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REPORT TO THE CONGRESS



BY THE COMPTROLLER GENERAL
OF THE UNITED STATES

Accounting For Automatic Data Processing Costs Needs Improvement

Twenty-six Federal organizations providing data processing services were using cost accounting procedures that were inadequate in some ways. Basic cost components like utilities, space rental, costs of transmitting data from one place to another and military salaries were frequently omitted from reports of total costs.

Without accurate costs managers (1) may choose uneconomical alternatives when replacing or adding to computer facilities and (2) may fail to appropriately charge users of computer facilities for services performed.



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-115369

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

This report describes (1) the Government-wide problem of inadequate accounting for automatic data processing costs, (2) the potential effects of inadequate cost accounting, and (3) our recommendations to the Federal agencies on improvements needed.

We made this review 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).

We are sending copies of the report to the Acting Director, Office of Management and Budget, and the Administrator of General Services, who are addressed specifically by our recommendations; to all heads of Federal agencies; and to other interested parties.

A handwritten signature in cursive script, reading "James A. Stutz".

Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

ACCOUNTING FOR AUTOMATIC
DATA PROCESSING COSTS
NEEDS IMPROVEMENT

D I G E S T

Of 26 Federal data processing organizations GAO reviewed, none had fully adequate cost information on their automatic data processing assets and operations. For instance, major elements of expense such as utilities, space rental, and data transmission line costs were omitted in over a third of them. In others, salaries of military personnel who worked with the data processing equipment were omitted.

Only about half of the 26 organizations spread the costs of long-lived hardware (equipment) over its useful life and only a few did the same with the cost of long-lived software (the instructions used to guide the equipment). The others simply charged the hardware and long-lived software to "expense" in the year they bought it, and few of them pointed out the resulting distortions in their reports. Thus the Congress, managers, and other readers of their reports were unaware of the unreliability of the reported data.

GAO did not try to link the practices used in these 26 cases to uneconomical decisions, but some earlier GAO reviews noted what can happen when sound cost data is not available:

--Using commercial services could have saved \$197,200, or 46 percent of data encoding costs, at five installations, but managers were unaware of it because accurate in-house costs were unavailable.

--A proper cost comparison would have revealed that a system developed in-house for \$662,000 could have been acquired and

installed for about \$20,000, but internal cost data was not readily usable.

--In one case, management had not been made aware that accumulated costs were \$1.9 million, six times the original cost estimate.

Both GAO and the Office of Management and Budget have offered guidance in this area. GAO has prescribed general cost accounting standards in title 2 of its "Policy and Procedures Manual for Guidance of Federal Agencies." The Office of Management and Budget originally issued guidance in its Circular No. A-83, which was subsequently incorporated into General Services Administration Federal Management Circular No. 74-2. Additional guidance was prescribed in its Circular No. A-11 in 1973. Office of Management and Budget Circular No. A-11 presently requires reporting of actual outlays and estimated obligations (amounts which an agency contracts to spend) rather than actual or estimated costs (the expenses incurred in providing services for a given period).

Why has the guidance not been effectively followed? This is not clear, but several factors contribute to the problem:

- Computer systems have changed dramatically over the past decade and can now serve many users.
- Sometimes data processing operations are financed by several different appropriations.
- Government accounting frequently attempts to keep track of disbursements by appropriation and costs by program. Since data processing costs are only a portion of the program costs, they have not been separately identified.

It is essential to keep costs accurately for data processing systems and organizations, as in any other department. Reliable cost data is practically indispensable in making sound decisions on whether to get needed

services through procurement from commercial sources or to perform them in-house. When multiple users are involved cost data is needed to properly distribute costs among them. If this is not done, these users will not know what their share of the costs is, and they too may make inappropriate decisions. When reimbursement is received for services furnished, cost data is essential in order to know how much to charge.

Even though data processing is not an end objective like operating a program, the cost of major systems is so great that good cost data is imperative. The extra work that may be involved in accumulating such cost data is well worth it.

Federal agencies should

- establish automatic data processing activities as cost centers;
- control such activities through operating budgets;
- keep cost accounts for these cost centers in such detail that charges, with or without cost reimbursement, can be made to major end users; and
- render reports that show actual costs compared with operating budget estimates and provide full disclosure of all significant data-processing-related expenses.

GAO will provide detailed guidance on how such costs should be handled and is sending copies of this report to the heads of all Federal agencies.

All nine agencies asked to comment on this report generally agreed with its conclusions and recommendations. However, the Office of Management and Budget, the Department of the Treasury, and the Department of Health, Education, and Welfare raised several concerns about implementation.

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ABBREVIATIONS

GAO	General Accounting Office
GSA	General Services Administration
HEW	Department of Health, Education, and Welfare
OMB	Office of Management and Budget

CHAPTER 1

INTRODUCTION

During the past decade, computer technology and the complexity of computers and computer-based operations have grown greatly. Computers and related resources, such as personnel, supplies, and communications, are now used extensively throughout the Government for highly complex applications--from payroll to energy, space, weapons, and weather systems. Management personnel have had difficulty in understanding this technology and in exercising control over data processing activities.

Government records do not accurately show how much it spends each year for automatic data processing equipment and services. The best available cost estimate is over \$10 billion annually. The Congress and the executive branch want better control over the growing use of these resources.

Our recent reports have indicated that Federal managers in several agencies are having difficulty in readily obtaining sound cost information on automatic data processing activities. They need this information to make decisions and to control computer-based operations. The difficulties were caused, at least in part, by inadequate cost accounting ^{1/} for automatic data processing activities and by inadequate reporting procedures.

AGENCY RESPONSIBILITIES FOR ACCOUNTING FOR COST

Section 113 of the Budget and Accounting Procedures Act of 1950, as amended, requires the head of each executive agency to establish and maintain a system of accounting and internal control designed to provide, among other things,

- full disclosure of agency finances;
- adequate financial information for management,

^{1/}Cost accounting is that part of an accounting system that systematically measures and assembles all significant elements of expense incurred as costs in accomplishing a specific purpose, carrying on an activity or operation, or completing a unit of work or a specific job. (See also title 2, "Accounting," "GAO Policy and Procedures Manual for Guidance of Federal Agencies.")

--effective control over and accountability for all funds, property, and other assets;

--reliable accounting data for preparing and supporting the agency's budget requests and controlling its budget.

Under this act, the Office of Management and Budget (OMB) is primarily responsible for improving executive branch financial management. OMB originally issued guidance on cost reporting for automatic data processing in OMB Circular No. A-83, which was subsequently incorporated into General Services Administration (GSA) Federal Management Circular No. 74-2. Additional guidance was prescribed in OMB Circular No. A-11 in 1973. Under the Brooks Act (Public Law 89-306), OMB exercises the general management and policy responsibility for automatic data processing.

Section 112(a) of the Budget and Accounting Procedures Act authorizes the Comptroller General of the United States to prescribe the principles, standards, and related requirements for accounting to be observed by each executive agency. The accounting principles and standards and related requirements, including provisions for approving accounting systems and our role in aiding other agencies to develop their accounting systems, are published in title 2, "Accounting," of the GAO "Policy and Procedures Manual for Guidance of Federal Agencies." Chapters 2 and 6500 of this title treat the use of cost information and cost accounting.

PURPOSE OF COST ACCOUNTING FOR AUTOMATIC DATA PROCESSING ACTIVITIES AND SYSTEMS

As envisioned in title 2, cost accounting should be an integral part of an agency's management control and accounting systems. Identifying expenses related to automatic data processing activities and accounting for and reporting such costs aid decisionmakers who use, operate, or manage computer data processing resources.

