The case study in this report provided examples of such improvements.

Several authors have suggested that public agencies should more carefully identify their needs in this area, in some cases through a central staff which would ascertain productive investments on a continuing basis. Agencies should be informed about new and existing technological developments and the use of capital improvements to perform similar tasks in other agencies and other jurisdictions, e.g., the possibilities for technology transfer. They should provide greater visibility for productivity-enhancing investments and improve the credibility of their investment programs through better justifications and feedback of information on previous investments.

Also, financing policies should be reviewed. Capital investments often lose out in budgetary consideration because of their high initial costs, the ease of deferral, and more pressing operation and maintenance requests. Investments which promise a favorable rate of return and an increase in productivity might fare better if they were separately identified in budget submissions. Such financing techniques as leases, lease-purchases, capital budgets, and revolving funds should be examined (OMB, *et al.*, 1973).

*Service Delivery Mechanisms.* This is a broad area in which states can realize productivity gains if they are willing to experiment with different mechanisms which provide alternatives to present practices. Governments need to develop the capacity to change modes of delivery if existing ones are not as efficient or effective as they should be.

Fosler (1975) has written of the desirability of more direct connections between government service organizations and the people they serve. He sees two new approaches to this end. First, the consumer movement can be enhanced (insofar as it is concerned with the public sector) through increased feedback such as client satisfaction questionnaires, decentralization of administrative services and political decision making, increased accessibility to government, and greater citizen awareness. Second, citizens can be given greater choice in the production and delivery of public services through competition among agencies and with the private sector, and through contracting for services with other organizations. Competition among agencies is illustrated by the city of Boston's use of rehabilitation rebates and code enforcement. The two programs are operated by separate departments to achieve the same goal of meeting adequate housing standards for existing dwellings. Competition from the private sector can be encouraged, for instance, through the public provision of vouchers for services. Contracting can involve either the private sector or other governmental bodies, as with the

Lakewood Plan where many municipal services are provided to smaller communities on a fee basis by Los Angeles County.

Other examples of ways to improve service delivery include the relocation of offices or the sharing of equipment and facilities to achieve economies of scale, and better allocation of employee time to meet patterns of demand. By examining the demand for services and controlling the staffing schedules, crew sizes, and work schedules of an agency, a better mix between service requirements and public resources can be obtained. In doing this, however, managers should determine that the altered workload or caseload ratios do not adversely affect the quality of service provision.

*Management Improvement.* A commitment to "good management" and the presence of the attitudes and devices which the phrase connotes are crucial factors in improving the performance of state government. Although dozens of volumes have been written on this subject, several brief comments should be made about the role of management improvement in a productivity program.

The skills of agency managers are critical to a productivity program. Particularly important is the capacity for systematic analysis of agency operations (both current methods and alternatives) in light of objectives, costs, and benefits. Yet most states appear to be ill-equipped in analytic capacity. The Committee for Economic Development (1976) found chronic deficiencies in line agency management, especially in terms of a lack of training and ability.

The state of Wisconsin has taken a special interest in rectifying this situation. The case study in this report described that state's Career Executive Program and Executive Assessment Center. Wisconsin has also experimented with the use of professional consultants to recruit top managers, with personnel interchange between other levels of government and the private sector, and with revisions in several personnel policies to facilitate more rapid entry and exit from state employment and thus increase the infusion of new blood into the managerial ranks. These changes are directed at the acquisition of talented executives, new advancement opportunities for managers, and more flexibility for supervisors in recruiting and assigning personnel (Lucey, 1975a and 1975b).

These types of executive development programs offer a prime route to improve productivity. States should consider innovative ways to develop managerial skills and match those skills with the different agency needs, through expanded training programs and the establishment of a managerial corps (NYSTF, 1975).

