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REPORT TO THE CONGRESS



*BY THE COMPTROLLER GENERAL
OF THE UNITED STATES*



LM100247

27 Years' Experience With Defense Industrial Funds

Department of Defense

This report is intended to provide an appraisal and understanding of Defense industrial funds. It explains how industrial funds work and how the objectives of a businesslike approach have been met. It also discusses shortcomings and problems of the funds and suggests improvements to make them a more effective management tool.



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WASHINGTON, D.C. 20548

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To the President of the Senate and the
Speaker of the House of Representatives

This report discusses the utility of the industrial fund method of financing Defense industrial and commercial activities and includes suggestions for making the concept more effective.

During the 27 years since the industrial fund concept was formulated, many questions have been asked and appraisals made of its value. We made this study to (1) determine if the industrial fund method of financing was providing the benefits contemplated by the enabling legislation (10 U.S.C. 2208) and implementing Department of Defense regulation (DOD 7410.4) and (2) identify those matters which significantly inhibit its effectiveness.

This study was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

Copies of this report are being sent to the Director, Office of Management and Budget; the Secretary of Defense; and the Directors of the Defense Communications Agency and Defense Supply Agency.

A handwritten signature in black ink, reading "James A. Stacks".

Comptroller General
of the United States

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GENERAL ACCOUNTING OFFICE
REPORT TO THE CONGRESS

27 YEARS EXPERIENCE WITH
DEFENSE INDUSTRIAL FUNDS
Department of Defense

D I G E S T

The record of the past 27 years indicates that Department of Defense industrial funds--which are working capital funds--have achieved some of the objectives intended by the Congress but have not been the panacea many hoped for.

The Congress authorized industrial funds for financing the operation of Defense industrial and commercial activities. They are intended to provide incentives and controls for better management similar to those existing in private enterprise. However, forces inherent in Government have made it virtually impossible to bring all of the incentives and disciplines of the business world to defense activities. Moreover, the Department and the military services have not adopted some management actions needed to derive the greatest potential benefits from use of the funds.

Over 100 Defense activities operated under industrial funds in fiscal year 1975. Total sales to "customers"--usually military organizations--amounted to nearly \$9.9 billion.

Five central industrial funds are established within the Department of Defense--one for each of the four military services and one for defense agencies. The services are responsible for designating which industrial and commercial-type activities are to be industrially-funded, subject to Assistant Secretary of Defense (Comptroller) approval.

Under the concept, industrially funded activities are provided working capital to finance the cost of producing goods and services ordered by other Government organizations, called customers by fund administrators, and obtain reimbursement by billing customers for the goods and services furnished. Defense customers obtain money to pay through the appropriation process.

Activities financed by industrial funds include

shipyards
arsenals and ordnance plants
supply, overhaul, and repair depots
public works services
publication and printing
laundry and dry cleaning
communications
clothing manufacture
air and sea transportation
transportation management and terminal service

Despite faults and limitations, Defense officials generally agree that industrial funding provides a satisfactory way for financing Government industrial and commercial activities and are worthwhile.

ACCOMPLISHMENTS

Industrial funds have:

- Simplified financing and promoted the use of cost accounting systems, focusing attention on costs, and providing a more disciplined and effective approach to budgeting and useful tools for managerial control.
- Fostered efficiency by forcing customers to consider costs in developing requirements and placing orders.
- Given managers limited incentives and flexibility to vary their resource mix to effect efficiencies and cut costs (although these frequently are offset by constraints and poor management practices).
- Promoted a higher degree of cost consciousness among managers, employees, and customers.

CONSTRAINTS AND PROBLEMS

More serious constraints and poor practices needing management attention include the following:

--Because of civilian personnel ceilings and constraints on reduction of personnel, industrial funds often are not able to quickly adjust labor force levels to changing work requirements. Some flexibility is available by use of overtime, hiring temporary and part-time help, using military personnel and contracting work out, but these are also restrained. Financial controls, properly conceived, could be more effective than ceilings in promoting efficient management. However, the Congress does not believe the industrial funds have the financial discipline necessary to operate on the basis of financial controls alone and thus has placed civilian strength ceilings on the Defense Department. (See p. 19.)

--The arrangement of financing equipment for industrial fund activities with appropriated funds rather than with working capital has not been effective in stimulating the acquisition of equipment that would enhance productivity and, thus, help reduce costs. Two approaches are being tried that should help resolve this problem. One approach is to set aside a specific amount of appropriated money just for buying labor-saving equipment. The other provides for industrial funds to use working capital to buy equipment costing up to \$100,000 that will pay for itself in labor savings within 2 years. (See p. 22.)

--Failure of many industrial fund activities to identify and obtain separate funding for the cost of maintaining unused and underused plant facilities and skilled people for mobilization reduces the effectiveness of the industrial fund concept because actual costs are not known, and one cannot be sure that costs have been reduced to a minimum and are reasonable. Although identifying unused and particularly underused mobilization capability is required by the Department of Defense, GAO found in previous reviews that procedures for doing so have not been developed. (See p. 24.)

--Limited use of predetermined price and frequent price adjustments have reduced both

effective use of price controls to regulate industrial fund operations and management incentives for reducing costs. A price and rate stabilization program has been established which should help, particularly to reduce the need for price adjustments. Additional action may be needed to achieve greater use of predetermined prices. (See p. 28.)

- Questions of how efficiently activities using industrial funds are being operated cannot be objectively answered because systems have not been developed for measuring productivity trends. Also cost data is not as accurate and useful as it could be. It is anticipated that cost problems should be resolved as Defense and GAO accounting procedures and requirements are implemented. However, continued reviews will be needed to see that cost control procedures and actions are adequate. A Defense-wide productivity program for enhancing, measuring, and evaluating productivity has recently been established which should accelerate efforts to develop and use productivity measures. But judging from experience, continued progress will need to be encouraged. (See p. 30.)

RECOMMENDATIONS

The Secretary of Defense should

- Establish, with the assistance of the services, the minimum number of skilled people needed for mobilization and expedite development and issuance of guidelines for identifying and funding the cost of maintaining unused and underused plant, equipment and people at the industrial fund activities. (See p. 27.)
- Insure that Department of Defense internal audit organizations periodically review the adequacy of the cost controls used by industrial fund activities, their parent commands, and other responsible organizations. (See p. 38.)
- Include in annual financial reports presented to the Congress, data on unit cost

comparisons and trends where practicable, and on productivity trends as measures are developed. The emphasis in presenting unit cost data should be on comparing year-to-year trends within individual activities. (See p. 38.)

AGENCY ACTIONS

The Department of Defense agreed with these recommendations, but due to Congressional expressions of the need for personnel ceilings, has reservations about acting on a suggestion that it resume its test program for operating selected industrial fund activities without personnel ceilings. Defense also opposes excluding only industrial funds from personnel ceilings believing this would penalize those Defense activities remaining under personnel ceilings and deprive the Department of the flexibility to respond to unforeseen work load increases and legislated manpower reduction.

The suggestion for further tests was intended to see whether financial controls acceptable to the Congress could be developed. In GAO's opinion such tests would be beneficial. However, GAO is making a comprehensive study into what types of budget and financial controls might meet congressional needs and thereby preclude the need for ceilings. Anticipating some definitive suggestions from this study, no further recommendations to Defense on the matter of civilian personnel ceilings are being made at this time.

CHAPTER 1

INTRODUCTION

Industrial funds are working capital funds that finance the operating costs of most industrial and commercial-type activities ^{1/} of the Department of Defense. Congressional legislation enacted in 1949 gave the Secretary of Defense authority to establish working capital funds (1) to finance inventories of such supplies as he may designate and (2) for designated industrial and commercial-type activities that provide common services within or among the departments and agencies of the Department of Defense.

Within this authority, the Secretary of Defense established stock funds to finance procurement of selected supplies and materials and industrial funds to finance the operation of designated industrial and commercial-type activities. On April 2, 1974, we published an analysis entitled, "Department of Defense Stock Funds--Accomplishments, Problems, and Ways to Improve" (B-159797). This report provides some of the same kind of information about industrial funds as the earlier one did about stock funds.

Defense industrial funds are revolving funds modeled after business financial arrangements. That is, industrial fund activities are given working capital to finance the cost of producing goods and services ordered by customers and subsequently receive reimbursement by billing, much as a private business does. By using money generated from sales to replenish its working capital, industrial fund activities are intended to be self-sustaining, hence, the term "revolving fund."

Industrial funding--and most other revolving funds--finance an organization on a unit-cost basis. That is, the amount of money an organization receives for financing its daily operations varies automatically--unless prices are changed--with the amount of work performed in terms of the number of units or specified services delivered. In contrast, under appropriated funding, money for financing operations is provided in advance--usually for 1 year--on the basis of the amount of work expected to be performed. The amount

^{1/}The term activities as used here and in the Department of Defense refers to both installations, such as Sharpe Army Depot, and organizations, such as a public works center and the Military Traffic Management Command.

appropriated will remain unchanged without regard to the level of work that may materialize unless management takes the initiative and makes an adjustment.

Congressional control over industrial funds is maintained both directly and indirectly. The Congress maintains indirect control by limiting the appropriations made available to customer organizations. For example, spending for operation of Navy shipyards is constrained by revenues resulting from customer orders, and customers are in turn constrained in placing orders by the amount of appropriations made available by the Congress. The Congress exercises direct control through personnel ceilings and expenditure limits on certain types of expenses. Such direct controls are somewhat inconsistent with the industrial fund concept since they tend to reduce the performing organization's flexibility to vary resources with changes in workload. This is discussed further in chapter 5.

In fiscal year 1975 over 100 Defense activities were operating under the industrial fund concept. These activities employed about 37,000 military personnel and 298,000 civilians (about 27 percent of the Department of Defense civilian workforce) and had sales of nearly \$9.9 billion. In terms of sales the industrial fund complex ranks with U.S. Steel, the 14th largest industrial corporation which in 1974 had 187,500 employees and sales of \$9.2 billion.

Federal agencies outside the Department of Defense also have a variety of revolving funds. For example, almost all the agencies have revolving funds for providing centralized administrative services within their own agency, such as communications, photography, automatic data processing, library, and duplicating. The General Services Administration has, in addition to an administrative revolving fund, four separate funds (Federal building fund, general supply fund, Federal telecommunications fund, and automatic data processing fund) which provided \$2.3 billion in goods and services to other Federal agencies in fiscal year 1975. The Food and Drug Administration uses a revolving fund to finance services it provides on a reimbursable basis to industry. (For additional information on revolving funds see our report, "Financing Agency Programs Other Than By Direct Appropriations," B-140789, Mar. 6, 1970.)

