PRODUCTIVITY MEASUREMENT IN THE DEFENSE LOGISTICS AGENCY MUST BE SUPPORTED IMPROVED AND USED (U) GENERAL ACCOUNTING OFFICE WASHINGTON DC FINANCIAL AND GENERAL UNCLASSIFIED 18 APR 80 GAO/FGMSD-80-41
To the President of the Senate and the Speaker of the House of Representatives

This report addresses the adequacy of the Defense Logistics Agency's efforts to use productivity and work measurement data in budgeting and staff management. We found that productivity measurement data is not being so used because of serious deficiencies in the measurement system and because management has not encouraged budget review authorities to use such data.

We are recommending that the Defense Logistics Agency, Department of Defense, Office of Management and Budget, and the Subcommittee on Defense of the House Appropriations Committee take action to encourage, improve, and use productivity measurement system data.

We are sending copies of this report to the Director, Defense Logistics Agency; Director, Office of Management and Budget; and Secretary of Defense.

Comptroller General of the United States
DIGEST

Tight budgets and high inflation make it essential that government agencies obtain the greatest output possible from their resources. An effective productivity measurement system can be extremely important in helping agencies achieve productivity improvements.

The Defense Logistics Agency has one of the best-designed measurement systems in the Government, but it does not derive full benefits from the system because it does not use data based on productivity and work measures in budgeting and barely uses such data for other management purposes. (See p. 5 and 6.)

Limited management attention to the system has also caused deficiencies which affect its credibility and use. The deficiencies include insufficient training, inadequate standards development, insufficient controls over data accuracy, and ineffective measurement system use. (See p. 21.)

The Agency's new work standards program could correct some of these problems, but it too has serious management weaknesses which affect data credibility. (See p. 29.)

Productivity and work measures are beneficial as resource allocation tools to the Congress, executive branch management, and budget reviewers at all levels. GAO found that these review authorities, by not requesting or using productivity data where such measurements were possible, contributed to the Agency's not encouraging its managers to make effective use of the measurement system.
RECOMMENDATIONS TO THE DEFENSE LOGISTICS AGENCY

GAO recommends that the Director, Defense Logistics Agency ensure that the productivity measurement system is effectively used by managers at all levels by

-- improving the measurement system methodology for providing summary and program standards and establishing controls over the accuracy and validity of reported data to ensure that correct data is available for performance evaluation and resource determinations;

-- assessing the status of the new work performance standards program with a view toward more timely implementation and assuring better planning and controls for its proper development and maintenance;

-- requiring that data from the system be integrated into the programming and budgeting systems and routinely used for those purposes as well as for making other staff management decisions;

-- assuring that supervisors and managers are trained for their roles in work measurement data usage;

-- supporting the use of work measurement data by incorporating the Civil Service Reform Act's provisions on appraisals and rewards into the measurement system and requiring that other actions be taken to encourage supervisors and managers to use measurement data;

-- providing sufficient guidance and encouragement to the field activities' measurement system staffs and clarifying those staffs' roles and functions; and

-- requiring that measurement system managers establish adequate monitoring and control mechanisms to assure that measurement system personnel are appropriately utilized and that the measurement system is used continuously.
RECOMMENDATION TO THE SECRETARY OF DEFENSE AND DIRECTOR, OFFICE OF MANAGEMENT AND BUDGET

To emphasize the importance of using work-measurement-based productivity data in the budget process, and to encourage its use for other purposes, GAO recommends that the Secretary of Defense and the Director of the Office of Management and Budget require their budget examiners to formally request and utilize such data, as can be developed in their budget reviews.

RECOMMENDATIONS TO THE SUBCOMMITTEE ON DEFENSE, HOUSE APPROPRIATIONS COMMITTEE

To assure improvement in the Agency's productivity measurement system, GAO recommends that the Subcommittee require the Agency to

--provide the Subcommittee with definitive plans for timely implementation of the new work performance standards program; and

--submit, as part of its budget package, information on (1) progress in implementing the program and (2) the extent to which budgeted resource requirements are based on valid work measurement data.

AGENCIES' COMMENTS

The Department of Defense, the Defense Logistics Agency, and the Office of Management and Budget were requested to provide written comments on the GAO draft report. The Department of Defense did not offer comments before this report was issued. The Defense Logistics Agency provided oral comments and stated that it agreed with GAO's findings and recommendations and further stated that it plans to move with improvements to the measurement system as fast as available resources permit.

The Office of Management and Budget expressed concern that it retain discretion over the use of data sources which it considers most
germane to the budget review. GAO believes that the Office of Management and Budget should require its examiners to request and use productivity data in the budget review process to the extent possible.
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ABBREVIATIONS

DCASR Defense Contract Administration Services Region
DGSC Defense General Supply Center
DIMES DLA Integrated Management Engineering System
DLA Defense Logistics Agency
DPSSO DLA Performance Standards Support Office
GAO General Accounting Office
OMB Office of Management and Budget
<table>
<thead>
<tr>
<th><strong>Actual hours</strong></th>
<th>Time taken to complete a specified amount of work.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Budget submission</strong></td>
<td>Documents showing the resources requested for the budget year and the justification for both the amount of the resources and their purpose.</td>
</tr>
<tr>
<td><strong>Earned hours</strong></td>
<td>The amount of time it should have taken to complete a specified amount of work. (Standard hours multiplied by work units performed.)</td>
</tr>
<tr>
<td><strong>Effectiveness</strong></td>
<td>Comparison of actual results against an objective or goal. Goals are used to assess how well an organization is accomplishing its programs.</td>
</tr>
<tr>
<td><strong>Efficiency</strong></td>
<td>The best use of people and other resources to produce at the lowest cost the goods and services necessary to accomplish the organization's mission.</td>
</tr>
<tr>
<td><strong>Engineered performance standard</strong></td>
<td>The time (staff-hours) it should take a trained worker, or a group of trained workers, working at a normal pace to produce a described unit of work of an acceptable quality according to a specified method under specified working conditions. The engineered performance standard is derived from a complete, objective analysis and measurement of the task.</td>
</tr>
<tr>
<td><strong>Performance information</strong></td>
<td>Data showing the planned and actual results of an organization's activities and whether they were accomplished efficiently and effectively.</td>
</tr>
<tr>
<td><strong>Productivity</strong></td>
<td>The ratio of an organization's output units to the associated input.</td>
</tr>
<tr>
<td><strong>Resources</strong></td>
<td>The personnel, funds, and assets of an organization.</td>
</tr>
<tr>
<td><strong>Unit cost</strong></td>
<td>The cost of the resources used to produce a unit of work.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Workload/output indicators</td>
<td>The basic units of work or tasks which accomplish the mission and objectives of an organization.</td>
</tr>
<tr>
<td>Work measurement data</td>
<td>Data on staff-hours (or costs) and production by work units, so that the relationship between output and staff-hours (or costs) can be calculated and used for personnel planning, scheduling, production, budget justification, performance evaluation, and cost control.</td>
</tr>
<tr>
<td>Work mix</td>
<td>The blend of different types and amounts of work accomplished.</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

Productivity growth has long been recognized as essential for a strong national economy. In this time of spiraling inflation and high labor costs, the improvement and maintenance of productivity levels are extremely important. Budget limitations force Government agencies to obtain the greatest output possible from their resources. Productivity measures based on an effectively implemented and operated work measurement system provide managers with reliable information for justifying, allocating, and controlling personnel resources.

Productivity and work measures are beneficial as resource allocation tools for the Congress, executive branch management, and budget reviewers at all levels. Within an agency, measures are important for planning and controlling workload, balancing resources, and identifying areas where labor is being used inefficiently.

This report, which discusses the Defense Logistics Agency's (DLA's) efforts to use productivity data in budgeting and staff management, is part of our sustained commitment to monitor the status of productivity in the Government. (Some of our prior reports on productivity are listed in app. III.)

GENERAL INFORMATION

DLA, a unit of the Department of Defense, was established in 1961 as the Defense Supply Agency to consolidate common supply support functions for the military services. The Agency's greatest expansion came in 1965 when it absorbed the Defense Contract Administration Services. In 1972 and 1973, the Agency assumed responsibility for worldwide management of property disposal, bulk petroleum, and subsistence. To reflect its expanded role, the Agency was named the Defense Logistics Agency on January 1, 1977.

Today, DLA's basic missions fall into three major categories--procurement and supply, contract administration, and technical and logistical services. DLA headquarters develops policy and controls the Agency's worldwide network of activities including six supply centers, seven depots, six technical and logistical services centers, nine Defense Contract Administration Services regions, and a number of field

1/DLA is currently consolidating certain regions in an effort to reduce the total number to five.
extension offices. (See app. II for a list of major field activities.)