The proper atmosphere for the exercise of management skills must also be present. Several authors have commented on impediments to productivity from the mindlessly tight



controls imposed on managers by restrictive laws, procedures, and regulations. These often result in insular, self-protective bureaucracies where there are no rewards for risk-taking. The useful exercise of judgement emerges over time only after sufficient authority has been delegated and flexibility provided for managers to employ that judgement. Productive management requires that some decision-making responsibilities be placed on middle and lower-level managers (Bell, 1975).

One factor consistently mentioned in the literature and by agency managers as a prime obstacle to productivity improvement is current civil service laws and regulations. The case study in this report also reflects a concern for this problem. Examples of the cumbersome restrictions on management discretion imposed by these rules include limited discipline and discharge powers, uniform pay and promotion schemes, job tenure and seniority rules, and hiring provisions (Lentz, 1975). The effect of such rules on managerial flexibility and control, and hence on efficient and effective operations, should be reviewed and balanced against other values secured by such practices (i.e., equity, security, and nonpartisanship).

An important element of good management which is intimately related to productivity is the setting of and adhering to objectives for state programs. Performance evaluation requires a yardstick for comparison of results to intentions. Although goals should be a product of deliberation among elected officials, managers will be involved in turning these goals into operational objectives. It is important to make presently general or intangible goals more specific and measurable. These objectives will have to be clearly assigned to organizational units and personnel within those units, and placed within discrete time periods.

Ordione (1974) and others have noted that an emphasis upon methods and skills often leads to a shift of managers' attention from the aims of their organization to the behavior required by the rules and practices of the past. This process of "goals displacement," in which formal adherence to bureaucratic procedures becomes a terminal rather than instrumental value, merits concern in any management improvement effort.

A final subject to be touched upon is the relationship between managers and program specialists. Where professionalization of agency personnel has blocked the development of a management ethic through the tunnel vision of particular programmatic loyalties, reform may be necessary. In such cases, either those with general managerial skills must supplement or replace the specialists, or the specialists must become good managers (NYSSTF, 1975).

*Human Resources.* The role of state government-employee relations in productivity improvement has been the subject of much discussion and controversy. Although personnel costs are generally the largest category in state

budgets, Lentz (1975) and others have claimed that too much emphasis is usually placed on this area as a source of dollar savings. Lentz points out that employee compensation accounts for only 20 percent of the total expenditures of state governments, although the percentage is much larger for their annual operating budgets.

Furthermore, it has been claimed that a long-run productivity program which merely seeks to halt the rapid growth of state payrolls will be a "dead letter" as long as many people turn to government for needs not met in the private sector. The increasing political clout of organized government employees is a major factor in many jurisdictions. Cutting the government work force is admittedly different because of political pressures. It has been argued that productivity efforts will have to accept a growing public labor force as a constraint on their scope of action (Adams, 1975).

Still, state governments cannot neglect the critical area of human resource management. An analysis of ways to improve the management of human resources should be an essential component of productivity programs, as long as it is remembered that the goal of such programs is to increase productivity, and not necessarily to reduce the work force (NCOP, 1974).

The effect of productivity job cutbacks or employment ceilings is also a controversial topic. An account of the New York State experience (Sperry, 1975) cites such cutbacks as a way to increase pressure on management and employees to use resources efficiently, and lists a number of ways in which the reductions led to increased productivity. A report of the federal productivity project (OMB, *et al.*, 1973), however, contends that personnel ceilings have major adverse effects on efficient management, and that across-the-board cuts and freezes are especially counter-productive.

It should be noted that alternatives to personnel cuts are available. Retraining, reassignment, and attrition can often be used to achieve the desired ends. Also, as a practical matter, the National Commission on Productivity (1974) found that productivity improvement programs rarely result in layoffs.

Common stereotypes reflected in public opinion polls and everyday conversations depict government workers as lazy clock-watchers. There may consequently be some pressures to focus on forcing state employees to "work harder." But a productivity program aimed primarily at the issue of employee diligence would be wrong on both political and management grounds. Diligence is a problem that should be addressed, but not on a government-wide basis (NYSTF, 1975). Wisconsin's slogan, "Work Smarter, Not Harder," seems especially appropriate.