OUR POSITION ON USING INDUSTRIAL FUNDS AND OTHER REVOLVING FUNDS

Any opinions, suggestions, or objections we express on the use of revolving funds are usually related to whether the Congress would actually weaken its control over activi-

ties of a program in authorizing the use of a particular fund. We have applied the standard that the public interest is best served when congressional control is exercised through regular (usually annual) reviews, affirmative action on planned programs, and financing of requirements through the appropriation processes. In our opinion, departure from this standard and approval of other financing arrangements should be made only when it can be demonstrated that the disadvantages of reduced congressional control will be outweighed by more efficient operation of the activity.

In 1949 we commented favorably on draft legislation authorizing industrial funds. In past years we have, generally supported using industrial funds on the presumption that they would be authorized when they would clearly promote more efficient and economical operations and provide for adequate and continuing congressional control.

Over the years we have reviewed various aspects of industrial funds and have reported on the need for certain improvements in their operation. In these cases, however, the problems were attributed to improper administration rather than to an inherent flaw in the industrial funding concept. Summaries of recent reports we have issued concerning Department of Defense industrial funds are included in appendix II.

CHAPTER 2

HOW DO INDUSTRIAL FUNDS WORK?

Pursuant to statutory authority, five central industrial funds have been established within the Department of Defense--one for each of the four services and one for Defense agencies. Subject to approval by the Assistant Secretary of Defense (Comptroller), the services are responsible for designating which industrial and commercial-type activities are to be industrially funded. Activities approved for industrial funding generally are provided with initial working capital by assuming ownership of existing inventories of materials, supplies, and work in process and by allocating cash from one of the five central industrial funds. Cash balances are periodically adjusted. The amount provided is intended to be sufficient for an activity to finance its operating costs until it receives reimbursement from customers.

Typical activities financed by industrial funds include shipyards, arsenals, printing plants, and depots that store, distribute, repair, and overhaul such things as planes, trucks, weapons, and electronic equipment. They also include activities providing such services as transportation, public works, and research and development. The major categories of activities financed by industrial funds are shown in the following chart.

Activities Financed by Industrial Funds Fiscal Year Ended June 30, 1975			
<u>Sales</u>		<u>Sales</u>	
(000,000 omitted)		(000,000 omitted)	
Navy Industrial Fund: Shipyards \$1,045 Research 1,598 Ordnance plants 613 Sea transportation 935 Aircraft repair and overhaul 619 Public works 312 Publications and printing 87 Total <u>\$5,209</u>	Army Industrial Fund: Depot supply and overhaul \$ 848 Arsenals-- manufacturing, storage, and research 577 Research 237 Transportation management and terminal service 137 Total <u>\$1,899</u>	Air Force Industrial Funds: Depot repair and overhaul \$1,432 Air transportation 879 Printing 21 Laundry and dry cleaning 4 Total <u>\$2,336</u>	Marine Corps Industrial Fund: Depot repair and overhaul \$ 27 Defense Industrial Funds: Communications \$ 382 Clothing manufacture 19 Total <u>\$ 401</u>

As can be seen from the above chart, some differences exist in the type of activities designated for industrial funding. Also, a number of installations with missions similar to those shown in the chart have not been industrially funded. 1/ Additionally, certain functions are performed on a reimbursable basis by industrial funds in some commands while similar functions are performed directly from appropriated funding in others. These differences occur within as well as between services.

There are two primary reasons for these differences. First, the criteria for selecting activities for industrial funding are rather broad. By legislation they can be used to finance industrial and commercial-type activities that provide common services within or among the departments and agencies of the Department of Defense. Additionally, the Secretary of Defense requires that a "buyer-seller" or a "contractual" relationship between an industrially funded activity and those activities that require and order products or services from it, exists or will be created within a reasonable period of time.

Secondly, use of industrial funding is considered permissive, rather than mandatory, and the services are given considerable latitude in designating the type of activities they consider appropriate. 2/ Obviously the services have some differences of opinion.

How industrial funds work

Customers--usually other Defense organizations financed with appropriated funds--place orders with an industrial fund activity. Upon acceptance, the Defense customer records

1/These consist primarily of 125 printing and 130 laundry and dry-cleaning plants, 4 overseas depot repair installations, 31 depot-supply activities, 47 research, development, test, and evaluation installations, and 25 Army-owned munition plants operated by private contractors. The communications industrial fund mainly finances long-haul leased communications services.

2/In explanation, the Department of Defense has stated that the existing differences are not bad per se and that the apparent inconsistencies result from various reasons which have been investigated. The current use of industrial funding is considered appropriate, but conditions for effective application of the concept are continually reviewed.

the amount of the order as an obligation against its appropriation, just as it would in placing an order with a private concern. Although it is intended that the customer's liability be limited by the amount and terms of the order, customers must pay all costs incurred including increases. Thus when increases occur, customers are generally given a choice of paying the increase or reducing workload quantities.

On the basis of a customer's order, the industrial fund activity uses its working capital to finance the cost of doing the work. Usually the work is done in-house, although in some cases it is contracted. (See chart on page 34.) As the work is done and the costs of jobs determined, the customer is billed on the basis of predetermined prices, or on actual costs as specified in the order or subsequently agreed on. Payments from customers are returned to the activity's working capital fund and are used to finance continuing operations, much as sales receipts are used in a commercial enterprise. This flow is depicted in the chart on the following page.

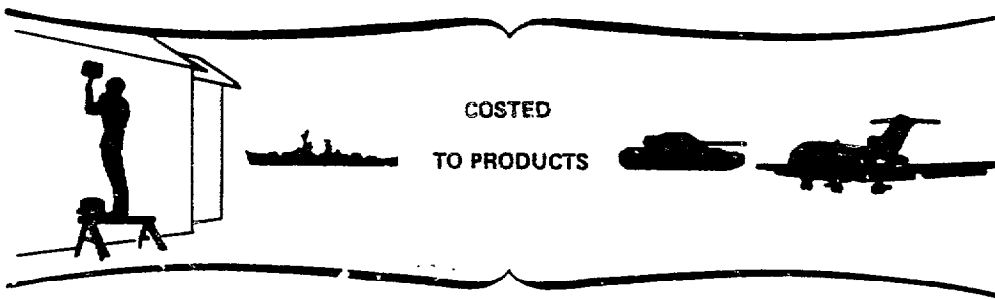
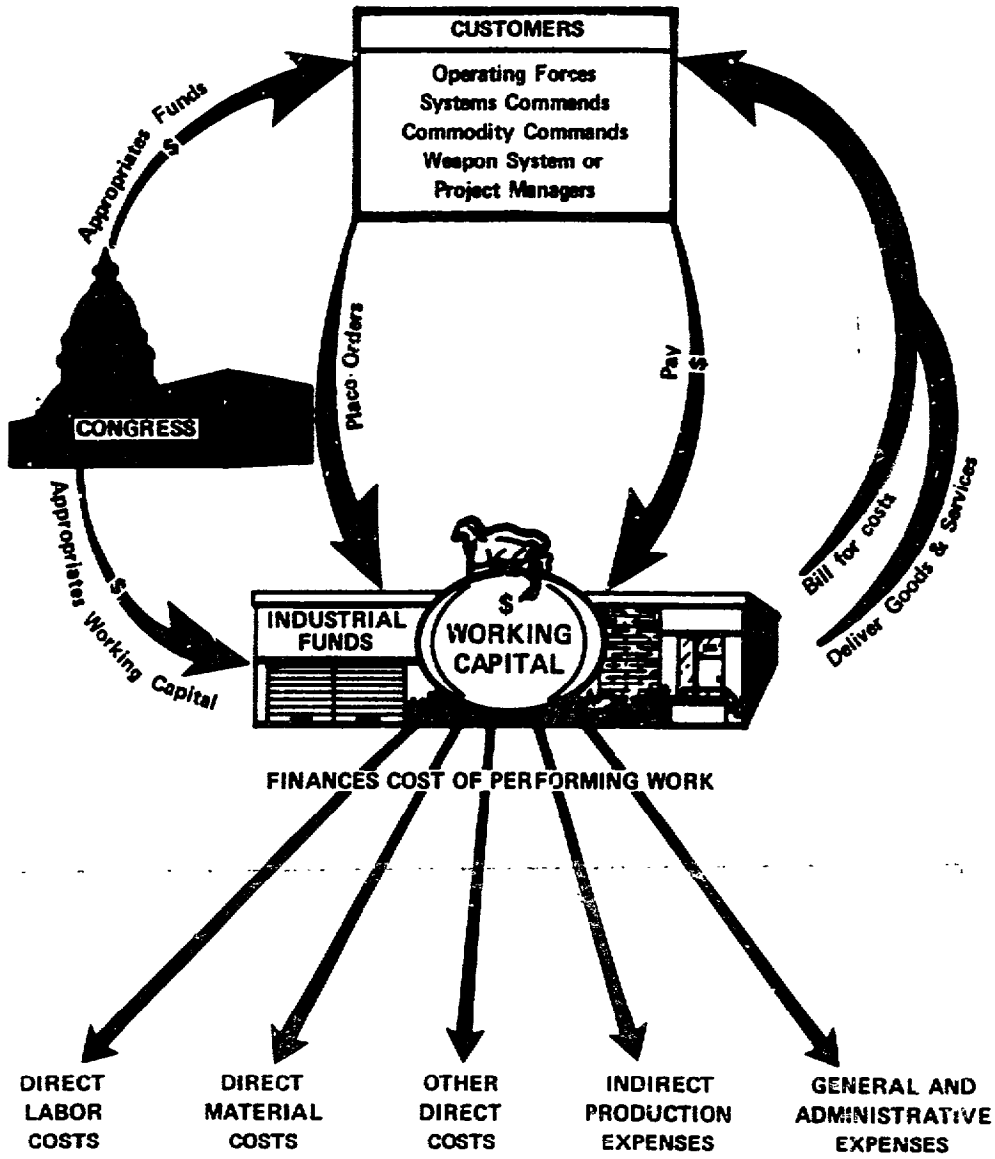
Although most customers of industrial funds are Department of Defense organizations, some are from other Federal agencies. In addition, they occasionally do work for private companies and foreign governments. About 98 percent of industrial fund sales are to Defense customers.

All costs are not paid by industrial funds

Costs charged to customers generally consist of current operating expenses, such as civilian personnel salaries, supplies, materials, travel, transportation, utilities, and maintenance of plant facilities. Differences do exist, however, among the services and even among different activities within a service. For example, expenses for maintaining plant facilities are generally charged as a cost in the current year, but in some cases major repairs are amortized over 2 or more years. At some activities, maintenance of plant facilities along with utilities and most general overhead costs are paid from appropriated funds rather than from working capital. At activities engaged in test and evaluation, only direct costs are charged to customers. As a financing convenience, indirect and overhead costs are initially paid from working capital but are budgeted and funded with appropriated funds.