DLA officials said the Agency's objective is to provide these support activities at the lowest feasible cost. DLA's annual budget now exceeds $1.1 billion. For fiscal 1979 the annual payroll was $900 million. In January 1979, DLA's 49,062 authorized personnel were allocated to the various agency functions as follows:

<table>
<thead>
<tr>
<th>Function</th>
<th>Number of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply support</td>
<td>23,723</td>
</tr>
<tr>
<td>Contract administration</td>
<td>17,095</td>
</tr>
<tr>
<td>Logistical service</td>
<td>6,743</td>
</tr>
<tr>
<td>Headquarters</td>
<td>961</td>
</tr>
<tr>
<td>Field offices</td>
<td>540</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>49,062</strong></td>
</tr>
</tbody>
</table>

Of these, 48,002 (or about 98 percent) are civilian employees.

**DLA'S PRODUCTIVITY MEASUREMENT SYSTEM**

DLA recognized the need for productivity measurement and initiated such a system in 1965. The DLA Integrated Management Engineering System (DIMES) was implemented to use industrial engineering techniques to achieve efficiency and enhance productivity. This work measurement system was developed based on work performance standards established at each major field activity. These standards, which specify the "should-take" time to accomplish work, are structured into higher level standards for headquarters managers to use in evaluating labor performance, determining needed staff, and allocating resources. The system provides various work measurement reports containing performance data for use by supervisors and managers at all DLA levels. The system's only major change was in 1974 when DLA decided to replace its locally developed standards with standards applicable nationally.

DLA headquarters' Office of Comptroller is responsible for DIMES. Each major field activity's office of planning and management is responsible for local DIMES implementation.

In appropriations hearings for fiscal 1979, DLA reported to the House Appropriations Committee's Subcommittee on Defense that the Agency's productivity increased nearly 13 percent since 1976. Agency personnel attributed this increase
to imposed personnel reductions at a time when workloads were increasing. DLA was unable to attribute any specific overall productivity achievements directly to DIMES or specifically relate the personnel reductions to changes in the effectiveness or quality of work, but DLA did point to some specific management improvements resulting from methods studies and other actions.

DIMES is integrated with other resource management systems to provide productivity measures for intermediate and top management. DLA uses the following diagram to illustrate this integrated approach for justifying, distributing, and controlling resources. (Each system element is discussed in app. V.)

OBJECTIVES AND SCOPE OF REVIEW

Our objective was to determine DLA's effectiveness in using productivity measurement system outputs in budgeting and other staff management decisionmaking processes. Our review also answered the January 25, 1979, request from the Chairman of the House Appropriations Committee that we address (1) the adequacy and validity of DLA's use of productivity data for
justifying its staffing requests to the Congress and for allocating those resources in the Agency and (2) any improvements needed in the productivity measurement system. (See app. I.)

Our review was performed at DLA headquarters in Alexandria, Virginia, and at two major field activities—the Defense Contract Administration Services Region (DCASR), Chicago, Illinois, and the Defense General Supply Center (DGSC), Richmond, Virginia. These activities have those functions which represent the largest concentration of Agency employees. At DLA headquarters, we examined the budgeting process, identified the extent to which productivity data was used in justifying staff requirements and for other staff management purposes, and reviewed the management of the productivity measurement system.

At the field activities we reviewed the local application and management of the measurement system including the development and maintenance of work standards; the compiling, reporting, and use of measurement data; and the extent to which the field activities use productivity measures and participate in determining the resource requirements.

Concerning DLA's budgeting process, our review included discussions with Office of Management and Budget and Office of the Secretary of Defense budget examiners.

In reviewing DLA's measurement system we used established criteria for an effective productivity measurement system. (See app. IV.) Also, we were assisted by a consultant with expertise in productivity measurement.
CHAPTER 2

DLA IS NOT ACHIEVING MAXIMUM BENEFITS
FROM ITS PRODUCTIVITY MEASUREMENT SYSTEM

In prior reports, we have often noted that disuse causes the quality and reliability of performance measurement data to decline. However, we believe that if agencies were required to use the data for budgeting and other management purposes, managers would ensure and maintain data quality.

DLA has spent millions of dollars on the development and implementation of its measurement system and through its integration with the programming, budgeting, and management review systems probably has one of the better designed systems in the Federal Government. But the benefits of the system are severely restricted because DLA's

-- budget requests for staff are not based on the use of productivity measurement system outputs and
-- measurement system does not provide an adequate basis for managing personnel or for identifying areas needing improvement.

The measurement system is not being used in budgeting and is being used very little by management in decisionmaking for many reasons. The most significant appear to be that

-- the use of the measurement system has not been sufficiently encouraged by outside budget review authorities or internal managers;

-- the system has not been effectively managed, which has resulted in reduced data credibility and accuracy, inadequate training of managers in using the data, and poor utilization of DIMES staff for local system implementation and maintenance; and

-- a new work performance standards program which is being implemented to correct many of the system's technical problems also is ineffectively managed.

This chapter discusses the weakness of DLA's efforts to use the productivity measurement system outputs and some of the restricted benefits being achieved. The remaining chapters discuss the management and system improvements needed to encourage managers to use the outputs and to assure that the work measurement data is reliable.
PRODUCTIVITY MEASUREMENT SYSTEM
OUTPUTS ARE NOT USED IN BUDGETING

Productivity data based on a sound, effective work measurement system provides an organization the most accurate basis for forecasting work force and dollar needs. During May 10, 1979, appropriation hearings, DLA told the House Appropriations Committee's Subcommittee on Defense that the workload measurement system was instrumental in developing "end strength" personnel requirements and that without DIMES, another system would be necessary to determine and justify resource requirements. However, our review showed that work measurement and productivity data produced by DIMES was not used to develop and justify the personnel requirements contained in the budget submissions.

DLA's approach to budgeting and its failure to use the measurement system data have resulted in

--differing relationships between staffing and workloads for similar programs at field activities,

--inadequate development and application of projected productivity improvement goals, and

--little motivation for field activities to participate in determining resource requirements.

As illustrated below, this has resulted in a complete breakdown in DLA's ability to achieve the integrated resources management system's objectives of developing a reliable performance-based operating budget and using it as the basis for distributing resources and realigning priorities.
Not using work-measurement-based productivity data results in questionable staffing levels

DLA's budget process virtually ignores measurement system data for justifying and allocating personnel. DLA designed its measurement system to provide program level standards for use in programming and budgeting. But such standards are not used to determine staff requirements or to allocate employees within the agency because management has not required and supported use of the standards in budgeting.

DLA uses a centralized, top-down approach to budgeting which is performed primarily at the headquarters level. Using imposed budget limitations from the Office of the Secretary of Defense, DLA develops its budget package considering special program needs, zero-based budgeting data, and estimated workloads. Using those considerations and their judgment of the impact of each, budget personnel compute staff requirements and allocate the resources to program areas by applying production rates to forecasted workloads. The production rates for each mission area are computed based on historical and recent actual performance trends. The workload estimates result from negotiations between the budget personnel and program managers. The resource requirements and allocation figures are also adjusted based on special program needs which are determined by the program manager's judgment.

Our analysis showed that DLA's computation of personnel requirements using the historically based production rates differed significantly in some instances from those based on program standards for fiscal 1979.

As shown in the table on page 8, personnel requirements which have been computed using program standards differ by 1 to 13 percent from personnel requirements based on historical production rates. Further, in these examples the program standards computations result in higher personnel requirements than the historical rates. Normally, personnel requirements based on "should-take" standards will show a lower requirement than historical rates. DLA's program standards, however, are not true should-take standards. Details regarding development of program standards are provided on page 25.
Differences in Staff-year Requirements Using Standards and Historical Rates

<table>
<thead>
<tr>
<th>Program</th>
<th>Estimated number of work units</th>
<th>Computed on program level standards</th>
<th>Computed on historical production rates</th>
<th>Difference Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement</td>
<td>3,017,000</td>
<td>2,783</td>
<td>2,613</td>
<td>170</td>
<td>7</td>
</tr>
<tr>
<td>Supply:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Inventory control points</td>
<td>19,485,000</td>
<td>2,228</td>
<td>2,122</td>
<td>106</td>
<td>5</td>
</tr>
<tr>
<td>- Depots</td>
<td>17,995,000</td>
<td>7,081</td>
<td>7,017</td>
<td>64</td>
<td>1</td>
</tr>
<tr>
<td>Contract administration's production function</td>
<td>190,500</td>
<td>2,647</td>
<td>2,395</td>
<td>252</td>
<td>11</td>
</tr>
<tr>
<td>Contract administration function</td>
<td>248,750</td>
<td>3,534</td>
<td>3,126</td>
<td>408</td>
<td>13</td>
</tr>
</tbody>
</table>

Differences also existed in the allocation of personnel for the major field activities compared to the requirements based on program standards. For example:

-- The resources allocated for the supply system's storage and transportation function ranged from 61 employees more than the standard at the Richmond, Virginia, DGSC, to 64 employees less than the standard at the Columbus, Ohio Defense Construction Supply Center.