With good cost accounting and reporting, management can have complete and consistent cost information quickly and economically. This should enable them to

--compare costs among organizations, activities, operations, and projects;

--make informed investment decisions by facilitating (1) estimates of the cost of implementing proposals for new systems and facilities, (2) preparation of

cost-benefit analyses, and (3) cost comparisons with commercial and other alternatives;

- establish the cost of work done and measure productivity;
- measure the cost of performance of responsible officials;
- make end users and top management conscious of the cost of data processing systems and services;
- provide the accounting basis for proper charging of appropriation, allotment, and program accounts, as well as the billing for certain intra- and inter-agency services; and
- provide the accounting basis for budget justifications and reports to the Congress, OMB, GSA, and the public on the cost, custody, and use of the automatic data processing resources entrusted to them.

CHAPTER 2

INADEQUATE ACCOUNTING FOR AUTOMATIC DATA

PROCESSING COSTS IN 26 FEDERAL ORGANIZATIONS

Adequate cost accounting for automatic data processing calls for consistent use of accepted methods and techniques to systematically

- identify and accumulate 1/ in accounts all expenses related to automatic data processing activities;
- classify expenditures as either investment or current expense and maintain asset accounts for the items classified as investment; and
- account for such costs in ways useful for management decisions, reports, user billings, and external reporting.

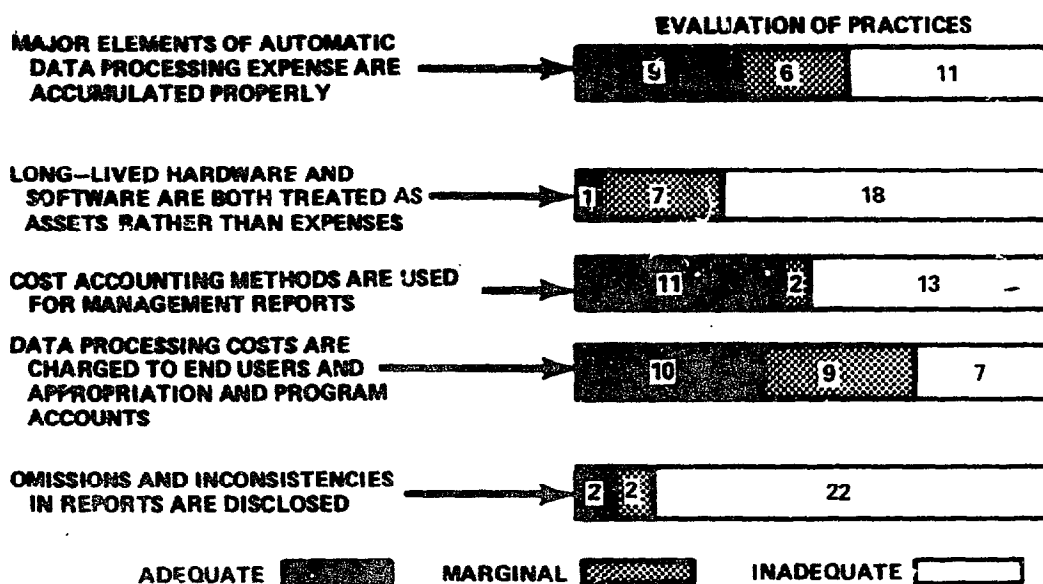
Without cost accounting of this type, accurate and reliable information on investment in computer facilities or the cost of computer operations and projects cannot be provided.

In most of the 26 Federal organizations surveyed (see app. I), the full cost of the automatic data processing activities could not be determined from available cost accounting records. Major expenses incurred in providing data processing services were either charged to other cost categories or were otherwise not identified as costs of computer operations. In this respect, most of the organizations do not keep financial accounts for long-lived automatic data processing software--the sets of instructions which guide the hardware (equipment) in its processing functions. Many of the organizations do not use formal cost-accounting procedures, and many do not know the cost of services furnished to users. The omissions and inconsistencies in cost data for automatic data processing equipment and services are reflected in cost reports, often without a qualification that would put the user on guard that the data reported is incomplete or otherwise inaccurate.

1/Cost accumulation is the collection of expense data through a system of accounts such as wages and salaries, rental expense, and depreciation.

A chart showing a profile of the adequacy of the cost accounting practices followed in the 26 Federal data processing organizations surveyed is shown below. Details are shown in appendix II.

**ADEQUACY OF COST ACCOUNTING AND REPORTING PRACTICES
FOR FIVE PROBLEM AREAS IN THE 26 ORGANIZATIONS SURVEYED**



As shown above, inadequacies in cost accounting are widespread:

--25 of the 26 organizations were following inadequate or marginal practices in two or more of the five problem areas.

--15 or more of the organizations were following inadequate or marginal practices in each problem area.

Since the sample represents a broad cross-section of size and type of data processing organizations in 14 departments and agencies, such inadequate practices appear to be a major Government-wide problem that needs attention.

FREQUENT OMISSION OF MAJOR
ELEMENTS OF EXPENSE

The table below shows that many of the organizations surveyed were incurring expenses but not identifying and accumulating them as expenses related to computer activities.

Frequently Omitted Data Processing Expenses

<u>Expense category</u>	<u>Accumulated</u>		<u>Not applica- ble (note a)</u>
	<u>Yes</u>	<u>No</u>	
Salaries and wages (military) (note b):			
Programers and analysts	2	4	20
Computer operators	2	4	20
Keypunch operators	2	3	21
Managers	4	4	18
Administrative	2	4	20
Fringe benefits	3	5	18
Data communications:			
Transmission lines	13	10	3
Remote terminals (note c):			
Rental	12	8	6
Depreciation	2	9	15
Other expenses	18	7	1
Floor space occupied:			
Rental	11	10	5
Depreciation	1	7	18
Utilities	15	11	0
Goods and services acquired from others:			
Costs from other groups (including user personnel)	7	14	5
Central office overhead	4	15	6

a/In most instances, officials said the expense was not incurred or the expense was absorbed (paid) by a different organizational element.

b/Eight of the 10 organizations operated by the Department of Defense used military personnel in data processing.

c/Offsite data input and output devices.

Salaries, wages, and fringe benefits

Almost all of the organizations accumulated as data processing expense the salaries, wages, and fringe benefits of civilian employees working within the automatic data processing facility. However, for many of the eight that use military personnel, the command unit to which these people are attached is accountable for salaries, wages, and fringe benefits, regardless of the unit in which the people work. This cost could be substantial.

One data processing organization had an operating budget of about \$2.1 million and 64 people working within the unit. Twenty-two were military personnel, paid about \$300,000 annually--or approximately 14 percent of the organization's existing operating budget. This organization was not identifying and accumulating the salaries, wages, and fringe benefits of these individuals as an expense related to its automatic data processing function, making its computer-related costs seem less than they were.

Data communications

Twenty-two organizations considered data communications an integral part of automatic data processing operations. Most of these organizations also considered the costs associated with data communications important in relation to total data processing costs. However, nine of these organizations did not accumulate the transmission lines expense--a large item of expense in data communications. In these instances, another group was responsible for managing and controlling all transmission lines, and expenses were paid by that group and not made known to the data processing organization as a part of its expense. In one case, data communications expenses were estimated at \$500,000 annually.

Space occupied and utilities

Often, managers of data processing facilities were not made aware of expenses associated with items such as space occupied or utilities. Rent was usually paid by agencies' headquarters, and the organizations were not always apprised of the payments made on their behalf. In many instances, the expense of utilities was included as part of the rent paid to GSA by agency headquarters. Organizations generally accumulated rents paid out of their operating budgets.

Costs from groups and overhead costs

Various kinds of support were often provided to the data processing organization by individuals and groups outside of the organization. Such support included data preparation and input from remote locations, as well as user participation during the the design and development of computer programs. Based on agency estimates of the number of user personnel involved in functions related to data processing, as much as 20 percent more people were materially involved in providing support than were listed as staff of the data processing organizations surveyed.