In accordance with legislative history and precedent, certain costs are not paid from working capital nor charged to Federal customers. These include salaries and benefits for

HOW INDUSTRIAL FUNDS WORK



military personnel ^{1/} and depreciation of plant and equipment. Depreciation is not charged because industrial funds do not pay for acquisition and improvements to plant and major equipment items. ^{1/} In addition, major components of weapons systems--navigational equipment, engines, and some very expensive materials, such as special steel for ships--are provided free to industrial fund activities (that is, paid from appropriated funds) and not included in prices to Defense customers. (These items are also provided free to private contractors as Government-furnished material.) Defense instructions require, however, that all the above costs be recorded in memorandum accounts.

Industrial funds fall
in two general categories

Some industrial funds have work allocated by their parent command, and others do not. However, activities in both categories generally have captive customers; i.e., customers usually do not have a choice of doing the work themselves, selecting one of several industrial funds, or going elsewhere.

The activities in the first category which have their work allocated include repair and overhaul depots, shipyards, ordnance plants, arsenals, and research activities. When work is allocated, customers place their requirements directly with the parent command. In some cases the parent command is effectively the customer in the sense that it controls funds and determines requirements. It then allocates the work to individual industrial fund activities through work orders. Allocations are based primarily on capability, capacity, mobilization considerations, and as a means of keeping staff busy. Cost is generally a minor consideration. Prices for each job may be predetermined but most are established after inspection or some percentage of the work is done, or are established for time and materials or cost reimbursement. For example, the Army Materiel Development and Readiness Command, through its Major Item Data Agency, will direct a maintenance depot, such as Anniston, Alabama, to overhaul a specific number of tanks at a negotiated price. In the case of the Navy, a ship will be directed to a Navy shipyard for overhaul. Negotiations with the fleet will specify the work to be done, the time schedule, and the price--which may be fixed or for cost reimbursement. When cost reimbursement is involved, the order is frequently converted to a fixed price after some percentage of the work is completed.

^{1/}Military salaries are funded from the military personnel appropriation. Equipment can be funded from a number of sources, primarily the major procurement appropriations.

The activities in the second category, which do not have work allocated by the parent command, basically depend on receiving work from customers who are authorized or required by regulations to trade with them. They may have many customers or just a few. For example, all Defense agencies are required, under certain circumstances, to use air and sea transportation. Customers place their requirements or orders directly with the performing industrial fund, and parent commands seldom get directly involved in distributing or controlling workload volumes or in trying to keep activities busy. The activities in this category generally have published tariffs or prices. The exceptions are public works and research activities where prices are usually negotiated for each order or the orders are for cost reimbursement. However, such activities generally have set rates for labor and overhead and sometimes other cost elements.

More detailed information on the regulations governing industrial funds is contained in Department of Defense Directive 7410.4.

CHAPTER 3

WHY WERE INDUSTRIAL FUNDS ESTABLISHED?

The Defense industrial funds were established in 1949, by amendment to the National Security Act of 1947, to (1) provide financial arrangements that would promote efficient and effective operation of Defense activities devoted to industrial and commercial pursuits and (2) control and account more effectively for the costs of the work such activities perform.

The creators' idea for accomplishing this was to bring to industrial and commercial-type activities the incentives and discipline that exist in the commercial world. Consequently, they wanted to apply the concept that each industrial fund activity would be financed and operated like a separate business, except that activities would break even instead of make a profit as a business does. As businesses, industrial funds can be viewed as being somewhat analogous to regulated monopolies.

PRIMARY FEATURES ENVISIONED BY CREATORS

As envisioned by the creators, the industrial fund concept was intended to incorporate three important features which encourage better management and which create an environment similar to that of private industry.

First, businesslike cost accounting would be used which would focus attention on the cost of getting the job done, simplify budgeting, and provide cost information for management control.

Second, a revolving fund, relatively free from the appropriation cycle with its established spending limitations, would give management the financial authority and flexibility to adjust operations for changes in workload and achieve efficiencies and cut costs.

Third, a buyer-seller relationship would be established between customers and producers, forcing customers to pay for what they receive--just as the consumer does when buying a car or having it repaired--and making producers financially dependent on obtaining orders from customers and matching costs with reimbursements to remain solvent.

Conceptually, reliance on a buyer-seller relationship to stimulate economy and efficiency is based on two fundamental tenets. One, it is believed that when users have to pay for

what they receive they will be motivated to order only what they need and not pay more than necessary. Two, when suppliers agree to do a specified job at a specified price it is believed that they will be more strongly motivated to improve cost estimating and cost control and to watch for inefficiency and waste.

The detailed objectives established by the Secretary of Defense are shown below.

OBJECTIVES OF INDUSTRIAL FUNDS
PUBLISHED BY THE SECRETARY OF DEFENSE

1. Provide a more effective way to control the costs of goods and services required to be produced or furnished by industrial and commercial-type activities and a more effective and flexible means for financing, budgeting, and accounting for those costs.
2. Create and recognize contractual relationships between industrial and commercial-type activities and those activities which budget for and order the end-products or services, to provide management advantages and incentives for efficiency and economy.
3. Provide to managers of industrial and commercial-type activities the financial authority and flexibility required to procure and use manpower, materials, and other resources effectively.
4. Encourage more cross-servicing among the military departments and among their operating agencies, in order to obtain more economical use of facilities.
5. Support the performance budgeting concept by facilitating budgeting and reporting for the costs of end-products, thus underlining the cost consequences of decisionmaking, including choices between alternatives.

Objectives might be achieved
by other means

In establishing industrial funds, the creators were aware that some or all of these objectives might be achieved by other means. They recognized that budgeting and management control might be improved by using performance budgeting,

which was also adopted in 1949. ^{1/} They also recognized that cost accounting systems could be developed under appropriated funding. Industrial funds were chosen, however, because the creators believed that the allotment type of accounting and control used in administering appropriated funds could not reveal the cost of doing work without an uneconomical duplication of cost systems. They also believed that if such a duplication were implemented, "its confused results would be difficult to utilize for management purposes."

But the creators wanted more than just better accounting. They also wanted a method of funding that would promote more efficient operations. By putting the industrial fund into the framework of a business enterprise, the creators believed that managers would not only be made fully responsible for a direct accounting of the money they spent and the cost of each job, they would also be motivated to find the most economical way to accomplish the work.

However, it is now recognized that it is unnecessary to use the industrial fund to have modern cost accounting and control. Improvements in budgeting and accounting for appropriated-fund activities are being developed which utilize good cost accounting methods. Recognizing this, Defense policy for many years has stipulated that the primary criterion for selecting industrial funding be its appropriateness for exploiting the buyer-seller relationship.

METHODS OF FINANCING AND CONTROL BEFORE INDUSTRIAL FUNDS

To appreciate the importance of these objectives, it is helpful to understand what existed before industrial funds were created. In 1949 almost every project or budget program was financed from numerous appropriations. Usually appropriations were managed or administered by scattered and somewhat unrelated organizational divisions having varying degrees of operational responsibility, or none at all. Rather than

^{1/}Under performance budgeting, the budget structure was to be revised to provide for readily identifiable functional programs and activities to be financed from a single source of funds. This was intended to clearly fix management responsibility, simplify accounting and reporting, and permit Defense managers and the Congress to more easily determine costs and evaluate progress and accomplishments. Industrial funds were considered to fit into the framework of the performance-budget concept since they accomplish the same results.

focusing on the cost of doing the job, management concentrated on setting staff levels (having funded staff-years to perform the forecasted workload and keeping the facility ready for mobilization) and on financing categories of expenses, such as salaries, materials, heat, equipment, and collateral items. Work was ordered into the activities on a priority basis, and the activities did work that was assigned or what they could within their budget resource limits. The goods produced and services rendered were provided free (to Defense customers), and users were seldom restrained by financial considerations in placing their orders.

The emphasis in accounting was on keeping track of obligations and disbursements for each appropriation or allotment and insuring that individual funding limits for each expense category were not exceeded. Few activities had cost accounting systems. Efforts to relate costs to end products or projects was generally done by memorandum recordkeeping, which was usually inaccurate and unreliable.

As a means of management and fund control, Defense used a detailed allotment structure which divided appropriated amounts and suballotted them to lower levels. This resulted in multiple pockets of obligational authority. Some activities reportedly received money from as many as 200 or more separate allotments. We reported that over 10,000 allotments or administrative subdivisions had been established at one installation. On this point, our report further stated:

"* * * it becomes increasingly more obvious that the excessive use of detailed administrative allotments as the basis for administering programs under appropriated funds is a significant factor in the confused and unsatisfactory situation with respect to financial control in the Department of Defense."

Herbert Hoover, as Chairman of the Hoover Commission on Organization of the Executive Branch of the Government, testified before the Senate Armed Services Committee in April 1949 that his task force on budgeting and accounting had concluded that:

"The budgetary and appropriation structures in the Army and Navy are antiquated. They represent an accumulation of categories arrived at on an empirical and historical basis. They do not permit ready comparisons, they impede administration, and

interfere with the efficiency of the military establishments."

Mr. Hoover further testified that "no one can tell from the present budget what any particular function or activity costs."

CHAPTER 4

HOW EFFECTIVE HAVE INDUSTRIAL FUNDS BEEN?

Quantitative data is not available to objectively determine just how effective industrial funds have been in promoting increased efficiency and economy in the operation of Defense industrial and commercial-type activities. Although efficiencies have been realized, it is impossible to say that they would not have been achieved under appropriated funding. Nonetheless, it is possible to get an idea of the extent that the other objectives of providing incentives and controls for better management have been achieved. The chart on the following page illustrates some of the benefits.