-- The resources allocated for the DCASR's quality assurance function ranged from 5 employees more than the standard at the Philadelphia, Pennsylvania, DCASR to 106 less than the standard at the Boston, Massachusetts, DCASR.

This situation may also be partly due to program managers' methods of allocating resources. For example, one program manager told us he redistributed 85 personnel spaces equally to all field activities without using performance data to assess each activity's needs.

Budget personnel concerns over the validity of standards and related performance data, a lack of management commitment,
and insufficient awareness of the benefits contributed to the failure to use work measurement data in budgeting. Although DLA instructions have long recognized the need for such data, budget personnel have not been required to use it in their budget development and execution. In addition, these personnel appear unaware of the value of using productivity data based on the measurement system in justifying and allocating resources when these resources are limited due to funding constraints. Budget personnel did not fully understand the process for developing detailed program level standards or what the program standards are designed to represent.

Also, the program managers were not committed to using work measurement data in their staffing decisions. The reasons they cited were (1) the budget personnel would not accept such data as justification for resources and (2) the data reflected a need for more resources than were available.

Not using work measurement data means poor development and application of projected productivity improvements

Another way measurement data can be used in budgeting is in developing and applying productivity goals. Productivity goals are an organization's objectives for improving labor force performance and efficiency. Although DLA has included productivity goals in its budget submission, it has not used the data for this purpose. For example, DLA's fiscal 1979 budget submission contained a 2-percent productivity improvement goal for each measurable program area. However, these projected improvements were greatly influenced by the personnel ceiling and reductions imposed by the Office of the Secretary of Defense, and were applied almost equally to the field activities without regard for their performance capabilities. The projected productivity improvements ranged from 1.9 to 2.3 percent. DLA did not consider using measurement system data to determine each activity's demonstrated productivity or its ability to achieve projected improvements. However, in applying the productivity goals to the field activities, management improvements that were expected at the field activities were considered.

Field activities seldom use work measurement data to justify staffing

The major field activities have little motivation to use work measurement data in their justification and allocation of staff resources because of (1) their limited involvement in the budgeting process and (2) the nature of the budget guidance from headquarters. Managers and budget personnel at field activities reviewed stated that they were unaware
or unsure of the techniques and data used by headquarters in developing the budget for staffing. These people generally felt that they could only use the guidance on staffing levels with requests for internal redistribution of employees.

Management and budget personnel's basic direct involvement in budgeting is the submission to headquarters of what is termed zero-based budgeting data. The data represents the impact of an arbitrarily reduced level of effort and is a means of ranking the reductions of resources so that the probable effects of different funding levels can be analyzed. The opportunities to use work measurement data to reflect the impact of reduced resource levels is apparent and DLA's guidelines recommend such use. However, our review of the zero-based budgeting data for the Richmond DGSC and the Chicago DCASR disclosed that

-- work measurement data was seldom used in developing the zero-based budgeting data and

-- the impact of the resource cuts on mission capability was not always reflected.

This nonuse of work measurement data existed because the zero-based budgeting data gathering process had been carried out perfunctorily. The field activities' managers (1) were skeptical of this data's impact on headquarters' staffing decisions, (2) received no feedback on the data's usefulness, and (3) believe the process was unrealistic due to the length of time between data development and its intended application.

Furthermore, the procedures and format that headquarters uses to inform the field activities of their staffing levels undermines the activities' initiative to consider the influence of local conditions on staffing authorizations. Headquarters annually gives the field activities initial budget guidance specifying personnel ceilings by program area and tells activity commanders that the staffing levels are firm. There are strong indications that the activities interpret this guidance as final and feel that they cannot influence the determination of resource requirements for their programs. For example,

-- DGSC computed a simple historical ratio of personnel to workload for comparison with the fiscal 1979 headquarters budget guidance. Although the computations showed a need for about 30 employees less than headquarters recommended, DGSC accepted the guidance--with the exception of an internal reallocation of 20 spaces--even though the DGSC commander recognized the need to consider local conditions and priorities.
The Chicago DCASR combined program standards with other management information to develop an elaborate display of resource requirements and allocation figures. Although the Chicago DCASR's comparison of its computation with the headquarters guidance showed a need for 88 more people—8 percent more than the guidance—the region accepted the decisions on staffing levels. Regional officials said they did not request more staff because the guidance states that resource levels are firm.

**MEASUREMENT-SYSTEM-BASED PERFORMANCE DATA NOT USED EXTENSIVELY FOR OTHER MANAGEMENT PURPOSES**

The limited use of data for nonbudget decisions in staff management further restricts achieving desirable results from DLA's productivity measurement system. Work measurement data appropriately summarized, based on valid work performance standards, is useful at all management levels for measuring operational effectiveness, trend and variance analysis, planning and scheduling work, and assessing individual performance. Evaluating actual work performance in relation to standard performance is the essence of a work measurement system. Analysis of such data can lead to identification and correction of the cause of inefficiencies, and thus increase productivity.

DLA designed an extensive automated data collection and reporting system to provide work measurement data ranging from detailed performance data at the lowest level work center in the field to summary performance data for headquarters use. The system provides mechanisms for using the data to plan and schedule work, evaluate organizational functions, and perform trend and variance analysis.

Managers and supervisors at all levels were generally conversant with the performance data reported within DLA. But their use of such data in routine decisionmaking was limited. Data usage appeared to result from staffs' desire to satisfy an institutional requirement rather than from their awareness of the benefits of using the data to better manage resources. This, combined with managers' belief that the data lacks credibility, has greatly restricted DLA from obtaining the full benefits of its measurement system.

**Use of headquarters data is limited**

Summary performance data on each function at the major field activities is provided for headquarters managers to use in (1) projecting resource requirements, (2) evaluating the
effectiveness with which the resources are distributed and utilized, and (3) briefing the Agency Director during the monthly management review. However, as depicted below, the limited data use for these purposes minimizes the effectiveness of the management review and performance evaluation system elements of DLA's integrated resources management system.

Headquarters' primary use of the data is to brief the Director monthly on significant variances between standard and actual performance of major field activities. According to the DLA comptroller, this occasionally results in staffing decisions. However, not all data is presented and the explanations for the variances often do not indicate the needed corrective action.

Program managers are supposed to use the performance data in the performance evaluation review. As part of this process they are to monitor and evaluate the field activities' reported explanation for out-of-tolerance conditions--situations in which a function's performance data reflects a

1/See page 25 for a further discussion of the impact on the performance evaluation system.
variance of plus or minus 10 percent from a performance efficiency level of 100 percent for 3 consecutive months. In discussions with various program managers about their monitoring of out-of-tolerance conditions, some managers had no record of receiving the field activity explanation. Some, as a practice, did not review and follow up on such cases and recommend corrective action. Further, we found that three of nine situations reported by the Richmond DGSC and the Chicago DCASR, and included in the monthly management review for the 19-month period ending June 1979, did not contain the applicable explanations.

Concerning other potential uses of the data on resource utilization, none of the program managers interviewed could demonstrate that their resource-related decisions were based on the data—they only stated that performance data was among several factors considered.

Field activities data use also limited

The use of performance data at the field activities reviewed was similar in many respects to that at headquarters. The field activities receive performance data based on both the detailed and summary standards—the summary data for use by directorate heads and the activity commander, and the detailed performance data for use by lower level managers and supervisors.

The summary performance data is monitored and used primarily to identify and explain out-of-tolerance performance. Analyses of these situations, when performed, were often not documented and explanations for the conditions were not always meaningful. For example, the Chicago DCASR did not prepare the required explanations for 18 of 59 instances, and those prepared were not based on adequate analyses and did not sufficiently explain the reasons for the performance variances. Typically, vacant positions and increased workload were cited as the reasons for out-of-tolerance performance. However, these reasons were actually unrelated to the performance variances.

Both DGSC and the Chicago DCASR had required that the detailed level performance data be monitored for out-of-tolerance conditions and that the reasons for the conditions be reported to management, but both discontinued the practice in 1976. The Chicago region reinstituted the procedure for 2 months in 1977 only to find that most explanations for performance variances were related to invalid standards. The region again decided to reinstitute the reporting requirements in June 1979, but waived the requirement for work centers.
where the explanations were already known. DGSC did not reinstitute its requirement.