In addition, administrative and management support was provided to most such organizations by the central offices of the Federal departments and agencies. The cost of support provided by the central office could be substantial. In one agency such expense exceeded \$1 million annually.

INADEQUATE EXPENSE ACCUMULATION PRACTICES

All 26 organizations were omitting or mishandling at least one significant element of expense incurred in performing the data processing operations. Our principles and standards of accounting for Federal agencies require that the cost accounting system provide for systematically accumulating all significant elements of expense incurred in carrying on an activity or operation.

Eleven organizations did not do this--many funded and unfunded expenses were either charged to other expense categories or were not identified with the cost of data processing. Another six organizations did not identify and accumulate some lesser categories of funded expense and material unfunded expenses, such as depreciation on data processing equipment and facilities, as expenses of the data processing operations. Nine of the organizations kept systematic records which were relatively complete in accumulating all funded expenses related to data processing.

INADEQUATE ACCOUNTING FOR DATA PROCESSING ASSETS

If an item is expected to benefit only the current period, the total expenditure should be recorded as a current expense--an expense of that period. Conversely, if an asset, such as a computer, is expected to function and provide benefits over several years, the total cost of acquiring the asset should be separated from current expense

and recorded or "capitalized" in an asset account. This total cost should then be systematically allocated to current expense over the estimated useful life of the asset. This allocation process is called "depreciation" for assets such as computers and printers and "amortization" for assets such as a computer program.

All but one organization owned its own software and hardware, but not one capitalized all of its long-lived assets. The result is distorted costs of data processing which are overstated in years of high acquisitions of new equipment or software and understated in years in which such acquisitions are low or nonexistent. A summary of their practices follows:

<u>Practice followed</u>	<u>Organizations following this practice</u>
Capitalized some or all hardware	12
Capitalized operating software (note a)	10
Capitalized applications software (note b)	0
Capitalized equity in leased hardware	3
Capitalized equity in leased software	1

a/This type of software consists of standard routines used to operate the computer regardless of the specific task to be performed. Nine of the 10 in this category capitalized this kind of software only when it was purchased with hardware.

b/Applications software is a set of specific instructions designed to make the computer perform a certain function, such as process a payroll.

ONLY HALF OF THE ORGANIZATIONS MAINTAIN SYSTEMATIC COST ACCOUNTING RECORDS

The most reliable method of obtaining valid cost data quickly and economically is by using cost accounting methods. Only 13 of the 26 organizations surveyed did so.

Twelve of the organizations used "work (job) order" 1/ cost accounting to aggregate 2/ management information on data processing costs. One organization used a "process" 3/ cost-accounting method to determine overall unit cost information and total costs for each of three organizational sub-units. The remaining 13 organizations did not use any systematic methods for aggregating computer cost data in ways useful for management.

INADEQUATE BILLING AND CHARGING FOR SERVICES PERFORMED

In many cases, a data processing organization served several other organizations. If the cost of the data processing services is to be properly charged to these other organizations, the data processing organization must accumulate its costs and bill the other organizations for work done and have funds transferred or charges made by accounting entries. The situation at the 26 data processing organizations surveyed was as follows:

<u>Treatment of cost</u>	<u>Number of organizations involved</u>
Do not charge users for services performed	7
Charge only users external to department or agency having the computer	5
Charge users for services performed	<u>10</u>
Total	<u>26</u> ==

1/A work (job) order cost accounting method identifies and aggregates costs by specific job, task, or project.

2/In proper cost aggregation, related classes of direct and indirect expenses that have been accumulated are organized and summarized into meaningful cost centers and accounts for projects, jobs, work functions or operations, and organizational units for management reporting and for assignment or allocation to other cost objectives.

3/A process cost accounting method identifies and aggregates costs by a work process for a given period of time.

Seven do not charge users in other organizations for services performed, and in many cases they do not routinely inform the users of the cost of services provided. Nine assign costs for services performed only to users outside the department or agency. They primarily served internal users and in most cases the external users were billed on the basis of cost estimates. Internally, all 16 of the above served more than one appropriation, fund, or program account or other major organization. The internal users were not charged for the cost of services furnished.

Of the 10 data processing organizations that assigned costs to all users through billings at established cost rates for their services, 1/ 8 were financed by a revolving (or working capital) fund. Their management is responsible for recovering the cost of services performed from the users of these services.

A data processing organization does not need to be financed by a revolving fund, however, to practice good cost accounting and cost assignment. The remaining two data processing organizations surveyed which followed adequate cost assignment practices illustrate the point.

One was established under a management (or inter-appropriation) fund which requires an annual balancing of incurred costs against advances received from various appropriations or other funds. Thus, it assigned costs to all users and recovered nearly all costs.

The other organization is financed mainly by one appropriation account and is established as a cost center. It provides computer services to projects and organizations financed by other appropriation accounts and receives full cost reimbursement from these accounts. It also provides services to other major organizational units and programs financed by the same appropriation account. Charges for these services are made by accounting entry, thus informing all users of the cost of services.

The revolving fund financing seemed to encourage good cost accounting but cannot be counted on to produce such results every time. Two other data processing organizations were financed by working capital funds, and management was

1/However, as indicated previously, some applicable costs were omitted in the accumulation of expenses in nearly all cases.

charged with recovering all costs from end users. Both were following practices which were inadequate in several problem areas.

The key factor in appropriate cost-accounting and reporting practices for data processing appears to be the commitment of managers to use cost information for control.

INADEQUATE DISCLOSURE OF OMISSIONS AND INCONSISTENCIES IN COST REPORTS

The organizations surveyed are providing cost reports to management and in most cases to OMB, GSA, and the Congress. The omissions and inconsistencies in expense accumulation and cost aggregation for data processing services affected not only billings for services but also reports to managers and others.

A key objective of the Budget and Accounting Act of 1950 is the full disclosure of the financial results of agency activities. Our guidance states that any unqualified representation of cost implies that all major elements of cost--in terms of financial, property, and personnel resources used for a given purpose--are included in the amount reported as total cost. If any element of cost is omitted, the cost report should disclose the nature and estimated amount of the omission and the reason for its omission. In this way, users of the information will not be misled. An inconsistency in accounting treatment that is reflected in a cost report can also be misleading.

Most of the organizations surveyed were inadequate or marginal in fully disclosing data processing costs. All of the organizations had some gaps in their accounting; many had inconsistent accounting. Yet, officials at nearly all indicated that they did not usually qualify reports and billings of data processing cost as to the nature and amount of any elements of cost omitted or explain any inconsistencies of accounting treatment.

CHAPTER 3

LACK OF ACCURATE COST DATA CAN LEAD

TO IMPRUDENT DECISIONS

The specific effects of inadequate cost accounting and reporting for data processing at the activities observed are hard to ascertain. What alternatives may have been profitably investigated? What controls may have been profitably exercised? What decisions would have been made had accurate cost records and reports been available? These questions are difficult to answer.

This review did not relate deficiencies noted to specific bad decisions. Our past reports and those of others illustrate the effects of the lack of adequate cost information for management decisions. Some examples illustrate these consequences.

NEED FOR COMPUTER COSTS NOTED BY PRESIDENTIAL COMMISSION

In 1970 a Presidential commission, the Blue Ribbon Panel on the Department of Defense, concluded that the Department could not effectively make management decisions and budgetary trade-offs for existing and new data processing applications because of incomplete cost information. The commission reported that the Department excluded certain costs--invested capital, depreciation, personnel, and support costs--from cost calculations and reports.