WHAT HAS BEEN ACHIEVED

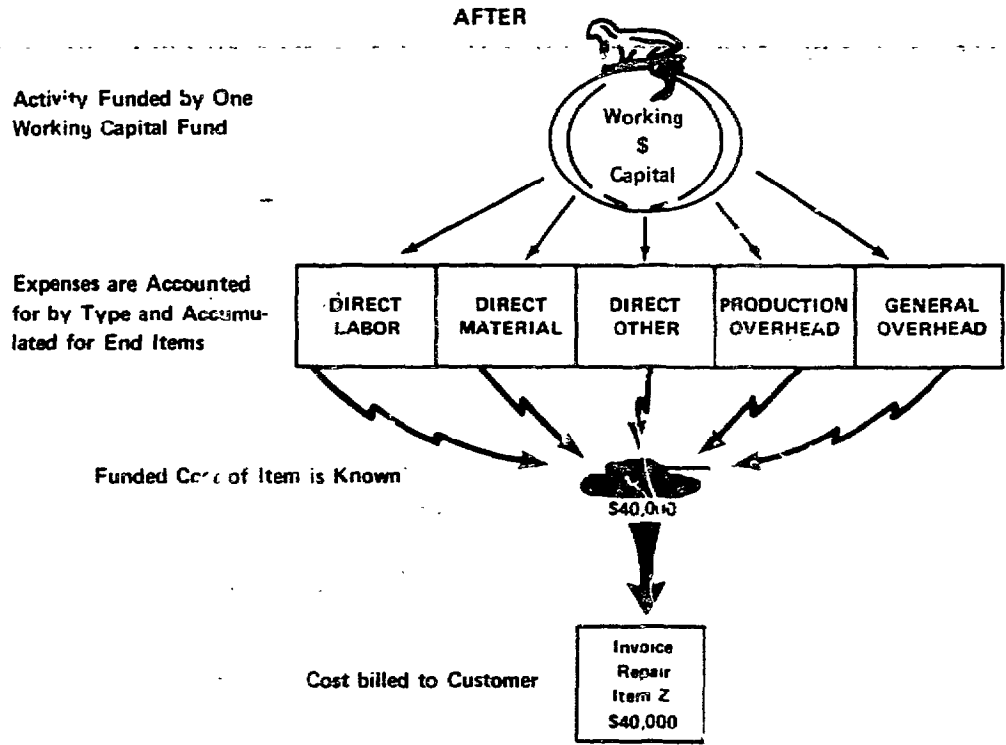
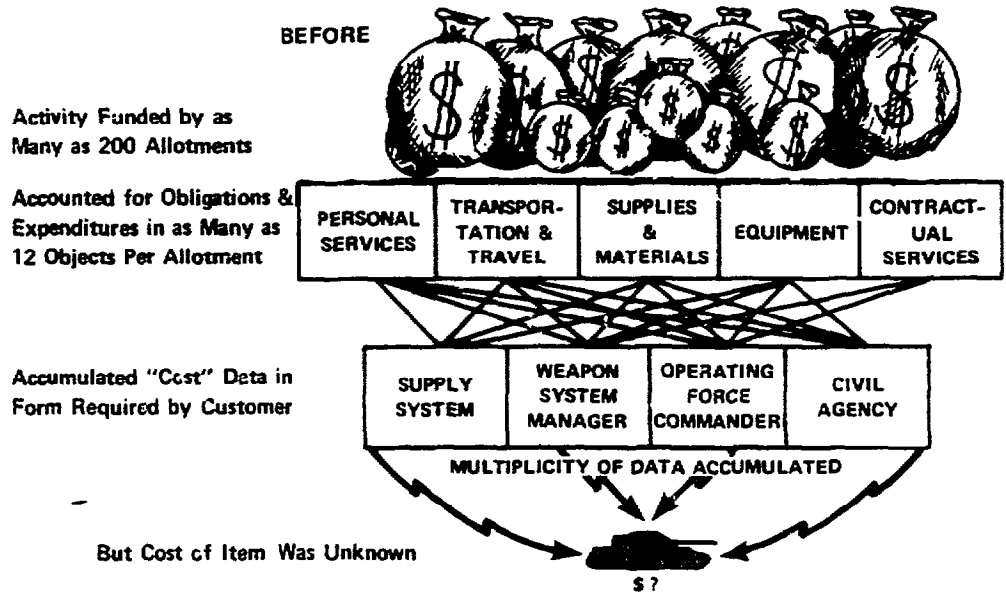
Industrial funds have simplified financing and promoted the use of cost accounting, thereby focusing attention on the cost of getting the job done and providing a more disciplined and effective approach to budgeting as well as a framework for better cost control. While improvements in accounting and use of cost data for control are needed, the fact that cost accounting systems are in place should not be disparaged by the suggestion that cost accounting systems can also be developed under appropriated funding. Whether they would be, considering the difficulties that occurred previously when these activities were under appropriated funding, is not a certainty.

Industrial funds have also forced customers to pay for what they receive and have given industrial fund managers somewhat greater financing flexibility, thereby providing incentives for both customers and performing activities to effect efficiencies and economies. This, of course, was a primary objective.

In many cases though, the incentives for improving efficiency and economy may be offset--in varying degrees--by imposed constraints, poor management practices, and organizational arrangements. (See chs. 5 and 6.) In some cases, parent commands are responsible for the program (deciding requirements and placing orders) as well as for overseeing activity operations and enforcing controls. Where this is true, the function of independent oversight is compromised and the incentives emanating from a buyer-seller relationship are diminished.

Notwithstanding the limitations in applying the concept in the Defense environment and acknowledged faults in

BENEFITS FROM USE OF INDUSTRIAL FUNDS



implementation, Defense officials who were contacted (persons interviewed had a cross-section of responsibility for industrial fund operations) expressed general satisfaction with the concept. The consensus was that industrial funds were generally achieving the general objectives for which they were created and that a return to appropriated funding would not be a better or satisfactory alternative.

Benefits from cost accounting

The financial management controls available through the industrial fund's businesslike accounting system focus attention on cost and help foster efficiency. By having costs charged to specific jobs or products and services, it is possible for industrial fund managers and customers to know what the activities are doing and what the operating costs are. Through internal reports, Defense managers, particularly at the local and parent-command level, can obtain details on overhead costs and operating costs--by areas of management responsibility as well as by job and end-products and services--and thus can evaluate an activity's efficiency and the reasonableness of expenses incurred in terms of costs. Managers can also evaluate the performance of their personnel in keeping costs low. In practice, this is done in a variety of ways. However, the extent and type of effort devoted to management control vary, as does the sophistication of the cost accounting systems, which can limit the usefulness of cost data for control.

In recent reports we have suggested improvements in cost accounting procedures to enhance the accuracy of cost information in individual industrial funds to improve the funds' usefulness in evaluating performance, and Defense officials have generally agreed to implement these suggestions. It is important to remember that industrial funding provides the conceptual framework for management control, but management must see that the tools are used effectively.

Incentives emanating from the "buyer-seller" relationship

The "buyer-seller" relationship is considered a principal motivator of efficiency. As a result of having to pay, customers are forced to consider costs in deciding requirements and placing orders. Also, while generally precluded from choosing alternate suppliers, customers can nonetheless compare prices. This can lead buyers to question the efficiency of a seller's operations, particularly when they find a supplier with lower prices, and thus motivate producing activities to be concerned with costs. Although the

benefits of this buyer-seller relationship have seldom been documented, Defense officials claim that when activities were first put under industrial funds (and comparisons of before-and-after ordering levels could easily be made) there was ample evidence indicating that customers were examining their requirements carefully from the viewpoint of economy.

Defense officials have expressed the opinion that application of industrial fund operating methods promotes a high degree of cost-consciousness among managers and employees of performing activities as well as customers. While obviously subtle and hard to measure, it is generally recognized that this attitude has considerable intrinsic value. In fact, creation of this product-oriented, cost-conscious attitude was in part what the creators of industrial funds hoped to achieve.

Increased financing flexibility

By consolidating funding source and accompanying constraints and by freeing financing from the appropriation cycle, industrial fund managers have somewhat greater financing flexibility. As a result of having this flexibility, industrial fund managers can better meet unforeseen conditions and achieve economies. For example, when working capital is adequate they can buy economical quantities of supplies and materials regardless of fiscal year, which often is not possible under annual appropriations. Also, since continued operations are financed with customer receipts, activities have a built-in flexibility to respond to increases in workload--so long as customers have enough appropriated money to pay. However, this flexibility is considerably limited by personnel and other constraints (which are discussed in more detail later) and in recent years by erosion of working capital balances through inflation.

CHAPTER 5

CONSTRAINTS AND POSSIBLE IMPROVEMENTS

IN APPLYING THE CONCEPT

As was to be expected, not all the advantages of the industrial fund concept have been realized. Some business-like methods of operation could not be brought to Government. In this respect, Governmental constraints are imposed on hiring and firing policies. Acquisition of equipment that would increase productivity is tightly controlled and financially constrained, and many industrial-fund managers are required to keep skilled people and maintain unused and underused plant facilities in periods of low operation in order to have a reserve mobilization capability. Moreover, the Department and services have not taken some management actions needed to maximize the potential benefits of the concept.

As a result, industrial fund managers do not have the same incentives or flexibility as managers in private enterprise to vary their resource mix to achieve efficiencies, cut costs that from a cost-saving standpoint appear appropriate, and apply modern methods that have proven cost benefits. Collectively, the requirements and constraints they work under have a tendency to reduce the incentive for local managers to reduce costs and even encourage the opposite.

PERSONNEL CONSTRAINTS

Although patterned after businesses, industrial funds are subject to civilian employee ceilings and constraints on hiring and firing, as are other Defense activities. As a result, industrial fund management does not have the flexibility that private company management has to quickly increase or decrease employment levels to meet workload requirements. For instance, when workload drops off management is not able, because of Defense and Civil Service regulations, to quickly reduce its labor force. The leadtime for getting permanent employees off the payroll normally extends to 5 or 6 months because actual layoffs must be approved by higher authorities and be preceded by complicated job-bumping procedures.

Conversely, when unexpected work develops, personnel ceilings frequently prevent management from hiring people permanently to do the work. Thus they must use expensive overtime, hire temporary or part-time help, use military

personnel, or contract the work out. But these substitute sources of labor are also subject to various constraints.

Temporary hires--which are widely used--give activity managers considerable latitude for adjusting personnel levels, since temporaries do not count toward personnel ceilings until yearend and can be separated with virtually no leadtime or separation costs. Additionally, when workload fluctuates, part-time employees can often provide the best and most economical way of accomplishing necessary work. Military personnel are essentially a free resource insofar as an industrial fund is concerned because they are not subject to civilian strength ceilings and their salaries are not included in prices (to Federal customers).

Besides decreasing managers' flexibility, these constraints also tend to present a disincentive. When coupled with the need to keep a broad base of skills for mobilization and the fact that work is largely allocated on the basis of capacity and capability (that is, keeping employees busy) rather than cost, managers actually have a strong incentive to keep their staff--particularly critical staff--even when workloads decrease. Thus, they can keep the existing personnel ceiling, thereby retaining the ability to be given work and take on new or additional work when the need arises.

Nevertheless, it is important to recognize in evaluating industrial funds that personnel constraints also apply when appropriated funds are used. Thus, while these constraints reduce the effectiveness of the industrial fund concept no advantage would accrue from returning to appropriated funding.

More flexible controls are possible

As an alternative to personnel ceilings, Defense officials and others have proposed that industrial fund activities be permitted to use financial controls for managing staff levels. This has been tested at a few industrial fund activities and although the ceilings were not totally lifted during the tests, those evaluating the results, including GAO, concluded that some benefits were realized.

The President and the Congress, however, have long been concerned about limiting the total number of employees on the Federal payrolls and have used personnel ceilings to accomplish this. Although various congressional committees have periodically considered excluding industrial funds from

civilian personnel ceilings (including two committees ^{1/} in early 1976), the prevailing view has been that such controls are invaluable and the decision has been to retain civilian strength ceilings. Contrary to the idea of relaxing ceiling controls, this year both Senate and House Appropriation Committees recommended specific personnel reductions at individual industrial funded activities in all services.