Managers and supervisors in the field often stated that performance data was a consideration in their decisionmaking. However, only in isolated instances could they show where they specifically used the data to redistribute resources or to justify and allocate overtime.

CONCLUSION

Because work-measurement-system-based productivity data is used so little, DLA does not know if it has reasonable levels of resources assigned to its field activities or if the resources are efficiently used. We believe that DLA has failed to take advantage of its yearly investment in a measurement system which offers significant benefits.
CHAPTER 3

EFFECTIVE USE OF THE MEASUREMENT SYSTEM FOR MANAGING AND BUDGETING NEEDS TO BE ENCOURAGED

We believe DLA's failure to fully use its measurement system for managing and budgeting is directly related to the lack of encouragement managers are given to use the measurement-system-based productivity data. Effective use of measurement systems depends on the importance given such systems and the incentives offered managers for using the system's outputs. However, managers within DLA have not received such encouragement from external or internal authorities. We found that

--external budget reviewers' failure to request and use productivity data based on the work measurement system has contributed to DLA's lack of interest and enthusiasm for the use of such data and

--DLA officials have not encouraged managers and supervisors to use the data.

BUDGET REVIEW AUTHORITIES HAVE NOT ENCOURAGED USING MEASUREMENT SYSTEMS

Budget review authorities have not adequately encouraged the effective use of work measurement data by DLA in its budgeting. Although the Department of Defense, the Office of Management and Budget (OMB), and the Congress have emphasized using productivity data in formulating budget requests, neither agency nor the Congress has requested or utilized work-measurement-system-based productivity data in its budget review processes. We believe this lack of action by the review authorities has contributed significantly to DLA's limited efforts to use such data to justify and allocate staff. Agencies will place greater emphasis on improving productivity if they believe such data will be used for formulating, executing, and reviewing budgets.

Defense does not use measurement-system-based productivity data in reviewing DLA's budget

The Department of Defense requires its components to utilize productivity and performance data in developing requirements and allocating resources. However, the Office of the Secretary of Defense budget reviewers do not use measurement-system-based data in their analysis of DLA's budget.
The reviewers expressed confidence in DLA's work measurement data based on their knowledge of the system obtained from a DLA briefing. However, they use selected workload and actual or trend production rates along with their knowledge of various program trends to appraise DLA's personnel requirements. The Office of the Secretary of Defense analysts responsible for reviewing DLA's budget said they do not specifically require agencies to use work measurement data and that this data alone would not be adequate justification for resources. Their reason for not using DLA's work measurement data is that it was not used by prior budget reviewers. The Office of the Secretary of Defense analysts further stated that incentives for using work measurement data are not provided to DLA because limited resources are available for allocation to the agency.

We believe that the Office of the Secretary of Defense budget reviewers' lack of interest in DLA's measurement data for budget considerations has deemphasized the importance of its productivity measurement system and has contributed to DLA's limited use of such data.

OMB does not encourage DLA to use work-measurement-system-based productivity data in budgeting.

Using productivity data in conjunction with specific program objectives contributes to an improved capability to review resource needs. Although OMB has issued instructions to executive agencies emphasizing and directing the use of productivity measures in budgeting, it does not request or use such data in its review of DLA's budget submission.

OMB instructs its examiners to ensure that agency management provides for systematic improvement in productivity and efficiency. OMB has also published general requirements for using productivity data in its Circular A-11, Preparation and Submission of Budget Estimates, which states:

"Work measurement, unit costs, and productivity indexes should be used to the maximum extent practicable in justifying staffing requirements."

However, the OMB examiner responsible for reviewing DLA's budget for fiscal 1979 and 1980 did not use measurement data. She stated that she is not familiar with DLA's performance measurement system, does not consider measurement data in her review, uses predominately historical trend data to assess agency resource needs, and sometimes requests data on DLA's workload indicators. She stated that she never accepts work measurement data as justification for resources because she
is familiar with another agency whose top management lacks confidence in such data and is not willing to use it to allocate resources.

The OMB examiner currently responsible for reviewing DLA's fiscal 1981 budget told us that he is not familiar with DLA's measurement system and that he does not consider performance standards data in reviewing other agencies' budgets. Rather, he uses workload trends and past budget resource data. This examiner also stated that OMB Circular A-11 allows each examiner to decide whether to use such data. However, he has not had any formal training in using productivity data in budgeting and appeared not fully aware of the uses of such data.

We believe OMB's failure to use measurement-system-based data in the budget review further deemphasizes the importance that Circular A-11 seems to place on using such data.

Need for greater congressional interest in using productivity data

The Congress can increase agency emphasis on using productivity data by encouraging the use of such data in justifying staffing requests for activities where productivity can be adequately measured. When reviewing agency budgets, oversight committees and appropriations subcommittees can encourage the use of productivity data by

---requesting productivity data to support agency requests for staffing increases for those activities that are susceptible to such measurement;

---requesting concise statements on the status of agency or department productivity improvement programs, work measurement systems, and the extent to which budgets are based on productivity data; and

---creating reinforcements for using productivity data through the use of budgetary and organizational incentives.

The staff of the House Appropriations Committee's Subcommittee on Defense stated that they have been concerned about the credibility of DLA's productivity data for the last few years and had not provided any incentives for its use. They said their concerns were confirmed by the Committee's April 1976 report on DLA's operations.

We believe that an across-the-board effort from all levels of the Congress, OMB, and agency top management to emphasize work measurement data is the best way to increase Federal managers' use of the data and thereby increase productivity itself. This is best illustrated by one DLA budget official
who said that he could not be expected to distribute resources in DLA using measurement-system-based data when higher level review authorities do not allocate resources based on such data.

DLA HAS NOT TAKEN ACTIONS TO ENCOURAGE USING THE MEASUREMENT SYSTEM

In addition to the actions needed by the Congress and other budget review authorities, DLA also needs to encourage managers and supervisors to use labor performance data in their routine decisionmaking. Specifically, DLA should provide incentives for using performance data, hold managers accountable, and eliminate barriers.

Incentives necessary for using performance data

Incentives to managers for using performance data are crucial to the success of work measurement systems in the Federal Government because the Government does not provide the same degree of incentives for cost reduction as private industry, which is profit motivated. The importance of and need for rewards and accountability for using performance data has been demonstrated by some Federal organizations. The Internal Revenue Service has successfully used what it refers to as a "profit-sharing" technique with its regional managers. It allows a manager who improves his or her organization's productivity over a year to be granted back resources equal to about one-half of the annual savings to use on activities which were approved but not adequately funded. The Department of Health, Education, and Welfare's policy is to disallow staffing increases, except in emergency situations, unless the increase can be supported with workload projections and work measurement techniques.

We found that DLA made no effort to institutionalize incentives into the system, and both headquarters and field managers were generally unable to cite any incentives. Headquarters officials responsible for budgeting and allocating resources stated that there are no incentives for using performance data because DLA has limited resources. Measurement system managers said they are not aware of any incentives they could provide.

Likewise, managers at the field activities we visited generally could not point to any specific incentives that were established to encourage use of the data. At one DGSC directorate, work performance standards were occasionally used to justify group service awards.
Although the Chicago DCASR commander said he had not considered the need to encourage using performance data, some officials felt that the use of such data improves supervisory capabilities and increases a manager's ability to justify more employees, thereby constituting incentives. However, some DCASR managers believed they were more likely to be penalized than rewarded if they used measurement data.

Managers should be held accountable for data usage

Although holding managers accountable for the use of performance data could motivate them to use such data, DLA has not done this. Headquarters program managers are in staff positions without any line responsibility for the field activities' labor performance effectiveness. Some managers stated they felt no sense of accountability for the productivity of the labor force under their cognizance and that such labor performance did not affect their own performance assessment.

Title V of the Civil Service Reform Act, enacted on October 13, 1978, ties improved efficiency, productivity, and quality of work to the merit pay provisions for managers and supervisors in grades GS-13 through GS-15. In addition, the act requires that performance standards be established so performance can be evaluated with objective criteria related to each employee's job. Such standards once identified and employed, should provide meaningful incentives and direct more management attention to productivity improvement at all levels. However, at the time of our review, DLA had not decided whether the measurement system would be included in its implementation of the act's merit pay and appraisal provisions.

DLA must eliminate barriers to data use

While incentives and rewards for using performance data are important to the success of any work measurement system, it is equally important that disincentives or barriers which discourage such data use be removed. DLA has not identified and therefore has not eliminated barriers. Some of the barriers which we identified or were cited to us by certain DLA managers include:

--The practice of making across-the-board staff reductions and equally distributing resource gains and losses to all field activities without considering an organization's demonstrated productivity accomplishments or its ability to achieve further improvements.
--The fear of grade reductions when staffing levels are reduced because Civil Service regulations associate grade with staff supervised.