Also in 1970, because of incomplete cost information, the review of an original budget submission for data processing activities for fiscal year 1970 by the Department's comptroller was limited to 17 percent of the estimated budget requirements. The agency felt it necessary to require a resubmission of budget data with more complete cost data on data processing and subsequently changed its budget submission guidance to correct the problem.

LESS EXPENSIVE ALTERNATIVE NOT CHOSEN

Having good cost data available is essential when deciding among alternatives, such as

--starting or expanding in-house operations and procuring commercial services and

--buying computer software or having it developed by a contractor rather than producing it in-house.

During the early 1970s, we surveyed Federal data encoding activities and found a common practice of performing most of the work in-house. Had commercial services been used for data encoding activities at 5 installations visited, we calculated that a potential annual savings of about \$197,200--46 percent of in-house data encoding costs--could have been realized. Only 1 of the 10 installations in the survey had computed unit costs for data encoding operations.

Less than half of the 26 organizations surveyed in our current review aggregated the cost and quantity data for this computation. Thus, most could not easily compare the cost of in-house operations and commercially available services.

In a 1975 report (LCD-74-118), we noted that management did not always compare costs of other alternatives; and, in one instance, a system similar to one developed in-house for about \$662,000 could have been acquired and installed for about \$20,000.

LACK OF PROJECT COST INFORMATION

Having information available for estimating and controlling the costs of system development projects should enable management to control the cost of an in-house development project and decide whether to continue or terminate such a project. In the 1975 report cited above, the agency

--experienced prolonged development periods--one system had been in development for 9 years;

--prematurely acquired data processing equipment costing about \$5.1 million to run systems not proven to be worth their costs; and

--management did not know the size of major project cost overruns; in 1974, one system had accumulated costs of at least \$1.9 million, six times the \$318,000 estimated in 1968.

Top managers and project managers knew little about costs, because the agency failed to develop detailed cost estimates and make project cost reviews and the agency's cost accounts did not summarize the total cost of individual projects.

The cost accounts for management reporting on projects, systems, and operations and the details needed to facilitate cost estimates and control are lacking in many of the agencies surveyed during this review. Consequently, many agencies may be experiencing or could experience similar problems.

INABILITY TO COMPARE COSTS

When expenses are not consistently accounted for, the cost information for one project, operation, or agency cannot be compared with that of another, without having to adjust the data. This was the case several years ago when a Joint Financial Management Improvement Program study team examined the practicality of developing a centralized automated payroll system for the Government. The team concluded that one of the reasons meaningful comparisons of costs incurred in developing and operating payroll systems among agencies could not be made was because of inconsistent practices.

NOT ASSIGNING COSTS TO END USERS

By fully accounting for data processing costs, agencies can inform users of the costs of services furnished to them. Thus, made conscious of costs, users can determine whether work done by the computer is worth the cost and they can estimate the cost of any new requirements.

In a 1975 report prepared by a management consulting firm for GSA the firm recommended that Government data processing activities measure the true cost of their computer services; that is, that the full costs of providing data processing services be accumulated and summarized by those served and that the costs be recovered from these end users.

According to the consulting firm, the principal advantages of using full cost information in the Government are that it

- fosters competition among Government activities,
- encourages cost consciousness, and
- eliminates submarginal uses of data processing resources and services.

The firm emphasized that in private industry all costs of computer services are usually assigned to the end user and that industry can more readily ascertain the true cost of providing these services than the Government.

Our survey of current cost accounting practices in private industry confirms this. These firms cited large benefits gained from doing so. One firm claimed over \$1 million in savings. Other firms stated that they cancelled or reconsidered large system investments, kept costs within limits, and eliminated submarginal applications by using cost data to make decisions.

Government organizations frequently have not received the benefits that can be attained from assigning cost to all users. We reported in April 1975 (LCD-74-110) on problems a Federal department had in managing its data processing resources. One problem was attributed to the many questionable services being computerized, although end users had not determined the value of the services. Assigning costs to users and making them cost conscious could have eliminated or reduced the magnitude of this problem. Department officials commenting on the report said a program was being initiated so that all computer services would be fully charged to the users. They said this would assure that data processing expenses could be matched with the activities supported and the functions served and could provide the capability to measure the value of computer services against their costs.

CHAPTER 4

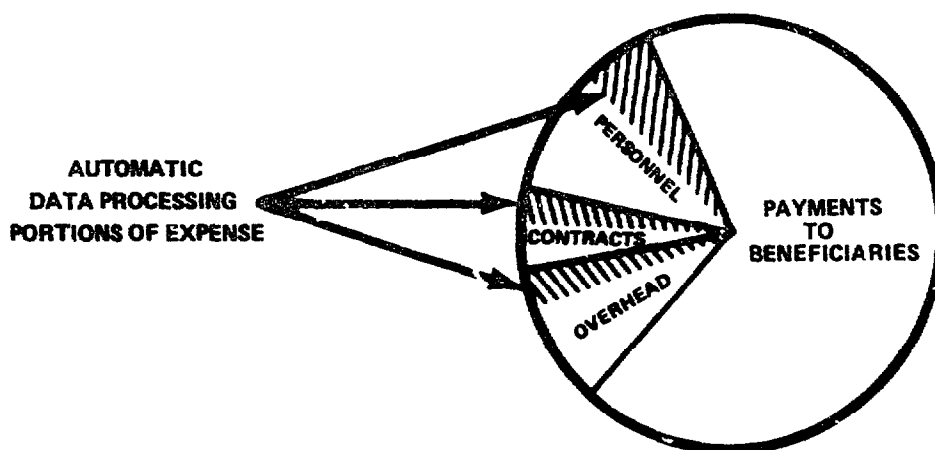
REASONS FOR VARIATIONS IN ACCOUNTING PRACTICES

Why has sound accounting for data processing activities not been followed? This is not entirely clear. Agencies often record reasons for taking specific actions, but reasons for not doing something are rarely documented.

AUTOMATIC DATA PROCESSING NOT AN END OBJECTIVE

Perhaps the most important reason is that many agencies do not consider sound accounting necessary for data processing because it is not an end objective in itself. Thus, if an agency kept its cost records by program or activity, it might not see the need to keep data processing costs separate from other costs in the program. The following graph shows how automatic data processing costs might be a part of a whole program.

PROGRAM COST ILLUSTRATION FOR A HYPOTHETICAL WELFARE PAYMENTS PROGRAM



In the above case, it would be possible to have accurate overall costs for the program as a whole but not have accurate data processing costs. For example, if the salaries of the people operating the computers were charged to personnel costs, the total personnel costs for the program could be accurate. But if these costs were not included when the costs of data processing services were computed, the data processing costs would be incomplete. We believe that many agencies have inaccurate records of data processing costs for this or similar reasons.

FEDERAL MANAGERS DO NOT USE COST DATA FOR DAY-TO-DAY CONTROL

Another factor may be that Federal managers of data processing facilities use data in units such as staff-hours and machine-hours for the day-to-day control of operations instead of costs. In the non-governmental businesses surveyed, cost information was predominantly used for control and decision purposes and resource data was considered supplemental. In Federal organizations, the managers often emphasize the control of resources, not the value of resources. Simple controls, to keep obligations within the total budgetary limitations and within certain expense limitations, such as for travel, are typically the only value-oriented control in appropriation-financed data processing organizations.

OPERATING BUDGETS INCOMPLETE

Some agency managers may think that most data processing costs are captured within the budget limits set for the data processing organization. In fact, data processing expenses were incurred in scattered parts of the agencies surveyed. The budget limitations for the data processing organizations frequently omitted major elements of data processing expenses. The supporting procedures for accumulating expenses frequently did not identify these expenses as related to data processing when they were being incurred in organizational units outside the data processing organizational unit.