The basic arguments generally given by those opposed to relaxation of personnel ceilings were summarized by the Senate Committee on Appropriations in its report on the Defense Appropriation Bill for fiscal year 1976. In addition to reiterating the value of ceilings in evaluating Defense budget requests, the primary reasons cited were: (1) the lack of positive evidence that use of industrial funds had contributed to productivity or efficiency, (2) the lack of a clear pattern as to which activities will be industrially funded, (3) the fact that these "business-type" activities must be responsive to national security needs and thus cannot be fully managed like a private business, and (4) the committees' belief that no financial control can be exercised over industrially funded civilians.

Conclusions

Controls imposed by personnel ceilings tend to deprive agency management of flexibility to use the most effective and economical source of labor in accomplishing essential work. Moreover, our reviews at various industrially funded activities shows that civilian employee ceilings tend to be counter productive due to the end of year scramble to reduce personnel to authorized ceilings. While employment ceilings may be a tool to assure that the concerns of the President and Congress as to total numbers of Federal employees are met, they are at best an inferior substitute for financial controls and effective management. Accordingly, we suggested in our draft report that the Department of Defense make further tests of operating selected industrial funds without personnel ceilings to clearly and conclusively demonstrate whether financial controls could be relied on to provide controls that meet congressional requirements while permitting managers greater flexibility.

In response, the Department of Defense expressed support for the idea of operating without use of civilian strength ceilings. However, they feel that applying this exclusion only to industrially funded activities would penalize those

^{1/}The Senate Committee on Appropriations and the House Committee on Armed Services.

Defense activities remaining under personnel ceilings and deprive the Department of the flexibility to respond to unforeseen workload increases and legislated manpower reductions. For these reasons, and anticipating continued reliance on personnel ceilings by the Congress and the President, the Department expressed reservations about the value of resuming a test program limited to only industrial fund activities.

We agree with the Department of Defense that exclusion of only industrially funded activities from civilian personnel ceilings could result in tighter ceilings on other activities, and it was not our intention to imply that this be done. Our suggestion for further tests was intended to see whether financial controls acceptable to the Congress could be developed. In our opinion such tests would be beneficial. However, we are currently making a comprehensive study into what types of budget and financial controls might meet congressional needs and thereby preclude the need for ceilings. Anticipating some definitive suggestions from this study, we are not making a recommendation to Defense on this matter of civilian personnel ceilings at this time.

CONSTRAINTS IN FINANCING LABOR-SAVING EQUIPMENT

The three major factors in increasing productivity are: (1) harder or smarter work by the workforce, (2) more efficient management techniques, and (3) capital investment in labor-saving devices. The last item has historically been responsible for producing a high rate of productivity growth. However, until July 1975 money for buying capital equipment (items costing over \$1,000) was separately provided to industrial funds from appropriated funds and not considered as part of the cost of operating the industrial fund. As such, these costs were not recovered because they were not included in the sales price to the Government customer.

Defense officials did not previously give industrial fund managers the flexibility to buy major items of equipment with working capital for two basic reasons.

--They believed that activities could obtain sufficient money to finance capital assets through appropriation financing.

--They wanted to retain visibility and central control of such expenditures, primarily because the many sources of funds for capital improvements would fragment responsibility and control.

This policy has not proven effective in stimulating the acquisition of equipment that would enhance productivity. One reason is that managers of industrial funds usually do not consider equipment costs to be a business expense because they do not have to recover the cost of buying and using such equipment from customers. Also the activities have experienced difficulty obtaining money through the appropriation process for buying modern equipment to make their operations more efficient and economical. A related constraint is the long leadtime involved--up to 2 years--from the time the opportunity for savings is recognized until money is obtained through the budget process. Additionally, and perhaps in part as a result of these conditions, managers have generally not aggressively searched for opportunities to apply labor-saving equipment and to effectively justify buying it.

More flexible arrangements are possible

In the past Defense officials have tried several techniques to overcome at least part of the problem. One recent funding approach that has been particularly effective is to set aside a separate fund of appropriated money for acquiring labor-saving equipment having a fast payback potential. In addition to providing money, this approach has stimulated management interest in identifying opportunities for applying labor-saving equipment. While ideally suited for nonindustrial activities, this approach can also be effectively applied to industrial funds.

More recently, the Deputy Secretary of Defense directed the military departments to develop instructions and procedures by July 1, 1975, that would permit industrial funds to finance fast payback investments. Under this program, industrial fund activities can use their working capital to buy tools and equipment costing between \$1,000 and \$100,000 that will improve productivity and recover the purchase price through lower production costs within a 2-year period. However, items which exceed \$25,000 will require Defense Comptroller approval. Amounts spent under this program are recovered by including a pro rata share of the cost in overhead charges to customers. (This has the same effect as accelerated depreciation.) To demonstrate that use of this authority is cost efficient, the program also requires establishment of management controls over the use of the authority and accounting procedures to provide information on the actual results of these investments.

Conclusions

Permitting industrial funds to finance equipment that will increase productivity appears to be a sound idea.

However, it is too early to tell how effective it will be or to offer any further recommendations in this area. We offer a bit of caution though. Because many industrial funds have been operating with a marginal amount of working capital, they may not have enough money available to buy such equipment. Thus, to keep this innovation from becoming form rather than substance, Defense officials will need to insure that the activities have adequate working capital.

DISINCENTIVES ASSOCIATED WITH NOT IDENTIFYING MOBILIZATION COSTS

A primary reason for having the military services operate industrial-type activities, in addition to having work done on contract by private industry, is to have a reserve capability which can be quickly activated in time of war or emergency to meet expected military requirements. Accordingly, many industrial fund activities have an inherent amount of unused and underused capability.

Secretary of Defense policy is that major expenses of maintaining unused and underused plant, equipment, and skilled people for mobilization at industrially funded activities are to be identified and separately funded from appropriated funds and not passed on to the customer. Nonetheless, in a recent review 1/ at 45 selected Army and Navy industrially funded activities we found that most activities incurring costs for unused and underused equipment and plant facilities were including them in prices and passing them on to customers without identifying the amount. 2/ The Air Force indicates that the cost of underused capacity and capability at its industrial fund activities is not large, except in the airlift service industrial fund. 2/ Maintenance of mobilization skills at industrial funds is an acknowledged problem at only a few installations and the airlift service.

1/Letter report to the Secretary of Defense on funding unused and underused mobilization essential capacity at Department of Defense industrial fund activities, March 21, 1974 (B-159896).

2/The Army provides some funds to maintain inactive mobilization essential facilities, and both the unused and underused mobilization capacity at the Military Traffic Management and Terminal Service. The Air Force is identifying the cost of maintaining underused airlift capacity and related pilot training for mobilization, but the means of funding remains to be resolved.

The reasons why this problem of identifying and funding unused and underused mobilization costs has not been entirely resolved are:

- It is difficult to define and identify the costs associated with having underused capacity. Because managers like to keep operating costs low, particularly reimbursable costs, they are strongly motivated to overstate these nonproductive overhead costs.
- Some officials within Defense apparently believe that if such costs are made visible they will not be able to obtain all the money through the appropriation process to fund them.

More precisely, the Department of Defense has neither issued instructions and procedures for implementing the policy (although it is developing instructions) nor established the type and number of skilled people needed for mobilization.

Not identifying mobilization costs reduces the effectiveness of the industrial fund concept by:

- Limiting management flexibility for reducing costs.
- Making cost comparisons between similar activities and private industry difficult because the extent of unused or underused capability at each activity is not the same and contractors do not need to retain this capability.
- Increasing prices and thereby reducing business at activities which have competitors either in private industry or other Federal organizations.

Additionally, when mobilization expenses are not identified, customers and those responsible for reviewing costs cannot be sure if management has minimized costs. This can foster a continuing negative attitude toward the value of the industrial fund concept.

Identification of the cost of having unused and underused capability is of primary importance. This alone would permit managers to know the true cost of doing a given job and thus facilitate cost comparisons. Whether these identified mobilization costs are separately funded or not is less important considering the other constraints under which industrial funds work.

Also, returning to appropriated funding would not resolve the basic problem. It would no doubt make such

mobilization costs less visible; however, this is not desirable because the true cost of doing a given job would still be inflated by an unknown amount.

Conclusions

Identifying and separately funding the costs of maintaining a mobilization base would greatly enhance the effectiveness of the industrial fund concept. It would not only improve the industrial fund managers' and customers' ability--as well as that of the Congress--to evaluate actual costs of providing the products and services requested, but it would make the Congress and Defense fully aware of the costs of maintaining unused and underused plant equipment and people for mobilization. The delay in identifying such costs is caused primarily by the lack of procedures for identifying and quantifying plant and equipment costs and establishing the type and number of skilled people needed for mobilization.

Recommendations

We recommend that the Secretary of Defense:

- Establish, with the assistance of the services, the minimum number of skilled people needed for mobilization at industrial fund activities.
- Expedite the development and issuance of guidelines for computing, reporting, budgeting, and funding the cost of maintaining unused and underused plant, equipment and people at the industrial fund activities.

Agency comments

The Department of Defense agreed with our recommendations and added the following comments.

"The problem, as recognized in your report, is one of clearly defining the parameters and establishing an accounting system to capture such costs. This is a complex and time consuming problem but some progress is being made. The OASD(I&L) is working on guidelines to cover industrial type activities and has recently completed its first draft on a Handbook concerning shop capacity measurement in the depot maintenance area. Solution of the problem of measuring practical plant capacity is a prerequisite to the development of budgetary and accounting guidelines for establishing and funding the cost of maintaining unused and underutilized capacity."

These actions are responsive to our second recommendation, but not the first. The issue of determining the minimum number of skilled people needed for mobilization is distinct from identifying unused and underused plant capacity and needs to be addressed separately. Accordingly we believe that special attention should be given to this personnel aspect of the problem in determining needed mobilization capabilities.

CHAPTER 6

IMPORTANCE OF PRICE AND COST CONTROLS

Under the industrial fund method of financing, an activity can effectively determine the size of its operations as long as it can generate sufficient revenues to match its operating expenditures. Thus, one of the primary means for regulating operations is through price and cost controls (financial controls). In many instances, however, reliance on financial controls has been hindered by limited use of predetermined prices and frequent price adjustments; and by lack of productivity measures, poor cost data, and inattention to cost controls in evaluating the performance of operations.

ROLE OF PRICE CONTROLS

As in placing orders with contractors, financial control is achieved by establishing predetermined fixed prices for doing specific work. If the price includes all appropriate costs and reflects reasonable performance norms, then management and the Congress can be reasonably assured that the size of the activity is being controlled and that it is operating efficiently. Of course, because competition generally does not exist at industrial funds as an incentive for keeping costs low, cost controls and independent reviews are periodically needed to insure that prices are reasonable and that any adjustments and increases include only essential incremental costs.