--The rarity of an organization's gaining employees based on the system's data compared to the likelihood of losing employees when the data indicates over-staffing.

--Use of measurement data generally is not considered in rewarding outstanding performance.

Our previous report 1/ on a study of 13 agencies showed that they needed similar incentives. Also, the report identified several disincentives similar to those at DLA.

CONCLUSION

Undoubtedly the management's limited emphasis on the measurement system and current problems associated with it also have discouraged using such data. However, we believe that all organizations responsible for managing and budgeting resources must stress the importance of measurement systems and provide appropriate incentives and rewards for their use before managers and supervisors will effectively utilize productivity data.

CHAPTER 4
OTHER ACTIONS NEEDED BY DLA
TO EFFECTIVELY MANAGE THE
PRODUCTIVITY MEASUREMENT SYSTEM

Not fully using productivity data for managing and budgeting and not encouraging use of such data is related to a lack of credibility in the data and other problems of ineffective management of the productivity measurement system. Management's failure to consistently emphasize the importance of productivity data, monitor its uses, or maintain necessary controls has resulted in:

-- insufficient training of managers and supervisors in the benefits and uses of measurement data;
-- lack of credibility in the measurement data because of inadequate development, maintenance, and control of work performance standards;
-- insufficient controls over the accuracy and validity of reported performance data; and
-- ineffective use of field activity DIMES staff for local system implementation and maintenance.

Experience has shown that a principal ingredient of long-term success of any measurement system is the sustained emphasis and commitment by management. For example, one city discontinued its system in one area on a test basis for about 2 years to determine whether performance efficiency would be affected. Labor performance decreased in 9 of 10 work centers. But when the system was reinstated, performance immediately began rising in 7 of the 10 work centers. We believe that management's continued commitment, interest, and emphasis are necessary for maximum benefits from work measurement techniques. Such support combined with adequate controls over system implementation and operation is essential to assuring the system's continuing success.

INSUFFICIENT TRAINING IN MEASUREMENT DATA USAGE

One of the reasons DLA managers do not use measurement data is that they have not been trained to. Training of managers and supervisors in the uses and benefits of performance data is sporadic, and formal training is not provided to the headquarters program managers. Although both DGSC and
the Chicago DCASR provide some exposure to work measurement during routine supervisory training, this minimal instruction has not been successful. During our discussions with managers and supervisors, we found that

-- program managers generally learn through on-the-job training provided by their predecessors,

-- some supervisors at DGSC were not trained and were not fully aware of the information contained in the work center performance reports, and

-- some personnel responsible for using productivity data at DCASR had been in their positions from 4 months to 5 years but had not yet been trained.

At DGSC, where weekly and monthly reports containing performance data are given to managers and supervisors, some supervisors felt that the cyclical nature of the organization's work invalidated the performance data. At the Chicago DCASR where performance data was provided only monthly, some supervisors felt that they were close enough to the work environment that they did not need to rely on data usage.

EXISTING STANDARDS NOT EFFECTIVELY MANAGED, MAINTAINED, OR CONTROLLED

Another reason DLA managers do not use measurement data is that they do not believe it is credible. The low credibility accorded DLA's work measurement and performance data by its managers is largely due to deficiencies in management of the work standards program. The validity of a work measurement system hinges on the accuracy and validity of the work standards established. The experience of the Department of the Army illustrates the need for valid standards. Army managers determined that employees were performing at 12 percent above the standards. However, when the standards were properly adjusted, it was determined that employees were performing at 19 percent below standards. Thus, without valid standards, performance efficiency levels and resource needs are questionable.

Valid detail level work standards not developed or maintained

DLA did not adequately manage its existing work standards program in that responsibility for the program was fragmented and the program was not centrally monitored and controlled. Lack of both adequate standards documentation and overall review caused inconsistencies between standards for
similar functions at different activities. For example, we found that

--the standard hours for awarding large purchase line items ranged from 5.022 at the Richmond DGSC to 7.579 at the Alexandria Defense Fuels Supply Center and

--the standard hours for the quality assurance function ranged from 0.188 at the Chicago DCASR to 0.333 at the Atlanta DCASR.

Also, DLA did not achieve and maintain its goals for standards coverage because (1) inadequate procedures were used in standards development and (2) the requirement to periodically reevaluate the standards was prematurely relaxed.

Because the performance standards program is an essential link in the integrated resource management system, it directly affects the credibility of the performance evaluation, management review, and programming and budgeting systems. As illustrated below, deficiencies in the standards program provide another significant break in a well-designed framework for personnel management.
DLA's early efforts to develop work performance standards recognized the need for standards coverage goals and a requirement that standards be periodically reevaluated. However, sufficient standards coverage was not obtained because of problems with standards development and maintenance from the start. These problems, coupled with a new work standards program, caused DLA to drop the goals and relax the standards maintenance requirement.

Performance standards must be updated to reflect changes in methods, equipment, and procedures. Otherwise, the standards will not accurately reflect the time it should take to perform the task, and performance data will not reflect the true resource needs of the agency. To maintain the validity of its standards, DLA established a requirement that work standards be reevaluated every 2 years. However, in 1976, as part of its reorientation to the new work standards program, DLA dropped the 2-year reevaluation requirement and instructed the field DIMES staffs to update standards only when local conditions dictated and to minimize the development of new standards. As a result of this action, standards maintenance further declined and managers became more reluctant to use the standards and related performance data. For example:

--At DGSC, certain managers and supervisors requested repeatedly, without success, that the DIMES staff review and update specific work standards.

--The Chicago DCASR DIMES staff did update the standards for contract administration functions using technical estimates but did not include sufficient documentation to identify the starting and ending points of the operations being measured.

Officials responsible for DIMES stated that standards maintenance was deemphasized because (1) the field DIMES staffs misinterpreted the requirement to reevaluate the standards as a requirement to change the standards and (2) efforts were directed toward implementing the new work standards concept. Certain program managers believed that some standards are not properly maintained because of insufficient field staffs and inadequate emphasis on standards maintenance by DIMES managers.

DLA stated in the May 1979 appropriations hearings that the time spent on local standards is the minimum necessary to keep the system functioning until the new standards are developed. Officials believed that some out-of-date standards were at acceptable levels of degradation and that assigning any more resources to standards maintenance was an unaffordable
luxury. However, we believe that the existing standards program should be adequately maintained or discontinued especially considering the time required and serious problems associated with implementing the new standards program. The new standards program is discussed in chapter 5.

Inadequate procedures for providing performance data at the summary and program levels

Performance data provided for upper level managers lacks credibility because DLA's procedure for structuring summary and program standards from the detailed standards is inadequate. Summary standards are not based on a direct accumulations of detailed standards. Therefore, performance efficiency and staffing requirements computed based on a summary standard differ significantly from the performance levels and staff needs computed based on detailed standards. In addition,

--detailed standards and related performance data are used solely at the field activities, and

--performance data based on summary standards is the only data used at headquarters.

Consequently, if managers at the different organizational levels were using measurement data extensively, they would not be using the same information for routine staffing decisions and performance evaluations.

We reviewed summary standards--four each at DGSC and the Chicago DCASR--to compare the summary and detailed level data and disclosed differences of up to 90 percent in performance efficiency levels and up to 138 percent (74 personnel) in the detailed standard personnel equivalents. The summary standards and related performance data generally showed a higher level of both labor performance and resource needs than the detailed standards. For some of the functions reviewed, the graphs on pages 46 and 47 illustrate the different performance and resource trends for the year ending March 1979. These differences occurred because:

--Summary standards are developed based on variables and a manager's judgment, both of which usually do not relate directly to the detailed standards.

--Revisions to summary standards are not always consistent with or predicated upon corresponding changes in work methods or detailed standards.
Also, questionable revisions to summary standards affect program standards. Because program standards are structured from the summary standards, their validity in budget formulation and resource allocation for DLA field activities is directly related to the quality of the summary standards. Two factors can influence the change in a program standard—a change in any one of the summary standards or a change in the work mix among the summary standards.

We mathematically analyzed 18 selected changes to certain program standards and found that summary standards revisions can influence the resulting change in a program standard by as much as 80 percent. Examples of the degree to which summary standards revisions affect program standards are shown on page 48.

We believe that this entire process of structuring standards must be corrected before DLA managers can receive reliable summary and program level measurement data. DIMES managers told us they were considering a different process for structuring summary standards to provide a more direct relationship between the detailed and summary standards; but, that this new process would be in addition to, rather than in lieu of, the current process. We do not believe this will eliminate the deficiencies related to summary standards revisions. We believe that one simple solution would be to provide information based on detailed standards—which is currently in the data collection and reporting system—to headquarters managers for evaluating labor performance and making resource utilization decisions.