OTHER REASONS

Sound accounting has not been followed in some cases because funds for operating the equipment are provided by more than one appropriation. This makes cost accounting more difficult than it is when only one source of funds is involved, which may have discouraged some from keeping records of total data processing costs.

In some cases, rapid advances in computer technology may have confused accounting procedures. What was once a data processing facility entirely devoted to a single program may have become a sort of service center, serving several programs, when a bigger and faster computer was acquired. At the time of acquisition, the old accounting system may have been carried over to the new computer without fully considering the need for better cost data. In such cases the cost accounting procedures should have been revised to accumulate all data processing costs and to distribute them among the programs served.

SOME GUIDANCE PROBLEMS

The guidance issued by OMB centers on obligations incurred, not costs. Using obligations, all purchases of long-lived hardware would be included, in full, in the year acquired instead of being prorated over the several years of the equipment's life. Also, items such as supplies contracted for but not received or used would be included.

Obligations incurred is an appropriate basis for budget preparation--the purpose of section 43 in OMB Circular No. A-11. However, it is less useful than the cost basis for most other management purposes, which is the purpose of reporting under GSA Federal Management Circular No. 74-2. Since OMB does not require true cost accounting and reporting for automatic data processing activities and systems, the agencies may have felt it was unnecessary. Further, since this reporting guidance does not treat computer software as property of value to be inventoried and reported, it adds to the illusion that software development or acquisition costs (which are greater than hardware acquisition costs) should be treated as current expense rather than as assets whose costs should be charged to future periods of use.

We have published extensive guidance for developing sound cost accounting. However, the guidance does not focus specifically on the problems of data processing activities. Consequently, many users may not have related the guidance given to their data processing functions.

CHAPTER 5

CONCLUSION, RECOMMENDATIONS, AND AGENCY COMMENTS

CONCLUSION

Data processing resources have become a major Government expenditure totaling, by best available estimate, over \$10 billion annually. The operating costs and capital expenditures of individual data processing installations are significant expenditures--in themselves often costing many millions of dollars. Moreover, data processing requirements often change rapidly, requiring frequent reappraisals of current methods to see whether additional capability is required and, if so, how it can be obtained most economically.

The combination of significant operating costs and major capital expenditures and the frequent need to reconsider how to do the work most economically and effectively make it very important to have consistent and accurate cost data available to those who must make decisions. Without such data, the wrong decision can be made and more expensive alternatives can be wastefully chosen.

Good cost data is also needed so that costs can be properly divided among several users of data processing services. If this is not handled properly, costs may be shifted improperly among appropriations and one appropriation might improperly subsidize another. It can also lead other managers to wrong decisions based on inaccurate cost information. For instance, a manager might elect to perform a large data processing function in-house on the basis of understated cost data. With accurate data the decision might well be the opposite. Finally, accurate cost data is essential whenever the Government serves outsiders, including foreign governments. It will enable the Government to recover the fair cost of its services.

To establish the required level of consistency and accuracy, cost accounting for automatic data processing needs improvement in the following areas:

- The acquisition or development cost of computer software having several years of economic useful life should be capitalized and amortized over its useful life.
- All expenses reasonably associated with automatic data processing operations and the development or acquisition of computer software should be

accumulated as automatic-data-processing-related expenses in cost accounts or subsidiary cost records.

- The cost accounts or subsidiary cost records for automatic data processing should be maintained in sufficient detail so as to provide useful data to agency management on projects, work functions, and data processing applications for end users.
- The full cost of providing data processing services should be aggregated and billed to the using organization's account(s) whenever such services are provided to
 - other agencies,
 - programs and organizations financed by other budgetary or appropriation accounts, or
 - other major organizational elements within an agency.

Maintaining accurate cost records for data processing assets and organizations is important. Agencies should adjust their accounting systems as necessary to produce such records. We are preparing supplemental guidelines to the "GAO Policy and Procedures Manual for Guidance of Federal Agencies" on accounting for the cost of automatic data processing assets and organizations.

RECOMMENDATIONS

We recommend that Federal agencies:

1. Establish automatic data processing activities as cost centers.
2. Control such activities through operating budgets.
3. Keep cost accounts for these cost centers in such detail that charges, with or without cost reimbursement, can be made to major end users.
4. Render reports showing actual costs compared with operating budget estimates and providing full disclosure of all significant data-processing-related expenses.

We also recommend that, when such changes are substantially complete, OMB and GSA consider altering their annual

reports of automatic data processing costs to include such cost-based information in addition to the obligations-outlays-based data presently required under current OMB and GSA guidance. We are sending copies of this report to the heads of all Federal agencies to alert them to the need for accumulating such costs.

AGENCY COMMENTS

The nine agencies asked to comment on this report agreed with the conclusions and recommendations. The Departments of Agriculture, Labor, Commerce, and Defense, the General Services Administration, and the Veterans Administration agreed fully with our conclusions and recommendations. The Office of Management and Budget and the Department of the Treasury raised concerns about the application of the recommendations. The Department of Health, Education and Welfare (HEW) felt we had not fully considered some important matters, but did not disagree substantially with the conclusions and recommendations.

Office of Management and Budget

While agreeing with the conclusions and recommendations and highlighting the need for better cost data for cost comparisons to be used in investment and OMB Circular A-76 decisions, OMB expressed concern about the application of formal cost accounting methods to small or single-purpose operations. They suggest that cost-finding techniques in lieu of formal cost accounting methods might provide the same information more economically. Cost-finding techniques are statistical and analytical methods of determining approximate costs used in lieu of maintaining detailed cost accounts.

We agree that such situations do suggest the use of cost-finding techniques for greater economy. However, the economy of these techniques comes at a sacrifice of some of the quality and timeliness of management information. Cost-finding studies tend to vary in approach from study to study. Thus, management cannot always be sure that the changes in reported costs arise from actual operational experience or from changes in the definitions and concepts employed in the cost-finding study. The economy is gained at the loss of regular recurring reports on actual-to-planned costs which are produced by a formal cost-accounting system and which directly support the use of operating budgets.

We have observed that the formal cost accounting is simpler with fewer purposes or smaller scales of operation.

Thus, formal cost accounting is simple and economical for small or single-purpose data processing operations. Frequent management decisions requiring current cost data and the benefits of using operating budgets generally outweigh the cost of using formal cost-accounting methods for even small or single-purpose data processing operations.

OMB also expressed concern that our comments regarding OMB Circular A-11, section 43, reporting requirements (see pp. ii, 2, and 19) could be improperly interpreted as criticism of the Circular. They contend that the Circular rightfully requires data on obligations and outlays in this section as part of the preparation of the President's budget. Section 43 requires both actual outlays and budget estimates for automatic data processing and telecommunications. It is the primary Government-wide requirement for financial planning data for these resources. GSA requires similar financial data on outlays for prior years in more detailed reports on the inventories of this equipment.

The OMB Circular requirements, emphasizing obligations and outlays, dominates the preparation of financial data in the agencies for OMB, GSA, and internal management reporting purposes. As is apparent in the HEW comments below, some agencies view the emphasis on data on obligations and outlays as a disincentive to internal use of operating budgets and cost accounting. Effective management control over data processing and data communication resources requires the use of both of these tools.

Department of the Treasury

Treasury, while agreeing with the recommendations and conclusions, stated that the recommendations will require significant changes to its accounting systems. With resources scarce for such work and other improvements needed, Treasury indicated it preferred a longer period for implementation. Our view is that although this approach delays the implementation of needed improvements, Treasury's position is understandable. Therefore, we agree that in its case the changes should be implemented when each accounting system is redesigned.

Treasury also argued for flexibility in deciding the appropriate level of detailed cost accumulation in its bureaus. We believe each agency should adopt a flexible approach and carefully fit the cost accounting and reporting to its operations and subordinate organizations using the criterion of cost versus value of information. The cost accounting and reporting should be kept as simple and economical as possible.