An alternative approach is to review the work environment. Numerous commentators have noted the problem of



boredom in routine desk jobs and the presence of indifferent or frustrated employees. Part of this situation may derive from underemployment of employees or misallocation of skills. Such approaches as employee attitude and utilization surveys, review of job classification systems, manpower planning and forecasting, expanded participation by workers in objective-setting, greater delegation of authority and responsibility, and new incentive and suggestion procedures might be helpful. A concern for the "quality of work life" is a popular way of framing some of these approaches and might strike a more responsive chord than the use of the term "productivity."

Training geared to specific organizational and jurisdictional needs is another means of securing the skills and attitudes required for the effective utilization of human resources (Shallman, 1975). Wise and McGregor (1975) have noted that a sizable training effort is necessary for a successful productivity improvement program, and that such training includes an entire curriculum, not a single prepackaged course. The Federal Government has developed a number of training programs related to productivity enhancement, and some states offer centralized training programs that can be of value in this regard.

Three concluding comments seem appropriate. First, for any of these approaches or techniques to be effective over a long period of time, they must be made an organic part of the management processes of agencies and state government generally. Second, linkages in these processes—between policy decision-making, budgeting, planning, personnel, capital improvement, and day-to-day operations—must be discovered and strengthened. Third, productivity gain will probably result from the cumulative effect of many incremental improvements, so attention should be turned to as many components of productivity as possible (NYSTF, 1975).

## MEASUREMENT SYSTEMS

The formation of performance measurement systems is not an easy task in the public sector. As previously noted, there are several differences between business and government that make assessment of operations in the latter much more complex.

In spite of the difficulty in forming these measures, governmental jurisdictions in increasing numbers are discovering the necessity of formal performance measures. Demands from legislative bodies and citizens for information on what public agencies are doing and how well they are doing it has increased pressure on the public manager to offer verifiable justification of agency efforts. Indeed, the increasing demand for public sector effectiveness and efficiency has increased the public manager's awareness of the need for effectiveness and efficiency measures as an integral part of management.

In the development and implementation of a performance measurement system, provision must be made for a multitude of variables, including the needs of agency management, employee response and participation, and demands of central executive officers and the legislative body, as well as questions concerning what is to be measured and how it is to be measured. In dealing with these developmental and operational questions, public managers must be aware of what performance measures are not and cannot do, as well as what they are and how they can be used.

In the development of a performance measurement system, state governments must be aware of the limitations of performance measures. The manager who intends to use performance measures as a solution to all management problems will be extremely disappointed. It is important to dispel any exaggerated anticipation associated with a performance measurement system. With recognition of the limitations of performance measurement as well as the value of these measures, an effective system can be developed.

As previously stated, it is important to realize that measuring productivity is *not* the same as productivity improvement. Although the mere existence of performance measures may have a positive psychological effect on the operations of an organization, little significant improvement can be expected from a so-called productivity effort in which the emphasis is on measurement alone. Performance measurement has utility in conjunction with efforts to improve productivity. In addition to the presence of performance measures, an organization must be able to analyze and use this information in relation to its management functions. Performance measures must be considered as only one element of a comprehensive productivity enhancement program.

A second important aspect of performance measures is that they have limited value when used on a one-time basis (Wise and McGregor, 1975). A performance measure derives most of its significance when compared to previous measurements or to a standard drawn from previous measurements or program objectives. Because of this, performance measures are most meaningful when taken systematically over a period of time.

Public managers using performance measures as a single-shot technique in a productivity improvement effort will probably be disappointed in the result. A single measurement exercise may provide some insight into the relative performance of different organizational units, but is not likely to offer many clues to the reasons for these differences. An executive may decide that quantified performance measures are not an effective evaluation method when in fact the technique was not used properly.