INSUFFICIENT CONTROLS OVER THE ACCURACY AND VALIDITY OF PERFORMANCE DATA

Credibility of performance data is also questionable because of inadequate controls over the accuracy and validity of data input into the automated system used for compiling and reporting work measurement data. Managers must receive correct data if they are to make meaningful and proper staff management decisions. DLA's productivity measurement system is supported by a computerized management information system which collects, stores, manipulates, and reports the performance data. This automated system provides a direct link from the field activities to headquarters. However, erroneous data is frequently reported because neither the field nor the headquarters has adequate controls to assure that accurate and valid data is being provided to managers and supervisors.

Erroneous performance data has been a consistent problem at the field activities we visited. Certain DGSC managers identified several instances of inaccurate data and a recent
test performed in conjunction with the implementation of a new standard found errors in the reporting of 10 of 13 work unit counts for one organization. Our review of selected reports at the Chicago DCASR also disclosed significant error rates in the reported work unit counts and actual hours. Even where erroneous data is found and corrected in the system, the corrected data is not always reflected in the work measurement reports provided to managers and supervisors. The erroneous data results because

-- periodic audits or checks of data accuracy are not always made,

-- many work unit counts are entered into the data system by the same people being measured, without any independent checks, and

-- loaned and borrowed hours of employees assigned permanently to one work center who are performing duties in another are not always reported or are improperly accounted for.

This lack of control over data extends to the headquarters level where managers rely almost entirely on the field activities to control the collection and reporting of performance data. The headquarters DIMES managers do not perform any routine checks to validate performance data. Instead, headquarters computer management information employees only test the reasonableness of data by comparing the data submitted over a period of time to pinpoint significant differences.

EFFECTIVE USE OF FIELD DIMES STAFFS NOT ASSURED

The lack of both management controls and action during the formal transition to the new standards program caused ineffective use of the field staffs responsible for local measurement system application. These staffs comprise most of the personnel assigned to the system and have key responsibilities for the work standards program. Their ineffective use undoubtedly contributed to the deterioration of the standards. In addition to the reduced effort related to maintaining work standards, efforts devoted to other system functions have been minimal. For example:

-- Only one methods improvement study, the consolidation of two clerical functions, could be documented at the Chicago DCASR since 1976 even though managers of the DIMES staff identified such improvement studies as a primary role.
Staff at DGSC, where the improvement studies effort was also minimal, said they would not concentrate on methods improvement until the new standards are implemented.

The ineffective use of the field staffs resulted partially from eliminating the requirement that field activities report information on program operations which included data on local DIMES staffs. DIMES staffs at the two activities we visited were greatly involved in work unrelated to the primary functions of the measurement system. At DGSC, 10 (or 67 percent) of the authorized 15 analysts are not performing DIMES duties because they are assigned to a warehouse modernization project in which they expect to be involved for 2 years. At the Chicago DCASR, an estimated 30 to 50 percent of the DIMES staffs' time is spent on duties unrelated to the measurement system.

The loss of local staff to the new standards-setting group also affected the staff's effective utilization and commitment to the measurement system. The DCASR officials responsible for the staff stated that they (1) had been unable to adequately replace analysts with qualified and experienced personnel, (2) had not been sure of the staff's mission since 1976, and (3) felt that the DCASR was unique and therefore not representative of other activities. However, an April 1977 DLA inspector general report observed that not only Chicago, but all DCASRs had difficulties since the 1976 transition to the new standards program.

We believe the effective use of field staff is critical to the success of the measurement system's local application. DLA must stress the importance of field staff functions and assure proper use of field employees.
CHAPTER 5

DLA'S NEW WORK STANDARDS PROGRAM

NOT ADEQUATELY PLANNED AND MANAGED

We believe another reason for DLA's failure to fully use its measurement data for managing and budgeting is that its new work standards program increases users' distrust in the data because the new program also is ineffectively managed. In 1974 DLA initiated a new work standards concept which we believe can overcome many of the technical problems of the current measurement system. This new direction with national standards appears appropriate and promises to offer several benefits. However, inadequate program planning has contributed to a lengthy implementation process and inadequate controls over the new standards. Further, insufficient planning and management of the program's implementation could greatly reduce or eliminate future benefits and effectiveness.

BENEFITS OF THE NEW STANDARDS

The potential benefits of the new standards are significant. If properly developed and implemented, they will correct some of the major problems of the existing standards--credibility and maintenance. One of the major benefits is that the standards are to be developed and applied on a national basis which will provide all headquarters managers with comparable data. As pointed out in the May 1979 budget hearings, the program provides for the standardization of work processes, uniform structuring of data, and use of uniform measurement techniques in similar functions. This will enable the results of a work measurement study at one activity to be applied to all other activities with similar functions while at the same time highlighting valid differences or unique situations at a particular location. Therefore, managers will have better data available for use in budgeting and managing staff resources.

Another important aspect of the new program is that a field activity may deviate from the national detailed standards when it can show the need for a different special purpose data time value or step in its detailed standards tasks. For example, an activity may deviate if it lacks the equipment for a step and must do that work another way. Therefore, the standard will be tailored to the activity, but its deviation from the national standard will be identified.

Easier maintenance of the new standards is possible since they are modular. For example, when an element or step within
a task changes, it can be isolated, reevaluated, and the time value for that element revised without reestablishing the entire standard.

DLA's Performance Standards Support Office (DPSSO), a headquarters chartered staff within the comptroller's survey and standards division, was expanded and made responsible for developing the special purpose data. Within DPSSO are two groups of analysts. One group, located at the Richmond DGSC, establishes standards to cover functions in the supply centers, depots, and inventory control points. The other group, located at the Chicago DCASR, establishes standards to cover contract administration-related functions for all DCASR's.

INADEQUATE PLANNING AND MANAGEMENT FOR THE NEW STANDARDS PROGRAM

Effective planning is a prerequisite to the success of any program. Without it, program objectives cannot be established, proper resources cannot be marshalled, and the organization's effectiveness cannot be measured. DLA's management of its new work standards program is poorly planned.

Although the special purpose data concept paper for the program was prepared in April 1974, the program is not expected to be completely implemented until fiscal 1982. DLA estimates that 75 to 80 percent of DLA will be using the new standards data when completely implemented. But only 35 to 40 percent of the program areas were projected to be using the data at the end of fiscal 1979, and some areas have not even been scheduled for development.

In the May 1979 hearings, DLA stated that centralizing the formulation and maintenance of the new standards program with DPSSO was one of its management improvement actions which resulted in cutting 58 positions at an annual savings of over $1 million. However, this action was taken almost 18 months after implementation began in an effort to correct the first in a series of strategic errors.

In January 1975, the various field DIMES staffs were requested to develop the new work standards. Soon DLA discovered that the field staffs were developing different times and frequencies for the same tasks and could not agree on uniform standards for national application. Consequently, in June 1976, DLA expanded DPSSO from about 8 to 45 analysts and changed its mission from training to development of the national standards. At that same time, the responsibility for standards development was taken away from the field activities and their DIMES staffs were reduced. This resulted in the net reduction of 58 positions.
The time lost during this process was just one of many problems encountered. Management did not analyze the projected program costs versus potential benefits nor did it adequately consider the proper approaches of program implementation. Rather than plan its implementation around programs which would provide the greatest coverage of agency personnel, smaller programs were selected.

The lengthy implementation process has also resulted from management's failure to establish milestones for program completion and to staff the program accordingly. DLA was only able to give us certain documents outlining the status of the implementation at various points; DLA developed one of these documents in response to our questions on the program's status. Also, DLA did not establish criteria for defining the staff resources required to develop the new national standards. Rather, DLA based staffing levels on the managers' judgment.

The Agency's projected completion date of 1982 was not tied to any systematic program planning effort but rather, appeared to result from management's assessment of its ability to get the program implemented with the resources committed to it. Some managers cited doubts about whether the 1982 target date would be met. For example:

--The DGSC commander was concerned about the limited results obtained to date from the standards setting group.

--The DLA comptroller attributed his doubts to the long-standing resistance to the program by managers of certain staff elements.

Further, program planning did not define the extent of personnel or workload that would be covered by the new national work standards. DIMES managers would only tell us that they planned to cover as much of the personnel and related workload as possible.

Even where the standards have been implemented, managers are reluctant to use the performance data because deviation requests have not been submitted and approved or the standards have already become outdated. For example, DPSSO decided to install the national standards for the procurement function before the activities had developed and submitted requests for local deviations. Some managers and supervisors at DGSC stated that they did not rely on the resulting labor performance data because of this. At the Chicago DCASR, one national standard was implemented in January 1976 but was considered invalid by June 1977 because of a change in work methods. An
updated standard was issued in August 1977 but again, revised work priorities invalidated the standard. Another revision to the standard was expected to be implemented in August 1979. Because of the extended delays in getting the national standards implemented, local DCASR officials had developed plans to implement an interim system of using summary standards within the region's operations.