Health, Education, and Welfare

HEW agreed that implementation of the recommendations would tend to standardize the identification of costs and could be especially useful in determining costs to be recovered from using organizations.

However, HEW felt there was little incentive for an agency to adopt operating budgets and thus cost accounting systems internally as long as OMB and the Congress continued to use obligations and outlays data in the annual budget process. HEW suggested that OMB and GSA change their reporting requirements before asking the agencies to implement the recommendations of this report.

Congressional and OMB use of obligations and outlays data in budget preparation and approval does not constrain agency management from using sound tools internally. The Congress in an amendment to the Accounting and Auditing Act of 1950 has directed the head of each executive agency to keep accounts on its resources and operating costs that facilitate the preparation and use of cost-based operating budgets.

We discussed the changes in OMB and similar GSA report requirements above. An intention to change these requirements, such as expressed by GSA in its letter to us, after a due period for agencies to implement our recommendations, will provide some incentive. Our review showed that agencies are generally unprepared to respond to such a change in these report requirements at present. Thus, these changes should be considered by OMB and GSA as soon as the agencies have had a reasonable chance to implement cost accounting.

A second item of concern to HEW is similar to one that concerns OMB. HEW believes that the small "mini" computer operations dispersed throughout an agency under the "distributed" data processing concept will present them with a difficult accounting problem which is not adequately covered in our report.

As we state in response to OMB's concern about formal cost accounting for small or single purpose operations, the accounting is simpler with a decrease in size or number of purposes. Widely dispersed data processing operations would most likely be small and limited in purpose. Their dispersal requires good cost accounting if management is to retain adequate control over these resources. Although the cost center for each operation might well reside within the

operating budget and accounts of the using organization rather than the data processing organization, our recommendations are quite applicable to this situation. Of course, the small desk-top or word processing machines, while still subject to normal property accounting, should not normally be established as cost centers.

Third, HEW thinks the report should have addressed the lack of specific OMB Circular A-76 guidance for making the required cost comparisons involved in decisions coming under the Circular's policy on in-house versus commercial investment and operation of data processing activities.

We agree with HEW that suitable and explicit guidance on these cost comparisons is lacking and needed. We have worked with OMB and others on several occasions to foster such guidance. We have a task force studying the A-76 policy area, and OMB has under consideration proposals for changing the Circular. These proposals suggest both a fuller costing approach to cost comparisons, such as suggested in this report, and issuance of specific supplemental guidance on required cost comparisons. Also, Comptroller General Decision B-136318, dated January 21, 1977, clarified the requirement for full costing of interagency services so that the cost reimbursement for these services reflects actual costs incurred and would be more directly comparable to services offered in the private sector. In addition, our discussion in chapter 3 of the need for better cost data for cost comparisons in important decisions, including those involving the Circular A-76 policy and other investments, adequately treats the subject from the point of view of this report on the need for improving the accounting for automatic data processing costs.

Finally, HEW expresses concern that our report implies that good cost accounting will prevent bad decisions, which they feel is an overly simplistic assessment. They also contend that cost data for good decisions is available even though there is no formal cost-accounting system.

To clarify, we believe nothing--including cost accounting--can prevent all bad decisions. We are convinced that HEW management and that of other agencies need cost accounting for data processing because it will make for more informed decisions. This, we believe, will lead to many benefits, including those resulting from the better control exercised through operating budgets and from making users aware of the costs of services performed.

CHAPTER 6

PURPOSE AND SCOPE OF REVIEW

We reviewed cost accounting and reporting in the Federal, State, and local governments and in private industry to determine the current state of cost accounting and reporting in the automatic data processing field.

In the Federal Government, we surveyed cost accounting and reporting at 26 Federal data processing organizations with annual budgets ranging from \$600,000 to \$385 million in fiscal year 1975. The organizations accounted for about 8 percent of the estimated \$10 billion total Federal automatic data processing expenditures in fiscal year 1975. These organizations are in 14 departments and agencies (see app. I) which accounted for over 91 percent of the Federal automatic data processing expenditures for general management, according to the GSA annual report for fiscal year 1975.

We interviewed accounting officials and data processing managers in each organization as well as agency executives and personnel responsible for establishing management policies for data processing activities. In the interviews, we obtained background information and answers concerning:

- How the organization accounts for automatic data processing costs.
- How the organization reports the cost of automatic data processing operations for management decision-making and control purposes.
- Whether the costs of automatic data processing services and systems are billed and charged (assigned) to end users and how this is done.

We also:

- Studied cost accounting practices for data processing activities in State and local government organizations and in 22 private firms (a supplement to this report compares their practices with the practices of Federal organizations).
- Consulted managers of data processing installations and accounting professionals from industry, Federal and State governments, professional bodies, and

several universities. (See separate Task Group Report of Recommendations entitled "Management Guidelines for Cost Accounting and Cost Control for Automatic Data Processing Activities and Systems," Sept. 17, 1975.)

- Studied our reports and other Federal agency reports, studies, and reviews, professional journals and texts, and current executive department budget and accounting guidance. (See separate report entitled "Selected Literature on Cost Accounting and Cost Control for Automatic Data Processing--A Bibliography," Jan. 7, 1976.)

FEDERAL DATA PROCESSING ORGANIZATIONS SURVEYED

Department of Agriculture:

Agricultural Stabilization and Conservation Service,
Washington, D.C.

National Finance Center, New Orleans, La.

Office of Automated Data Systems, Washington, D.C.

Department of Commerce:

Bureau of the Census, Suitland, Md.

National Bureau of Standards, Gaithersburg, Md.

Department of Defense:

Defense Communications Agency:

Defense Communications Engineering Center, Reston,
Va.

National Military Command System Support Center,
Washington, D.C.

Defense Supply Agency:

Data Systems Automation Office, Columbus, Ohio.

Defense Contract Administration Services Region,
Cleveland, Ohio

Department of the Air Force:

Data Systems Design Center, Montgomery, Ala.

Headquarters, Logistics Command, Dayton, Ohio

Department of the Army:

Corps of Engineers, Waterways Experiment Station,
Vicksburg, Miss.

Military Personnel Center, Alexandria, Va.

Department of Defense (cont.):

Department of the Navy:

Naval Command Systems Support Activity,
Washington, D.C.

Navy Ship Parts Control Center, Mechanicsburg,
Pa.

Department of Health, Education, and Welfare:

Data Management Center, Washington, D.C.

National Institutes of Health, Bethesda, Md.

Department of Labor:

Office of the Assistant Secretary for Administration
and Management, Washington, D.C.

Department of the Treasury:

Bureau of Government Financial Operations,
Washington, D.C.

Office of Computer Science, Washington, D.C.

Internal Revenue Service, Washington, D.C.

Energy Research and Development Administration:

Division of Management Information and Telecommunica-
tions Systems, Germantown, Md.

General Services Administration:

Automated Data and Telecommunications Service,
Washington, D.C.

Office of Data Systems, Washington, D.C.

National Aeronautics and Space Administration:

Goddard Space Flight Center, Greenbelt, Md.

Veterans Administration:

Department of Data Management, Washington, D.C.