Placed in the proper perspective, a performance measurement system can be a valuable management aid, providing

specific information that could not be obtained as easily or reliably by other methods. Probably the most important aspect of performance measures is that they are indicators of change (OMB, *et al.*, 1973). Considered along with other operational information, performance measures can provide a clue to the cause of a trouble area or the occurrence of performance improvement. By tracking performance measures over time, along with other variables in the agency environment, insights can often be derived concerning the interrelationship among operating variables and performance. Used properly, performance measures give management the basis for the analysis of change, positive or negative, and the impetus to make appropriate adjustments.

Besides their utility as management indicators, performance measurements can have value as psychological motivators. Contingent on a well-planned implementation that is not threatening to management or employees, performance measurement systems can create a productivity consciousness in these groups (NYSSTF, 1975). The existence of these indicators enables employees or managers to see the results of their efforts and can spur them to do a more effective and efficient job.

#### ***Implementation and Elements of a Performance Measurement System***

The ultimate worth of a performance measurement system is dependent upon the elements included in the system. As with the introduction of any new program, some initial anxiety can be expected. The initiator of a productivity program must be sensitive to this anxiety or may find this anxiety transformed into hostility. This may be even more important in the implementation of the performance measurement system when these measurements serve an evaluative function.

At the same time that the implementor considers anxieties within the organization, he must also be aware that these anxieties must not be accommodated by eliminating the crucial elements of a good performance measurement system. The best way to reduce such anxiety is to make a determined effort to include all organizational members in the developmental process.

The use of a highly participatory development process not only tends to reduce anxieties, but also introduces different perspectives into the planning stage. The value of this broad participation can be easily understood. For example, non-management employees are probably more aware of the nature of the jobs they actually perform, which is a determination that must be made in the formation of performance measures. The participation of these employees should help refine the measures so that they reflect the actual activities conducted by the agency. Similarly, different levels of management have different information needs, so their input can help assure that a

flexible and responsive system will be developed.

In determining the elements to be included in a performance measurement system, there are several considerations. The first of these is determination of the purposes that the system is to serve. Normally, a performance measurement system developed only for use in budget justifications will be less sophisticated than a system designed as an agency management tool. At the onset of the development stage, the goals and purposes of the system need to be clearly defined and communicated to all levels of the organization.

Closely related to the determination of the system objectives is the development of the measures to be used. As discussed in the Introduction, there are two basic types of measurement: efficiency and effectiveness. In the development of these performance measures, there are many issues and potential problems with which participants must deal. The proper handling of these issues is important in avoiding the commonly found problem of "perverse measurement" (Hatry, 1972). "Perverse measurement" refers to measures which exaggerate the productivity of the unit measured. In a more general way, any measure which does not accurately reflect actual productivity can be considered "perverse." A measurement is just as perverse if it understates productivity as it is perverse when it exaggerates this productivity. As we will see, many perverse measurements are a result of incomplete identification of inputs and outputs of an activity.

An example of a perverse measurement resulting from incomplete accounting of inputs is the situation in which only one major activity input, such as manpower, is identified, but is used to represent total resource use. If a heavy investment in technology reduces the manpower requirements for the activity, there will be a corresponding increase in productivity as "measured" by a performance measure in which the only input recorded is manpower. In this case the effect of not including capital investment as an input is that the performance measure exaggerates the productivity of the activity.

To reduce perversity in performance measures an attempt must be made to:

- (1) *Break down overlapping inputs.* Where a resource, such as a manager, is utilized in several activities, an attempt should be made to assign appropriate amounts of time and cost to the various activities.
- (2) *Depreciate capital costs over the life of the investment.* It is important in terms of the validity of a performance measure that only the actual depreciation of an investment during a measurement period be attributed as an activity input. If the entire cost of a capital investment is attributed to an initial measurement period, the initial



measure will lack comparability with future measures, and will result in perversity in future measures.