In addition to the program planning deficiencies, management has not instituted necessary controls over the development, implementation, and use of the standards. It is now more than 5 years since implementation began and DLA has not

-- included in its instructions a requirement for field activities to follow the approved national method for accomplishing work,

-- instituted controls to assure that local Dimes staffs' efforts in implementing the new standards and developing needed deviations are coordinated with and support DPSSO efforts,

-- established a requirement for periodic review of the standards nor defined the specific organizational responsibilities for standards maintenance, and

-- completed development of a format for presenting comparable data based on the new standards to program managers.

NEW STANDARDS PROGRAM NOT COORDINATED WITH OTHER MEASUREMENT SYSTEM IMPROVEMENTS

The cost and potential benefits of the new standards program point to the need to coordinate that program with improvements needed, as we discussed previously, in the measurement system. By 1982, when DLA officials believe the new standards will be completely implemented, an estimated $30 million or more 1/ will have been spent on the program. However, the Dimes managers have not considered coordinating the standards development effort with the improvements needed in the productivity measurement system.

1/This figure is considered conservative because it is projected on DLA's estimate of $5.6 million in costs for fiscal 1979 which covers only the salaries of personnel assigned to the program.
D.MES managers said that there are no plans to revise the measurement system management or design with the exception of the new standards program. The DLA comptroller said he was considering a reorganization of the DIMES managers at the headquarters level.
CHAPTER 6
CONCLUSIONS, AGENCIES' COMMENTS
AND OUR EVALUATION AND RECOMMENDATIONS

CONCLUSIONS

We believe that DLA has both the framework for an extremely effective measurement system and probably one of the better designed integrated resources management systems in the Federal Government. However, in its budgeting process, DLA uses productivity data based on actual performance and historical trend data, not work measurement data. Further, measurement-system-based productivity data is used only limitedly for other management purposes. As a result, DLA's work measurement and integrated resources management systems are currently not cost effective.

We believe the lack of encouragement to use the measurement system is the prevailing factor in DLA's not achieving desirable results from the system. Budget review authorities have not used the work measurement data to encourage DLA's data use and DLA has not encouraged its managers and supervisors to use the measurement system. Consequently, the budget as submitted to the Congress is not based on productivity data supported by the work measurement system.

Even when management uses the data for other purposes, the value of such use is questionable because of many problems associated with the measurement system that affect data credibility and its use in the integrated resources management system. We believe the new work standards program is a step in the right direction for improving the measurement system. But this effort is overshadowed by management's insufficient emphasis on the system and only minor commitment to its use. Management's failure to adequately support the system has resulted in the lack of controls needed to assure that the system is properly maintained and effectively used on a continuing basis. This lack of attention has resulted in

--insufficient training of supervisors and managers in the benefits and uses of measurement data,

--poor planning and controls and slow implementation of the new labor performance standards program,

--inadequate procedures for structuring detailed level standards to the summary and program level which give
intermediate and top managers a distorted picture of the performance levels and resource needs for program functions,

--insufficient controls over the accuracy and validity of reported performance data, and

--ineffective use of and commitment to the system by field staffs responsible for local system application.

Further, we believe that if the House Appropriations Committee's Subcommittee on Defense used DLA productivity data, all levels within the DLA budget process would be stimulated to use measurement-system-based productivity data to justify staff requests. However, because of the many problems associated with the system, the Subcommittee must first ensure that DLA improves the management, design, and use of the system to produce reliable data as justification for the resource requests. Although the system's cost is small compared to total outlays for personnel resources, we believe such improvements could save many millions of dollars. The Congress, if it finds DLA does not improve its system, may be better off terminating funding for the system and relying on the actual performance and historical trend data which DLA now uses in its budget submissions.

AGENCIES' COMMENTS AND OUR EVALUATION

We requested written comments on this report from the Department of Defense, DLA, and OMB. The Department of Defense did not provide us with comments prior to issuance of this report.

Defense Logistics Agency

In commenting orally, DLA agreed with our findings and recommendations stating that it has over the years derived significant benefits from use of the measurement system and that the framework for an effective measurement system is in place.

With respect to the current state of work standards and the measurement system, DLA stated that this is the result of a conscious decision to accept a reasonable level of degradation while implementing a new work standards program. DLA noted that it plans to begin making improvements to the system as quickly as available resources permit. One specific action in process is the revision of the methodology for providing summary and program-level standards. The new mechanisms will automatically revise the summary standards as work mixes change.
We believe that this revision in the measurement system should have a significant impact on improving the quality of performance data provided for use by intermediate and headquarters level managers. Further, we believe that DLA should be assertive in moving forward with the new standards program and other improvements needed relative to the support and use of the measurement system.

Office of Management and Budget

OMB agreed that productivity data is an important tool in determining an agency's proper level of resources. It stated, however, that such data is not the only tool and perhaps in DLA's case is not the most useful data. OMB cited references to the deficiencies we found in DLA's measurement system and stated that the Agency had relied on other more relevant data sources for budget review purposes as well as productivity data. (See app. VIII.)

OMB proposed that we revise our recommendation to require budget examiners to use productivity data in the budget review process wherever practicable. OMB stated that this revision would preserve the discretion of budget examiners to use those sources of data which they consider most germane to the budget review. Although discretion should be used, we believe that OMB should require its examiners to request and utilize such data in the budget review process to the greatest extent possible. Otherwise, DLA will not have the incentive to maintain an effective measurement system and use such data in its staff measurement decisions.

RECOMMENDATIONS TO THE DIRECTOR, DEFENSE LOGISTICS AGENCY

We recommend that the Director ensure that all levels effectively use the productivity measurement system by:

-- Improving the measurement system methodology for providing summary and program standards and establishing controls over the accuracy and validity of reported data to assure that correct data is available for performance evaluation and resource determinations.

-- Assessing the status of the new work performance standards program with a view toward more timely implementation and assuring better planning and controls for its proper development and maintenance.

-- Requiring that the measurement system data be integrated into the programming and budgeting systems and
routinely used for those purposes as well as for making other staff management decisions.

--Assuring that supervisors and managers are trained for their roles in work measurement data usage.

--Supporting the use of work measurement data by incorporating the Civil Service Reform Act's provisions on appraisals and rewards into the measurement system and requiring that other actions be taken to encourage supervisors and managers to use measurement data.

--Providing sufficient guidance and encouragement to the field activities measurement system staffs and clarifying those staffs' roles and functions.

--Requiring that measurement system managers establish adequate monitoring and control mechanisms to assure that DIMES personnel are appropriately used and that the measurement system is used continuously.

RECOMMENDATIONS TO THE SECRETARY OF DEFENSE
AND TO THE DIRECTOR OF THE OFFICE OF
MANAGEMENT AND BUDGET

To emphasize the importance of using work-measurement-based productivity data in the budget process and to encourage its use for other purposes, we recommend that the Secretary of Defense and the Director of the Office of Management and Budget require their budget examiners to formally request and utilize such data in their budget review process.

RECOMMENDATIONS TO THE SUBCOMMITTEE ON
DEFENSE, HOUSE APPROPRIATIONS COMMITTEE

To assure improvement of DLA's productivity measurement system, we recommend that the Subcommittee require the Agency to

--provide the Subcommittee with definitive plans for timely implementation of the new work performance standards program and

--submit, as part of its budget package, information on (1) progress in implementing the program and (2) the extent to which budgeted resource requirements are based on valid work measurement data.
Honorable Elmer B. Staats
Comptroller General of the United States
Washington, D.C. 20548

Dear Mr. Staats:

The Defense Appropriations Subcommittee has had a continuing interest in the productivity of the Defense Logistics Agency. In recent years, the Subcommittee has expressed concern that there is insufficient justification for DLA personnel requests and the agency has in the past been criticized for being inefficient and overstaffed.

A significant effort is expended annually by the Defense Logistics Agency to administer a productivity measurement management information system which is also used to support its budget requests. There is some concern that the data produced by this system to support staffing requirements and resource allocations may not be adequate and valid for that purpose.

The Subcommittee is aware that GAO is planning to undertake a review of the Defense Logistics Agency's use of productivity data in the budget process which will include both major components -- supply support and contract administration. Therefore, the Subcommittee is interested in receiving GAO's report on this review and desires that it address (1) the adequacy and validity of the Defense Logistics Agency's use of productivity data for justifying its manpower requests to the Congress and allocating those resources within the agency, and (2) any recommended improvements needed in the productivity measurement system.
It will be beneficial if someone from your staff would contact Mr. Derek Vander Schaaf, Defense Subcommittee staff assistant, prior to beginning this effort and be prepared to brief him on progress prior to the Committee's pursuing this matter with the Defense Logistics Agency early in April.