PROFILE OF ADP COST ACCOUNTING PRA

PRACTICE	ACTIVITY	1	2	3	4	5	6	7	8	9	10	
HIGHEST LEVEL OF ADP COST IDENTIFICATION IN ACCOUNT STRUCTURE:												
Formal General Accounts _____			•	•	•		•	•			•	
Formal Subsidiary Accounts _____						•				•		
Memorandum Accounts _____		•							•			
Budgetary Reports _____												
INVESTMENTS ARE CAPITALIZED FOR:												
Owned ADP Equipment _____		○	○	○	○	○	○	○	○	○		
Owned Operating Software _____		○	○	○	○	○	○	○	○	○		
Owned Applications Software _____		○	○	○	○	○	○	○	○	○		
Equity from Leased ADP Equipment _____		○	○	○	○	○	○	○	○	○		
Equity from Leased ADP Software _____		○	○	○	○	○	○	○	○	○		
EXPENSES BEING ACCUMULATED AS ADP COSTS												
Salaries and Wages (Civilian):												
Programmers and Analysts _____		•	•	•	•	•	•	•	•	•	•	
Computer Operators _____		•	•	•	•	•	•	•	•	•		
Keypunch Operators _____		•	•	•	•	•	•	•	•	•		
Managers _____		•	•	•	•	•	•	•	•	•	•	
Administrative _____		•	•	•	•	•	•	•	•	•	•	
Fringe Benefits (Civilian) _____		•	•	•	○	•	•	•	•	•	•	
Salaries and Wages (Military):												
Programmers and Analysts _____			○	○	○	•			○	•		
Computer Operators _____			○	○	○	•			○	•		
Keypunch Operators _____			○	○	○	•				•		
Managers _____			○	○	○	•	•	•	○	•		
Administrative _____			○	○	○	•			○	•		
Fringe Benefits (Military) _____			○	○	○	•	•	•	○	○		
Other Personnel Costs:												
Travel _____		•	•	•	•	•	○	•	•	•	•	
Recruiting _____			•		•		○		○	○		
Training:												
Inhouse _____		•	•	•	•	•	•	•	•	•	•	
Outside _____		•	•	•	•	•	•	•	•	•	•	
Utilities _____		○	•	○	•	○	○	○	○	○	○	
Data Communications:												
Transmission Lines _____		○	•	○	○	○	•	○	○	○		
Other _____		○	•	•	○	•	•	•	○	○	•	
Supplies:												
Data Processing _____		•	•	•	•	•	•	•	•	•	•	
Office _____		•	•	•	•	○	•	•	•	•	•	

APPENDIX II

I THE FEDERAL GOVERNMENT

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KEY TO PROFILE

- YES
- SOMETIMES
- NO
- NOT APPLICABLE
- (1) - A FORM OF PROCESS COST ACCOUNTING SYSTEM

APPENDIX II

IN THE FEDERAL GOVERNMENT

3	14	15	16	17	18	19	20	21	22	23	24	25	26
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KEY TO PROFILE

- = YES
- = SOMETIMES
- = NO
- = NOT APPLICABLE

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PRIOR GAO REPORTS CITED IN THIS REPORT

<u>Subject</u>	<u>Report number</u>	<u>Date</u>
Inquiry into Management of Automatic Data Processing Systems	B-163074	8-13-70
Revisions Needed in Financial Management Policies of the Federal Government's Automatic Data Processing Fund	B-115369	4-17-73
Letter Report to Senator William Proxmire on Total Annual Costs Associated with Government-owned and Leased Automatic Data Processing Equipment in the Federal Government	B-115369	4-25-73
Ways to Improve Management of Automated Data Processing Resources (LCD-74-110)	B-146796	4-16-75
Letter Report to Representative William L. Armstrong on Overall Costs of Automatic Data Processing in the Federal Government	B-115369	5-12-75
Improved Planning and Management of Information Systems Development Needed (LCD-74-118)	B-164497(1)	8-18-75



EXECUTIVE OFFICE OF THE PRESIDENT

OFFICE OF MANAGEMENT AND BUDGET

WASHINGTON, D.C. 20503

SEP 27 1977

Mr. D. L. Scantlebury
Director
General Accounting Office
Washington, D.C. 20548

Dear Mr. Scantlebury:

The Director has asked that I respond to your letter of August 25, 1977 which requested comments on two draft GAO reports, "Accounting for Automatic Data Processing Costs Needs Improvement" and "Guidelines for Accounting for Automatic Data Processing Costs."

We agree that better cost data are needed to assist in the management of Federal ADP operations. Users and management frequently do not know the full cost of using computers to serve their needs. As a result, management decisions to use in-house data processing resources are often made without knowing the full cost. As noted in the report, many agencies do not identify or charge overhead costs for their computer operations. In other cases only direct costs are allocated or charged. This lack of full cost data for Government computer operations has precluded meaningful analysis of the comparative costs of Government operations in relation to commercial services.

However, as Mr. Lordan's letter of July 25, 1977 noted, we have reservations about requiring all ADP activities to keep current cost accounts. In some cases, particularly smaller operations or those serving a single purpose, the same management information may well be obtainable in a more economical way by applying periodic cost finding techniques as opposed to a formalized cost accounting system. Allowing the agencies the flexibility to use these techniques in certain cases should reduce the expense of implementing a full costing policy, yet still realize the benefits of that policy.

In several places (pages ii, 2 and 29), the report, "Accounting for Automatic Data Processing Costs Needs Improvement," makes reference to OMB Circular No. A-11. The statements concerning this Circular could be improperly interpreted as criticism of the Circular for emphasizing obligations and outlays rather than costs. Because the Circular provides instructions for preparing the President's Budget, it rightfully requires that information be presented primarily on an obligation and outlay basis. A clarification of these references to the Circular would avoid any misunderstanding on this point.

A number of suggestions were made to your staff by ours concerning the second report, "Guidelines for Accounting for Automatic Data Processing Costs."

As you may know, OMB has recently initiated an effort to consider reorganizing the Federal ADP community. As a part of this effort an operational management task team will, among other issues, examine closely the problem of full costing of data processing operations and the related problem of interagency reimbursement for data processing services. Current plans are for this task team to begin its study in early December and develop recommendations by mid-March. I anticipate that this task team will work closely with your staff in evaluating these problems.

Sincerely,



Wayne G. Granquist
Associate Director for
Management and Regulatory Policy

GAO note: Page references above and on p. 55 refer to the draft report and may not correspond to this final report.



DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20250

NOV 4 1977

Mr. Henry Eschwege
Director
Community and Economic Development Division
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

We have reviewed the "Accounting for Automatic Data Processing Costs Needs Improvement" and "Guidelines for Accounting for Automatic Data Processing Costs" drafts as requested in your letter to the Secretary (FGMSD-77-2). Our comments are enclosed.

It is our position that cost data reasonably needed by managers and users of automated data processing facilities and services should be accumulated and reported in a manner which provides information for sound budgetary and procurement decision-making, operational planning and control, and billing purposes. The Department is now:

- . Consolidating responsibilities for ADP policy-making, procurement and accounting into a single organization, and
- . Implementing a Department-wide Central Accounting System possessing the capability to meet management needs for cost information.

We feel confident that these two steps will enable us to identify and remedy any shortcoming in ADP management and accounting practices which may exist.

Sincerely,

A handwritten signature in cursive script that reads "J. Fred King".

J. FRED KING
Acting Assistant Secretary
for Administration

Enclosures

Comments on GAO Draft Report Entitled
"Accounting for Automatic Data Processing Costs Needs
Improvement" (FGMSD-77-2)

The Department of Agriculture's Office of Finance is in the process of implementing a Department-wide Central Accounting System (CAS) which will possess the capability to develop reliable cost and accomplishment data. The system currently serves the Office of the Secretary, Department staff offices and several of the smaller program agencies. Implementation for these organizations occurred in October 1976. Among the organizational units currently served are the Departmental Computer Centers. These Centers, which provide computer processing and related services on a cost reimbursement basis, are currently operated by the Office of Automated Data Systems and financed through the USDA Working Capital Fund. Center services amounted to about \$25 million in 1976.