- (3) *Include indirect costs in input determinations where possible.* The indirect costs of an activity result from the unavailability of the resources used for other purposes. Though it is difficult to fix this cost, an attempt should be made since the choice of one activity over another may have indirect and direct costs for society.

In addition to defining inputs, the development of performance measures requires a corresponding definition of outputs. This statement may seem obvious, but in the process of developing performance measurements it may be discovered that there is not a clear understanding of the activity outputs. One common mistake is to confuse workload measures for program outputs. In fact, workload measures provide no information on the actual service delivered to a client group or the effectiveness of that service. Where outputs are of a physical nature such as highway mileage built, output determinations are relatively easy to make and can be used in efficiency determination. But as pointed out in Chapter I, there is generally a lack of qualitative information available concerning program outputs.

Even when effectiveness measures are of questionable validity, there is still reason for an agency to go through the process of measurement formulation. At the very least, the attempt at formulating adequate performance measures forces management to consider carefully agency goals, activities, and performance in clearly defined ways (NYSSTF, 1975). In many cases, this focusing will in itself bring a vast improvement to the previously unfocused operations.

A remaining issue in the formation of a performance measurement system is the comprehensiveness of the system. All performance measurement systems do not have to be highly sophisticated. In fact, it is much more important that agencies give attention to improving productivity rather than to refining the measurement system (OMB, *et al.*, 1973). Where possible, productivity measures should be simple and inexpensive by-products of current work measurement systems (OMB, *et al.*, 1973).

But while care should be taken to avoid overburdening an organization with performance measurement to the extent that the obtaining of data disrupts essential activities, it is also important to make the system sufficiently comprehensive to meet all the informational needs. For instance, the nature of the performance measures desired by a central budget agency will be somewhat different from the informational needs of an agency executive.

Another justification for the comprehensive measuring of an agency's performance relates to the complex nature

of most agency functions and the desire for validity in evaluating these functions. Since few agencies are homogeneous in their activities, it is illogical to assume that a single measure can gauge the scope of their programs. For example, a service delivery program should measure not only the number of clients processed, but such factors as the result of processing, satisfaction of the client, and overall effect on the problem addressed by the program.

## MOTIVATION IN STATE GOVERNMENT

Productivity improvement will have to be achieved by people working in the particular environment of state government. They will be asked to scrutinize present operations and in many cases alter them. The process of change will depend heavily on the success of the productivity effort in motivating state employees to accept and participate willingly in this challenge.

Motivation is, of course, a complex subject. Balk (1975a) and his associates, who have written frequently on this aspect of productivity, define three types of behavior that an improvement program must affect: individual behavior, group behavior, and organizational behavior. This section will focus primarily on motivating desired individual behavior. In so doing, it should be remembered that motivating productivity improvement in the public sector is markedly different than it is in the private sector. The influence of surrounding social and political forces is more complex and more readily felt, and technical agency experts alone do not possess the authority to get the job done (Balk, 1975d).

Reform of present governmental practices bearing on individual employee behavior can yield substantial benefits. At present, there is a lack of visible and effective incentive systems for managers and employees. Input allocations are not ordinarily connected to outputs in the public sector, as politics rather than performance often dictates the rewards for agencies and individuals (NYSSTF, 1975). An overriding goal in any productivity effort should be to make efficient and effective performance attractive by monitoring results and linking them with input decisions.

But motivation involves more than measurement. In fact, association of productivity with the excesses of Taylorism can be a stumbling block. To the extent that the program is seen as promoting strict, inflexible work standards, constant measurement, and pressures for higher output, resistance to change will grow. Employees will also fear the threat of lay-offs. To combat the negative connotations of past private sector analogues and the more routinized aspects of productivity measurement, the program should also reflect a concern for the human advantages of productivity—job satisfaction, the quality of work life, etc. The productivity effort in Washington State,



for example, emphasizes "humanistic" values as well as efficiency and effectiveness (Cadoo, 1975).