Sincerely,

Jamie Whitten
Chairman
APPENDIX II

DEFENSE LOGISTICS AGENCY MAJOR FIELD ACTIVITIES

Supply Centers

Construction Supply Center
Columbus, Ohio 1/

Electronics Supply Center
Dayton, Ohio 2/

Fuel Supply Center
Alexandria, Virginia

General Supply Center
Richmond, Virginia 1/

Industrial Supply Center
Philadelphia, Pennsylvania

Personnel Support Center
Philadelphia, Pennsylvania

Depots

Defense Depot Mechanicsburg
Mechanicsburg, Pennsylvania

Defense Depot Memphis
Memphis, Tennessee

Defense Depot Ogden
Ogden, Utah

Defense Depot Tracy
Tracy, California

Service Centers

Documentation Center
Alexandria, Virginia

Logistics Services Center
Battle Creek, Michigan

Property Disposal Service
Battle Creek, Michigan

Industrial Plant Equipment Center
Memphis, Tennessee

Administrative Support Center
Alexandria, Virginia

Systems Automation Center
Columbus, Ohio

Defense Contract Administration Services Regions 3/

Atlanta Region
Marietta, Georgia

Boston Region
Boston, Massachusetts

Chicago Region
Chicago, Illinois

Cleveland Region
Cleveland, Ohio

Los Angeles Region
Los Angeles, California

New York Region
New York, New York

Philadelphia Region
Philadelphia, Pennsylvania

St. Louis Region
St. Louis, Missouri

Dallas Region
Dallas, Texas

1/Centers with depot operations.

2/This center has a depot operation which is in the process of being closed.

3/DLA announced that the nine DCASR's are being consolidated into five, with offices in Atlanta, Boston, Chicago, Los Angeles, and St. Louis.
APPENDIX III

PRIOR GAO REPORTS ON

PRODUCTIVITY AND WORK MEASUREMENT


APPENDIX IV

BENEFITS, USES, AND ELEMENTS OF AN EFFECTIVE

PRODUCTIVITY MEASUREMENT SYSTEM

Only optimum productivity levels can ensure maximum use of an organization's available resources. Productivity measurement and improvement have become increasingly important for managing personnel resources and fighting spiraling inflation. Productivity measures based on an effectively implemented and operated work measurement system provide managers with reliable information for justifying, allocating, and controlling personnel resources.

BENEFITS AND USES OF AN EFFECTIVE MEASUREMENT SYSTEM

Measurement system reports comparing actual with standard performance are useful to all levels of management. Such reports are beneficial to managers in all aspects of resource management from planning and scheduling work to developing and justifying personnel requirements.

Work measurement and productivity data is very useful at intermediate and top management levels for (1) establishing and monitoring productivity goals, (2) evaluating an organization's operations, programs, and performance, and (3) determining, justifying, and allocating resource requirements. Using such data in formulating budgets provides for the most accurate and realistic projections of work force and dollar needs.

Work measurement reports at lower management levels provide data for budgeting and work force planning, distributing work force resources, supervising operations, and evaluating individual and organizational performance. Effective use of work measurement data keeps managers informed of labor's performance and indicates ways to improve operational efficiency. Significant variances between standard and actual labor hours for individual jobs must be routinely analyzed. By such analysis and continuous monitoring of trends, managers can promptly identify areas requiring correction. Some potential benefits from this analysis are: improved coverage of work by engineered standards, new or better techniques and methods, and improved organization and procedures.

ELEMENTS OF AN EFFECTIVE WORK MEASUREMENT SYSTEM

All levels of management must emphasize the importance of using work measurement techniques before the measurement system can succeed. Experience has shown that performance
decreases when management does not actively support the use of such systems.

The essential ingredients of a work measurement system include adequately developing and maintaining engineered performance standards, properly applying the standards for planning and estimating work, compiling useful measurement data, and effectively managing the use of the data to evaluate and improve the performance and efficiency of operations. A weakness in any one of these ingredients could adversely affect the entire system and provide less than optimum benefits.

The validity of a work measurement system hinges on the accuracy and validity of the labor performance standards. These standards provide the time it should take trained workers, working at a normal pace, to produce a defined unit of work of an acceptable quality. The standards are derived from a complete, objective measurement and analysis of work elements using techniques such as work sampling and time studies. Engineered standards are the most accurate basis for planning and estimating work. They provide a norm for estimating the amount of work to be done during a specific period and for measuring the labor force's efficiency in accomplishing that work. The standards should be reviewed and updated periodically to reflect method and technology changes.

A good work measurement reporting system is necessary to provide timely, accurate performance measurement data in a format easily usable by managers at all levels. The data should be appropriately summarized and reported to each management level from the lowest level operating supervisor to the agency director. Also, the reporting system should provide appropriate mechanisms for performance and productivity data use and incorporate incentives to encourage such use.

Finally, to assure that the system remains effective and used on a continuing basis, a good measurement system must have built-in controls. Management should provide for routine monitoring of the system's application and use and periodic systemwide evaluation to assure that each system element has been maintained and functions effectively.
Principal elements of the integrated resources management system are:

--A cost/staff-hour accounting system which is used to collect staff-hours and cost data reflecting the application and consumption of resources.

--A management information system which features a computerized data bank to accumulate and store staffing, cost, and performance data and report operating results to all management levels.

--A performance standards program which develops and structures work standards for use in measuring performance efficiency.

--A performance evaluation review system which serves as a barometer of changing workload/resource relationships and is the primary management tool for appraising resource utilization.

--A management review system which provides for recurring performance briefings to top management.
--A programming and budgeting system which provides the framework for applying performance standards and pricing factors to quantified workloads to determine and justify resource needs and internally allocate resources to current operations. It is within this system that workload forecasts and resource programs are compared to operating budgets.

This interface is made possible by a common account structure used throughout DLA by which its functions and organizations are structured from the lowest level (tasks performed at the work center of a field activity) to the highest level (mission or program area for the total field activity). The common account structure supports each element of the integrated resources management system.
Performance and Resource Trends for Selected Functions
(April 1978 - March 1979)

COMMODITY MANAGEMENT FUNCTION
Item requirements determination.
(April '78 - March '79)
(Richmond DGSC)

TRANSPORTATION AND PACKAGING FUNCTION
Traffic management and materials handling.
(April '78 - March '79)
(Chicago DCASR)
APPENDIX VI

Performance and Resources Trends for Selected Functions
(April 1978 - March 1979)

PRODUCTION OPERATIONS FUNCTION
Production surveillance and control.
(April '78 - March '79)
(Chicago DCASR)

STANDARD PERSONNEL EQUIVALENTS
Comparison of actual personnel on hand with personnel equivalents based on detailed and summary standards.

PERFORMANCE EFFICIENCY
Comparison of summary and detailed levels.

ITEM IDENTIFICATION FUNCTION
Preparation of item description.
(April '78 - March '79)
(Richmond DGSC)

STANDARD PERSONNEL EQUIVALENTS
Comparison of actual personnel on hand with personnel equivalents based on detailed and summary standards.

PERFORMANCE EFFICIENCY
Comparison of summary and detailed levels.
APPENDIX VII

PERCENT CHANGE IN SELECTED PROGRAM STANDARDS DUE TO SUMMARY STANDARD AND WORK MIX CHANGES

PROCUREMENT-(RICHMOND DGSC)

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Dear Mr. Scantlebury:

Mr. McIntyre has asked me to reply to your draft report entitled "Productivity Measurement in the Defense Logistics Agency Needs to Be Supported, Improved and Used" (FGMSD 80-233, dated December 19, 1979).

Productivity data is certainly an important tool in determining an agency's proper level of resources. However it is not the only tool, and in DLA's case it is perhaps not the most useful tool. We feel this view is confirmed by the deficiencies GAO itself found in the design and construction of DLA's performance and productivity measurement system. Consequently OMB has relied on other more relevant data sources for budget review purposes as well as productivity information.

We would like to propose only one specific change to your draft report -- that the recommendation to the Secretary of Defense and the Director of OMB be changed as follows:

".... require their budget examiners to use such data in the budget review process wherever practicable. (p.p. iii, 36A)"

This conforms closely to the instructions already contained in OMB Circular A-11, and the effect preserves our discretion to use those sources of data which we consider most germane to the budget review.

Thank you for the opportunity to comment on your draft report.

Sincerely,

David Sitrin
Deputy Associate Director for National Security

(910500)
DATE - 8