For price controls to be applied effectively, it is also important that a consistent price be established for similar work (even if the work or costs vary somewhat) and that prices remain stable for a reasonable period--optimally through the year. If a new price has to be established for each order and price adjustments are regularly permitted, the effort and cost of administration can, depending on the size and volume of orders, become prohibitive. Of course, prices should be revised when significant changes in labor rates or material costs occur. But such revisions should be subject to some level of independent review to assure that price increases are justified.

Limited use of predetermined prices

In practice, a number of activities use predetermined rates or prices. The predominant ones are air and sea transportation, printing, laundry and dry cleaning, clothing manufacturing, and communications. For these activities it would be rather easy to measure year to year productivity trends, which to some extent is being done.

In terms of sales, though, these activities are relatively small. At most major activities prices are established for each order (there are exceptions) either before work is started or after some percent of completion, or orders are for cost reimbursement. Predetermined prices are not widely used because it is considered impracticable to establish a single price that would properly show efficient performance because the type and scope of work requested is so different or unique. What has to be done is not known until the work is started or well underway.

Although the work does frequently vary from job to job and item to item, this does not necessarily preclude more extensive use of predetermined fixed prices. In addition, the advantages might outweigh the disadvantages. For example, progress has been made in using predetermined prices for ship overhauls, something which was generally considered impossible. Instead of arriving at a price after some portion of the work is completed, one shipyard has used its experience to determine what repairs will be needed and to estimate a fixed price before work begins. Among the advantages, it has reduced both the overhaul time and the cost.

Prices are frequently adjusted

Industrial fund managers have had considerable difficulty in completing work within established prices. As a result, prices or workload quantities have frequently been adjusted. The need for making such adjustments is caused by: unexpected changes in work, wage increases, and inflation, as well as some avoidable and unavoidable factors. However, since they are required to break even, management often has little choice when cost increases occur--whether for good or bad reasons--but to adjust or renegotiate the price of customer orders.

Where frequent price adjustments are permitted, price change can become accepted as the primary outlet for cost increases, and work is effectively done on a cost-reimbursable basis. The acceptance of cost and price increases as a way of life provides little incentive for industrial fund managers to take appropriate actions to reduce costs. It also makes it difficult to achieve a comparable level of funding between the industrial funds and the customer accounts (that is, to see that customers obtain sufficient money through the appropriation process to pay what industrial fund activities must charge to cover costs). Even worse, it reduces effective financial control.

Last year the Office of the Secretary of Defense issued instructions for a price and rate stabilization program.

This program provides for keeping established prices stable through the budget year. Where fixed prices are not used, it provides for labor and overhead rates to be held stable. While not directly addressing the potential for greater use of predetermined fixed prices, it may have a similar result.

Conclusions

Confidence that financial controls can be relied on to regulate the size of industrial fund activities and contribute to increased efficiency rests heavily on the effective use of price controls. Price controls could be improved and confidence in them fostered by making further use of predetermined fixed prices and minimizing price adjustments.

The rate-stabilization program appears to be good and should help reduce the need for price adjustments. Although other factors may have to be dealt with, particularly to encourage greater use of predetermined prices, it is too early to determine how effective this program will be or to offer additional suggestions.

ROLE OF COST CONTROLS

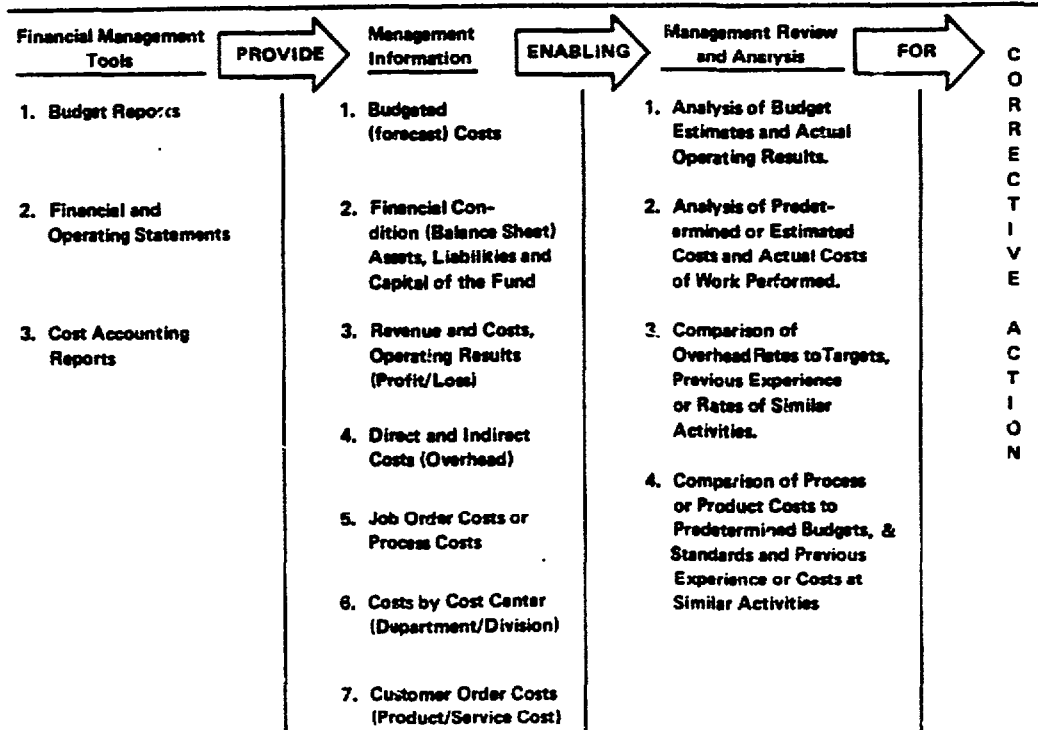
Cost controls play a number of roles. As mentioned earlier, they can be used to insure that costs are accurate and that increases include only necessary incremental costs. They can also be used to gage the efficiency of operations. Basically cost control is achieved by comparing data on current performance with other data. The basis for comparison may be data from another activity, historical data for the same activity, or a predetermined yardstick, such as a unit cost or price, an overhead rate target, or a labor standard. The chart on the next page depicts some of the financial management controls available through the industrial fund's commercial-type accounting system.

As would be expected, not every activity, each parent command, or other responsible organizations in the chain of command use all the techniques shown in the chart. The extent and type of effort devoted to analysis and cost control also vary.

Intra-agency cost comparisons

Work measurement is a primary method used by activities to plan and control operations and measure efficiency. Labor-hour standards are established for specific jobs, components, or services, and actual hours are measured against these standards. Sometimes labor standards are established for shops or organizational segments as well.

FINANCIAL MANAGEMENT CONTROLS



Cost standards can be used in conjunction with work measurement systems to provide overall indices of efficiency and tools for management control. As in work measurement, estimated costs for end-products and services are established (which may or may not equate with the price) and final costs are compared with these estimates or standards. To be effective, costs for direct labor, direct material, and overhead must be separately identified and variances between estimated and actual costs analyzed to determine the causes and to associate each variance with the person responsible.

In past reviews at selected individual installations and groups of installations, we have identified weaknesses in accounting procedures that have limited the usefulness of reported work measurement and cost data for management purposes. We found instances where

--labor hours were charged to incorrect jobs,

- standards were not current or subject to uncontrolled adjustments,
- production counts of completed units were inaccurate and not matched with appropriate costs,
- material costs were incorrect and not charged to the benefiting job or program, and
- expensive parts were interchanged and costs transferred between jobs and programs without proper accounting or good justification.

We also noted instances where actual hours were not compared with standards by job, cost variances were not analyzed, and costs were not accounted for in sufficient detail or properly aggregated to measure the efficiency of performing specific services or repairing similar components. Occasionally similar conditions have been reported by Department of Defense reviews and audits.

As mentioned earlier, Department of Defense officials have generally agreed with our suggestions and promised corrective action in the cases identified. Additionally, it is expected that some weakness in accounting procedures will be resolved as industrial fund accounting systems are developed to comply with our requirements. ^{1/} However, while providing guidance, our requirements allow each agency to determine the extent of detailed cost information to be collected and the method of accumulation, aggregation, and reporting. Thus, improvements will have to come primarily from Department of Defense initiatives.

The problems we have identified in accounting and control stem more from weaknesses in implementation than lack of procedures and instructions. Thus the weaknesses can be limited to individual locations or commands. We, therefore, believe that continual monitoring is needed to insure that management uses appropriate control procedures. We plan to continue reviewing industrial fund operations and to follow

^{1/}To date, only a few industrial fund accounting systems have been submitted and approved by us as required by the Budget and Accounting Act of 1950, but Defense has significantly increased its efforts in the past 3 years. For details see "Status, Progress, and Problems in Federal Agency Accounting During Fiscal Year 1976" (FGMSD-76-13 Oct. 23, 1975).

up on our past recommendations, but we believe that systematic monitoring of the type needed can be best accomplished by Defense internal audit organizations. The Secretary of Defense (Controller) should monitor the frequency and extent of audit effort to insure adequate coverage and take action when appropriate.

Cost comparisons between activities

Another way to see if costs are reasonable is to compare costs among activities doing similar work. However, this has not been as effective as originally expected because the costs are often not comparable--at least without considerable one-time analysis. Some variances result from normal causes. For example, although seemingly alike, the work being done is often quite different. Also, employee efficiency can vary because of differences in plant facilities and equipment.

Cost variances also result from more controllable causes. For example, unidentified mobilization costs may exist which differ. This problem was discussed in chapter 5. Also, the elements of expense funded by industrial funds differ, particularly among services, as may the method of recovery. For example, some amortize plant repairs over several years, others charge them off in the current year, and some do not even fund them. Comparisons between services have been further complicated because the methods of accounting for costs are not compatible. These differences have resulted largely from past decentralization of authority for establishing procedures for operating industrial fund activities. Efforts have been made in recent years to achieve greater uniformity in operating procedures. Most recently, the Department issued a handbook, "Depot Maintenance and Maintenance Support Accounting and Production Reporting" (DOD 7220.29H), which sets forth requirements for uniform cost accounting and reporting by all Defense depot maintenance installations.

It is anticipated that most of the basic weaknesses and differences will be resolved as (and if) these procedures are implemented and as accounting systems are developed to comply with our accounting requirements. However, even with these improvements, comparison of costs among activities will have to be carefully made to assure that costs are truly comparable. The inherent limitations and difficulty in comparing costs between activities places increased emphasis on using techniques for evaluating the efficiency of activities on an individual basis and on developing productivity indices useful in managing the activities and comparing relative performance trends (as opposed to direct comparisons).