There are a number of ways to approach motivation. In the beginning, productivity programs should react to the fears and desires of state workers. Ideas should be solicited, orientation and training should be provided where appropriate, the benefits of the program should be delineated, and reasons for becoming involved should be given (Balk, 1975a).

As discussed earlier, productivity programs should address such management improvement issues as enhanced flexibility for managers, greater delegation of authority, and new career development opportunities. These changes should increase the enthusiasm of managers for the productivity effort and should stimulate their performance. In addition, attention should be given to broader participation in goal-setting throughout the agency, perhaps through an MBO program. Total agency involvement should encourage individual and group motivation (Weeks, 1975).

Cash incentives are a popular way of eliciting productive performances from individuals. These can be offered through a variety of mechanisms. First, they can take the form of either flat cash payments or a certain percentage of monies verified as being saved. Second, they can be made available to individual employees or on a department-wide or statewide basis. Third, they can be integrated into collective bargaining agreements or suggestion systems, or be introduced by other means. The criteria for the awards can differ, for example, economies realized or improvements in the quality of service.

There have been a number of experiments with wage incentive possibilities. The case study in this report refers to some efforts and the National Commission on Productivity has depicted many others (NCOP, 1975). There are obviously problems that need to be considered, such as verification of results, balancing the various elements of productivity (efficiency and effectiveness), equity of rewards, and union attitudes, before such incentives should be used.

An exciting innovation attempted by Wisconsin, the productivity reinvestment program, offers some hope of future motivational efficacy. The essence of the idea, as described in this report, is to return a portion of identified savings to agencies for reinvestment in projects that promise to increase productivity even further. Although pitfalls to this approach are evident, it merits further exploration.

Related incentive systems include revised promotion policies and the bestowal of status. By making job performance or results displayed in the productivity program more central to promotion schemes, new advancement opportunities can be provided and motivation strengthened. Positive reinforcement can be given to employees when their accomplishments are officially recognized through

proclamations, awards, publications, or banquets. However, such mechanisms can easily become trivial events with little meaning.

Another path toward motivation is the negative one of punishment for failure to achieve mandated objectives. All employees, of course, should be held accountable for their performance, and poor performance deserves scrutiny and corrective action. It is true that fear of punishment (such as loss of job, demotion, budget cuts) can in some circumstances lead to increased productivity. But a positive approach, with emphasis on new challenges and rewards, should result in better long-range performance than a punitive or pressure-laden approach.

A final subject relating to motivation that must be considered is the role of employee organizations and unions, particularly as collective bargaining becomes more widespread in state governments. These employee groups exist to protect and strengthen the well-being and job security of their members. They are likely to react negatively to productivity programs, with the usual fears of job cutbacks and work speedups. They may be suspicious of measurement processes and changes in personnel policies and management practices. Productivity reward systems may create difficulties in contract negotiations by dividing large collective bargaining units into winners and losers. All of these factors are heightened by the emerging political clout of public employees (Lentz, 1975).

Adversary relations and confrontational styles between government management and workers are becoming more prevalent. In this environment, a productivity campaign may be viewed as a hostile gesture or at least as a reform not in the best interests of state employees. Moreover, labor-management conflict resolution in the public sector requires excessive time in some jurisdictions and becomes a hindrance to productive government.

Obviously, new procedures to arrive at speedier and less ritualistic or adversary-type settlement of disputes would be helpful. New modes of communication between these groups, besides collective bargaining, may be needed (Sperry, 1975). There should be systematic consultation and involvement of workers in any productivity program. Also, we have recommended alternatives to layoffs and a concern for job satisfaction and other aspects of the quality of working life. These approaches should work to offset the problems listed earlier and to fortify the motivation of employees to accept and aid productivity improvement.

The issues raised in this report are meant to stimulate the thinking about productivity programs. The state of the art in the area is such that no "certain" answers exist to the problems we have raised. Improved productivity should be a priority in all sectors of the American economy, especially the public sector, and it is our hope that future research and programs will help achieve this critical goal.

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