Importance of unit costs
and productivity measures

The Senate Appropriations Committee highlighted its concern with control of industrial funds by stating in its report on the fiscal year 1976 Department of Defense Appropriation Bill that " * * * at the present time, there can be no financial control exercised on industrially funded civilians." But the Committee was concerned with more than control. It also wanted to learn how efficiently industrial funds were operated, the extent they aided in effective management, and how the Congress could obtain better budget information on their staffing, workload, and fund requirements. ^{1/}

Two of the most useful ways are by using unit-cost trends and productivity measures. Productivity measures show the efficiency of the work force (which is important because labor is a significant portion of costs at most industrial funds as shown below) and unit costs can show performance trends in terms of total costs.

Ratio of Labor, Material, Contract Services,
and Other Costs as a Percent of Total Costs

(Fiscal Year 1975)

<u>Industrial fund</u>	<u>Labor</u> (Percent)	<u>Material</u> (percent)	<u>Contract services</u> (percent)	<u>Other</u> (percent)
Army	63	17	15	5
Navy	49	16	31	4
Air Force	29	31	39	1
Marine Corps	63	26	0	11
Clothing manufac- turing	85	9	6	0
Communications	1	0	99	0

Source: Department of Defense Annual Report on
Working Capital Funds, 30 June 1975

^{1/}The Committee directed the Department of Defense to conduct a study to examine these matters, among others.

As previously mentioned, unit-cost data is available and is used in setting prices and, to a varying degree, in evaluating performance. However, data on unit end-item costs for individual activities are not routinely reported to the Congress or to top-level Defense managers. Although unit-cost data is provided in budget backup material, it is generally in the form of a weighted average of the costs experienced by a number of activities. Annual financial reports required by the Congress do not include any information on unit costs or unit-cost trends.

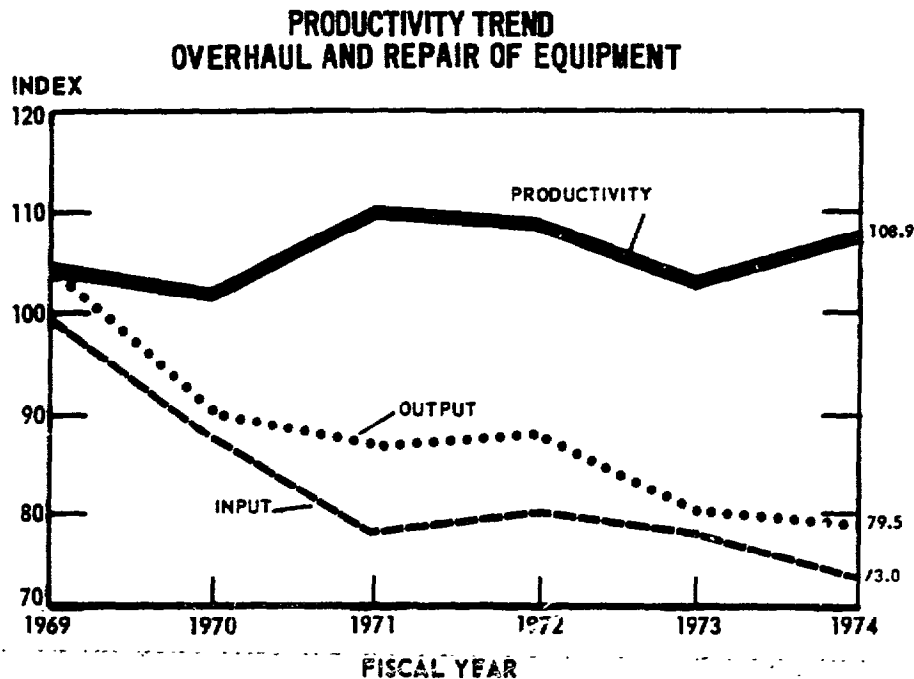
As emphasized in Defense instructions for management improvement, productivity measures (when properly developed, applied, and interpreted) can be used to (1) disclose trends in productivity which can signal possible need for adjustments in the work force, (2) determine and evaluate manpower requirements during the budget process, and (3) provide a means of reflecting year-to-year productivity trends to top managers and the Congress. The Secretary of Defense issued directive 5010.31 in August of 1975, establishing a Defensewide productivity program for enhancing, measuring, and evaluating productivity. Among its objectives are providing for development, evaluation, and use of productivity trend data in resource planning and control and in development and support of budget estimates. It also requires the Army to provide training on labor-productivity measurement techniques and the Defense Comptroller to insure that productivity data can be accumulated in accounting systems.

As with any management tool, however, it is difficult to mandate the development of good productivity measures and their effective use. Managers must be convinced that productivity measures can be helpful. This is why training in both the development and practical use of productivity measures is so important. This does not, of course, minimize the importance of continued top-level Defense management support.

The Office of Management and Budget has recognized the value of productivity measures in management and budgeting and has required its use in budgeting for many years. Additionally, the Government has a program for measuring and improving productivity in the Federal Government and several industrial fund activities are reporting productivity data as participants in this program.^{1/} The reported

^{1/}For details see "Productivity Programs in the Federal Government FY 1974 Volume One: Current Efforts and Future Prospects," (Joint Financial Management Improvement Program, June 1975).

productivity trend for Air Force and Navy aircraft overhaul and Army tank and vehicle overhaul--which includes input from some nonindustrial fund installations--is shown in the following graph.



Source: See page 44 of the Joint Financial Management Improvement Program report referenced in footnote 1 on the previous page.

Generally, however, measures used in the Federal Productivity Program do not provide the detail needed to be fully useful to management and have not yet been fully integrated into the activities' regular management systems. The slow progress in developing reliable productivity measures at many industrial funds is attributed to the variety of work being done on different jobs and individual items, thus making it difficult to develop data that will measure productivity trends consistently from year to year. In fact, it is questioned whether traditional productivity measures can be developed for some activities.

Although it is difficult to establish standards and develop productivity indices for many defense industrial fund activities, considerable effort is underway. The Navy has been working for several years to develop productivity measures at its shipyards. While no system has been officially approved, some of the test results indicate that it is feasible, at least for portions of the work.

The Army Development and Readiness Command has a project underway to improve productivity measurement in industrial fund operations. The project examines qualitative as well as quantitative measurement of productivity. Army officials expect this, coupled with the Command's system of overhead rate control, to improve management control with a minimum application of resources.

Conclusions

When unit-cost comparisons and productivity measures are properly developed and applied they can help show whether controls are working and provide better budget information on performance trends and staffing requirements. If productivity trends are increasing and unit costs decreasing (or rising slower than inflation), top managers and the Congress will be more easily persuaded that costs represent efficient performance and that management controls are adequate.

Of course, such measures neither a cure-all nor a substitute for good cost controls to insure that costs are accurate and reasonable. Accordingly, continual reviews are needed to see that cost-control procedures and actions throughout the chain of command are adequate.

The Defense Productivity Program should accelerate management efforts to develop and use productivity measures. But on the basis of past performance, implementation will have to be carefully watched and encouraged by top management to see that progress is being made and that the measures are practical and useful. Therefore, training of appropriate industrial fund personnel, both in development and in effective and imaginative use of productivity measures, is a key factor in encouraging progress, as well as continued top-level Defense management support.

Recommendations

We recommend that the Secretary of Defense:

- Insure that appropriate Department of Defense internal audit organizations periodically review the adequacy of the cost controls used by the industrial funds

activities, parent commands, and other responsible organizations.

--Include in annual financial reports presented to the Congress, data on unit-cost comparisons and trends where practicable and on productivity trends as measures are developed. In presenting unit-cost data the emphasis should be on comparing year-to-year trends within individual activities.

Agency comments

The Department of Defense agreed with our recommendations and stated that the Deputy Assistant Secretary of Defense (Audit) was furnished a copy of our report for appropriate action. With regard to providing unit cost and productivity data in financial statements, Defense stated:

"The complex nature of our multimission industrial fund activities makes the development of meaningful unit cost comparisons very difficult. As your report indicates, the usefulness of productivity measures is dependent on their proper development and application. Both your recommendations will be considered for improvement of our internal reports and the annual working capital report to Congress."

CHAPTER 7

SCOPE OF REVIEW

This report is based primarily on a study of the legislative history of conditions leading up to enactment of industrial funds; Defense regulations governing industrial funds; and applicable reports, studies, and documents published by GAO and Defense organizations concerning the operation and management of industrial funds. We obtained supplemental information through discussions with command and headquarters officials in the services and officials in the Office of the Secretary responsible for managing industrial funds. We also held a conference with officials from both Defense and civilian agencies responsible for managing major revolving-fund installations or organizations on the benefits, problems, and ways to make working capital and revolving funds more effective. Additionally, onsite surveys were conducted at Edgewood Arsenal, Maryland; Tobyhanna Army Depot, Pennsylvania; and the New Cumberland Army Depot, Pennsylvania.

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COMPTROLLER

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

17 JUN 1976

Mr. D. L. Scantlebury
Director, Division of Finance
and General Management Studies
General Accounting Office
Washington, D.C. 20548

Dear Mr. Scantlebury:

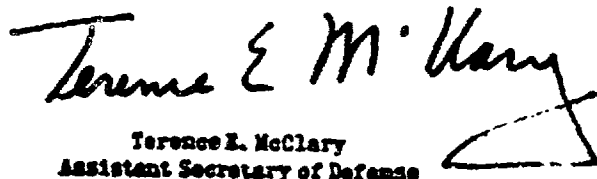
This letter is in response to your draft report entitled "A Look at Defense Industrial Funds After 25 Years" (Code 90317) conveyed to this office for comment by letter dated April 7, 1976.

While we agree with most of the report findings, we have reservations on your recommendation that the Secretary of Defense resume its test program for operating industrial fund activities without personnel ceilings. Our position on this subject as well as other comments is contained in the enclosures.

We are appreciative of your observations on some of the initiatives we have been taking to improve the operations of industrially funded activities. We appreciate especially your comments on our rate stabilization program, the Defense productivity program, and the new procedure permitting industrial funds to finance equipment to increase productivity.

Thank you for the opportunity to comment on your report.

Sincerely,


Terence E. McClary
Assistant Secretary of Defense

Enclosures

Note: The enclosures are not included here. Where appropriate, pertinent comments contained therein have been included in the text of the report.



SUMMARIES OF RECENT GAO REPORTSCONCERNING DEPARTMENT OF DEFENSE INDUSTRIAL FUNDSREPORTS TO THE CONGRESS

January 30, 1971 (B-159797) "Savings Available by Transferring Army Inventory Accounting From Stock Funds to Industrial Funds at Installation Level"

GAO recommended that stock-fund accounting at the Aberdeen Proving Ground and at other locations where a similar arrangement exists be transferred to the industrial fund to eliminate duplication of certain functions and reduce savings derived would include (1) annual personnel savings of almost \$100,000, (2) reduction of about 45 hours a month in computer-processing time, and (3) potential reduction in keypunching and verification effort.

February 2, 1971 (B-159797) "Potential for Improvements in Department of Defense Maintenance Activities Through Better Cost Accounting Systems"

The cost accounting systems for depot-level maintenance of aircraft engines differ among the three services and among various installations within each service, making any meaningful comparison between facilities performing similar work impossible. (The activities reviewed were industrially funded.)

January 5, 1972 (B-133025) "Increased Use of Financial Data and an Improved Tariff System Needed by the Military Airlift Command"

This report pointed out the need for (1) an improved tariff system and (2) compiling and reporting financial information in terms useful to airlift management. The accounting and billing system was not structured to identify the costs of transporting commodities on specific routes. Instead, a worldwide rate was used. Generally, the fund had not been regarded and used by responsible officials as a management tool but rather as a financing device. One of the report's recommendations was to revise the Department of Defense directive to more clearly show the objectives and purposes of industrial funds. Emphasis was to be given to the important benefits managers would obtain by using the fund.

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July 6, 1973 (B-178730)

"Potential for Greater Consolidation of Maintenance Workloads in the Military Services"

The report stated that each military service had over-emphasized developing its own maintenance capability, rather than trying to use capabilities existing in other services. Consequently, the services had extensively duplicated, and thus underused, maintenance facilities. We recommended (1) establishing an independent maintenance agency or (2) assigning a single maintenance manager for specific classes of items to designated services. Defense did not agree with the first recommendation but said that the second recommendation concerning the single manager concept seemed to have merit.

June 21, 1974 (B-165959)

"Project Reflex (Resource Flexibility)--A Demonstration of Management Through Use of Fiscal Controls Without Personnel Ceilings"

Although personnel constraints were not removed entirely and accumulated data was of little value in evaluating the project, benefits had been realized. For example, high-level management was relieved of costly and time-consuming administration associated with personnel ceilings. Management was given the flexibility of acquiring employees with appropriate skill and levels of experience and organizing them in balanced working groups to increase efficiency and productivity. Project Reflex was conducted at 10 Defense research, test, and evaluation laboratories. Our review included the four industrial fund activities that participated in the project.

July 17, 1974 (B-169857)

"Need to Consolidate Responsibility for Automatic Digital Network (AUTODIN) Terminals"

As a result of fragmented management responsibility, existing and planned communications capabilities exceed requirements in many areas. The preferred alternative, in establishing a single manager is to extend the Defense Communication Agency's authority over AUTODIN to cover terminal management, now an individual service responsibility.

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September 24, 1974 (B-140389) "Progress and Problems in Increasing Industrial Productivity Through Numerically Controlled Equipment"

Management at military industrial activities did not give enough attention to taking advantage of the tremendous productivity increases offered by numerically controlled equipment. Activities audited did not adequately plan for, manage, or follow up on numerically controlled equipment and did not take advantage of such benefits as reducing inventories of low-demand items by making them on numerically controlled equipment.

April 16, 1975 (LCD-75-204) "Airlift Operations of the Military Airlift Command During the 1973 Middle East War"

Airlift performance was successful, but several lessons were learned, including a need for improved management of airlift resources. The strategic airlift capacity could be significantly increased by improving the operational readiness of its aircraft. Also, Israel was not billed for the total cost of the airlift, as required by law.

June 26, 1975 (LCD-75-415) "Use of Numerically Controlled Equipment Can Increase Productivity in Defense Plants"

This report provides information on the nature of numerically controlled industrial equipment, such as drills, mills, lathes, and machining centers; its high cost; and the special management needed to make the most of this relatively new technology.

December 23, 1975 (LCD-75-432) "Navy Aircraft Overhaul Depots Could be More Productive"

Millions of dollars could be saved at the Navy's aircraft overhaul depots by improving its production-control system, revising its present method of maintaining components, and determining its industrial capacity for both peacetime and wartime for better balance and use of manpower and modernization funds. Among other things, the work measurement system does not provide adequate control over the yearly growth of staffhours required to perform certain maintenance jobs, and the management information system which accumulates and reports cost data is badly abused or misused so that it

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does not reveal true operating costs and inefficiencies to managers, nor provide adequate information in time to identify and correct problems.

January 2, 1976 (FPCD-75-156) "Part-Time Employment in Federal Agencies"

We recommended that the Office of Management and Budget should relax or eliminate personnel ceilings for part-time employees to allow agencies greater flexibility in using whatever types of employees are needed to most efficiently and productively accomplish agency functions. (Review includes Department of Defense but not specifically industrial funds.)

February 2, 1976 (LCD-76-217) Report to the Chairman, Senate Committee on Appropriations on GAO's analysis of staffing requirements at Air Force Aerial Ports

Our evaluation of the "Air Force Analysis of Aerial Port Manpower Requirements" indicates that the cited requirement of 7,232 active duty civilian and military personnel is 1,727 more than needed. The Air Force study contained inflated workload figures and staff requirements and did not consider some important alternatives.

April 12, 1976 (FPCD-76-7) "Maintaining a Military Presence in an Industrial Environment--Issues and Costs"

Only 23 of the 68 military personnel assigned to the Navy Weapons Support Center, Crane, Indiana, were doing center-related work or were working for other military activities. An alternate staffing pattern we posed would result in a decrease in military positions and annual savings of about \$858,000. Defense agreed to review all industrial fund activities to determine if military staffing could be reduced.

REPORTS TO DEFENSE OFFICIALS

September 7, 1972 (B-174901) Report to the Secretary of Defense--"Action Needed to Recover Full Costs to the Government of Producing Weapons For Sale to Foreign Governments"

Certain industrial fund activities were not including unfunded costs for Government-owned plant and equipment in the prices charged for work for foreign governments and other non-Federal Government customers.

July 3, 1973 (B-133014) Report to the Secretary of Defense--"Industrial Management Review of the Naval Air Rework Facility, Alameda, California"

This review of an industrially funded activity cited opportunities for improvements in production control, productivity of direct labor, quality assurance, equipment maintenance, packaging, and preservation. Also, weaknesses in cost accumulation procedures limited the usefulness of data provided to management for cost control.

August 16, 1973 (B-179260) Report to the Secretary of Defense--"Delays in Loading and Unloading Ships Cost Government Millions of Dollars Annually"

Ship delays at Far East military ports were costing an estimated \$10 million or more a year. Reasons for delay included (1) reduced operating hours of terminals because of money and manpower costs, (2) lack of information essential to efficient cargo operations, (3) poor loading practices, (4) fragmented funding of ocean shipping (terminals do not bear any ship delay costs), and (5) lack of a single authority for ship dispatch at various terminals.

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December 17, 1973 (B-159896) Report to the Secretary of Defense--"Industrial Management Review of the Army Aeronautical Depot Maintenance Center, Corpus Christi, Texas"

This review of an industrially funded activity cited the need for improving (1) labor standards, (2) managing direct materials and use of machines, and (3) decisions on repairing or replacing parts.

March 21, 1974 (B-159896) Report to the Secretary of Defense on funding unused and underused mobilization-essential capacity at DOD industrial fund activities

This report pointed out the need for implementing Defense's policy requiring that significant costs of maintaining unused and underused mobilization-essential plant and equipment at industrial fund activities be identified and separately funded.

April 11, 1974 (B-159896) Report to the Secretary of Defense--"An Industrial Management Review of the Maintenance Directorate, San Antonio Air Material Area, San Antonio, Texas"

This industrial management review of an industrially funded activity pointed out the need for improvement in (1) work-measurement system, (2) management of materials and general-purpose production equipment, and (3) procedures for reviewing repair-or-purchase decisions.

August 5, 1974 (B-118733) Report to the Secretary of Defense--"Industrial Management Review of Puget Sound Naval Shipyard"

This report recommended that the Secretary of the Navy (1) develop a more systematic means to accurately forecast direct and overhead manpower requirements in relation to projected and actual workloads of naval shipyards, (2) re-evaluate existing criteria for labor standards to insure that the application of standards at the shipyards contributes to more efficient shipyard management, and (3) insure that the shipyards properly record and analyze rework costs

for corrective action. Also, a series of industrial management-type recommendations were directed specifically to Puget Sound Naval Shipyard.

October 7, 1974 (B-174901) Report to the Secretary of Defense--"Delays in Implementing Regulations to Recover Costs of Government-Owned Plant and Equipment in Work Done for Non-Federal Customers"

This report points out continued failure of the military departments to implement Defense regulations and our recommendations for industrial funds and other activities to recover costs of Government-owned plant and equipment used for producing articles for sale to foreign governments.

December 17, 1974 (B-133170) Report to the Secretary of the Navy--concerning the planning for ship overhauls, Portsmouth, New Hampshire and Mare Island, Vallejo, California

We concluded that immediate savings are available at Mare Island, Portsmouth, and other shipyards by computerizing the systems for ordering material and preparing job orders.

March 13, 1975 (LCD-75-2191) Report to the Secretary of Defense on GAO's review of staffing requirements in the Military Airlift Command (MAC)

MAC was spending about \$17 million annually for excess personnel because its aerial ports were staffed to provide wartime capability rather than to meet peacetime workloads.

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May 15, 1975 (LCD-75-448) Report to the Secretary of Defense on need for the Army and Air Force to coordinate modernization of depot level maintenance facilities in the Sacramento, California area

Army and Air Force industrial fund activities (Sacramento Army Depot and Sacramento Air Logistics Center, which are 12 miles apart) were both planning to construct new plating shops without coordinating with each other. We observed that the workload could be performed at one location at considerable savings.

August 18, 1975 (FCMSD-76-4) Report to the Secretary of Defense on operation of the industrial fund accounting system for printing and duplicating services in the Department of the Air Force

We concluded that the accounting system was substantially in compliance with the principles, and standards prescribed by the Comptroller General. However, the industrial fund was not reimbursing the host base for support services, as it should under the industrial fund concept.

September 3, 1975 (LCD-75-424) Report to the Secretary of Defense--"Improving Depot Maintenance of Combat and Tactical Vehicles"

This report pointed out numerous areas for improvements at the Red River Army Depot industrial fund. Repair parts requirements were not accurately predicted, which caused work stoppage. Also, components were interchanged between programs without proper accounting, which negates the value of cost records in determining actual costs and measuring performance. The Depot accepted work even though it knew the work could not be completed on time. Additionally, too much esthetic rework was being done after vehicles were repaired or overhauled. In FY 1974 \$824,000 was spent to correct minor rejects--considering on which standard the vehicles were being repaired. Also, the authorized price for repair and overhaul was exceeded without Army approval. In some cases overhaul costs exceeded unit acquisition costs.

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June 3, 1976 (LCD-76-446)

Report to the Secretary of
Defense on reducing maintenance costs of construction
equipment in the Army

By making greater use of commercial contractors to perform depot-level maintenance of construction equipment (such as bulldozers, snowplows, and cranes), we estimated the Army could save about 36 percent in maintenance costs. Transportation costs and repair turnaround time would also be reduced. The majority of such depot level maintenance is being done centrally at Tooele Army Depot which is industrially funded.