In addition, costs of about \$65 million are incurred by USDA program agencies not yet served by the CAS for application program development and maintenance, equipment rentals and other ADP related activities. It was in part because the accounting systems of most of these agencies were not considered adequate for Comptroller General approval that the Secretary of Agriculture directed in 1973 that efforts to undertake development of the CAS proceed. It was not considered cost effective to redevelop the accounting system of each agency. These agencies will all be fully phased into the CAS within the next three years. This includes the Forest Service which spent \$11 million of the additional \$65 million dollars. In October 1977, two large regions and the Washington Office of the Forest Service were converted to the CAS. The balance of the Forest Service will be converted October 1978.

On October 5, 1977, Secretary Bergland ordered a Departmental re-organization completed within 90 days which is aimed at improving USDA management and services. One of the changes in organization structure ordered is the consolidation of the Office of Automated Data Systems, Office of Finance, and Office of Operations to form a new Office of Operations and Finance (OOF). This will place within one organization responsibilities for policy-making, procurement and accounting related to ADP operations. After the consolidation is accomplished, a study will be made of the use of CAS capabilities to determine if they are being properly used as development and implementation are being concluded. Based on study findings, Department management will take away corrective actions needed.

GAO note: Comments relating specifically to the draft guidelines document (which accompanied the draft report for comments) have been deleted.



UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Administration
Washington, D.C. 20230

7 NOV 1977


Mr. Henry Eschwege
Director, Community and
Economic Division
United States General
Accounting Office
441 G Street, N. W.
Washington, D. C. 20548

Dear Mr. Eschwege:

We endorse fully all of the concepts prescribed in the General Accounting Office draft report, "Accounting for Automatic Data Processing Costs Needs Improvement" and the related "Guidelines for Accounting for Automatic Data Processing Costs."

We look forward to the publication of your report and guidelines as a vehicle to assist us in clarifying and implementing these concepts.

Sincerely,


Elsa A. Porter
Assistant Secretary
for Administration



COMPTROLLER

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

3 NOV 1977

Mr. D. L. Scantlebury
Director, Financial and General
Management Studies Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Scantlebury:

This is in reply to your letter to the Secretary of Defense regarding your draft report, dated August 24, 1977, on "Accounting For Automatic Data Processing Costs Needs Improvement" and your draft "Guidelines for Accounting for Automatic Data Processing Costs," (OSD Case #4703).

The Department of Defense agrees that cost accounting for ADP needs improvement. The DoD-wide ADP Cost Accounting Joint Working Group, mentioned in your transmittal letter of August 25, 1977, was formed in 1976 for this purpose. The Working Group will consider the draft guidelines in its systems development efforts. Implementation of the system should enable the Department of Defense to improve conditions found in your draft report.

We appreciate the opportunity to review and comment on the draft report and guidelines.

Sincerely,

Fred P. Wacker
Assistant Secretary of Defense



General
Services
Administration Washington, DC 20405

December 6, 1977


Honorable Elmer B. Staats
Comptroller General of the United States
General Accounting Office
Washington, DC 20548

Dear Mr. Staats:

Thank you for the opportunity to review and comment on your draft report to Congress entitled "Accounting for Automatic Data Processing Costs Needs Improvement" and your draft "Guidelines for Accounting for Automatic Data Processing Costs". We have reviewed both reports and support your efforts to have agencies keep complete and accurate costs for data processing systems and organizations. Overall we found the reports to be very comprehensive. Our specific comments on how the reports impact the Government-wide management of ADP are attached.

If we can be of any further assistance, please let us know.

Sincerely,


J. M. SOLOMON
Administrator
Attachment

Comments on draft report "Accounting for Automatic Data Processing Costs Needs Improvement" and draft report "Guidelines for Accounting for Automatic Data Processing Costs"

I. "Accounting for Automatic Data Processing Costs Needs Improvement."

We agree with the findings, conclusions, and recommendations contained in the draft report, (Accounting for Automatic Data Processing Costs Needs Improvement.)

However, we do not intend to revise Federal Management Circular 74-2 "ADP Management Information System" until the guidelines are finalized and agencies have had sufficient time to incorporate them into their accounting systems.

(See GAO note, p. 41.)



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20548

OCT 6 1977

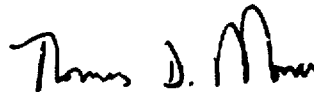
Mr. Gregory J. Ahart
Director, Human Resources
Division
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Ahart:

The Secretary asked that I respond to your request for our comments on your draft report entitled, "Accounting for Automatic Data Processing Costs Needs Improvement." The enclosed comments represent the tentative position of the Department and are subject to reevaluation when the final version of this report is received.

We appreciate the opportunity to comment on this draft report before its publication.

Sincerely yours,


Thomas D. Morris
Inspector General

Enclosure

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE COMMENTS ON THE
GAO DRAFT REPORT, "ACCOUNTING FOR AUTOMATIC DATA PROCESSING
COSTS NEEDS IMPROVEMENTS"

The report provides a full theoretical discussion of the need for better cost accounting for ADP activities. However, it seemingly glosses over some important areas of concern:

- Because OMB and the Congress will not accept or utilize a cost-based budget for ADP, but rather require an obligation-expenditure budget, there is no real incentive for agencies to use cost-based budgets in-house. As a consequence, agency top management views extensive cost accounting as a low priority item since it is not an integral part of the budget process.
- In several places the report implies that a good cost accounting system will prevent bad management decisions. In our opinion this is an overly simplistic assessment. Cost data required for good decisions are available even if there is no formal cost accounting system.
- The report completely ignores the lack of specific direction for application of OMB Circular A-76 to major ADP investment decisions. This tool is being used much more extensively in HEW, not only to compare costs for government versus private sector service but also to focus on the desirability of making the investment at all. The report should address this area, paying particular attention to the lack of definitive guidelines provided with A-76. This lack severely inhibits consistent application of A-76 within the federal government.
- The report focuses almost exclusively on the large computer center and cost accounting for it. In HEW we are experiencing a significant decentralization of our large computer centers as more and more ADP functions are placed with the responsible pro-organization to take advantage of mini-computer economics. We believe the ADP related cost accounting problems associated with these smaller and more decentralized ADP functions are much more difficult to solve.

Concerning the recommendations, we agree that implementation would tend to standardize the method of identifying costs, or obligations, and could be especially useful in determining service center costs that should be recovered from being using organizations. However, we seriously doubt that federal agencies will implement ADP cost accounting systems on their own initiative due to their high cost, because management does not consistently require such data, and the budget process does not rely upon cost data. The report states that OMB and GSA should alter their reports once cost accounting systems are implemented in the agencies. We feel that these directives must be changed and other appropriate direction given first. Agencies can reasonably be expected to

APPENDIX IV

APPENDIX IV

implement ADP cost accounting systems when the Congress and OMB are convinced that cost data are useful and the budget process is realigned accordingly.

(See GAO note, p. 41.)

APPENDIX IV

APPENDIX IV

U.S. DEPARTMENT OF LABOR
OFFICE OF THE ASSISTANT SECRETARY FOR ADMINISTRATION
WASHINGTON, D.C. 20210



OCT 4 1977

Mr. Gregory J. Ahart
Director
Human Resources Division
U. S. General Accounting Office
Washington, D. C. 20548

Dear Mr. Ahart:

In response to your letter of August 26, 1977, we have reviewed your draft reports to the Congress entitled "Accounting for Automatic Data Processing Costs Needs Improvement" and "Guidelines for Accounting for Automatic Data Processing Costs". We are in general agreement with the recommendations of the first report and the guidelines of the second.

(See GAO note, p. 41.)

APPENDIX IV

APPENDIX IV

Thank you for the opportunity to comment on these draft reports. If you, or your representatives wish to discuss our comments, please contact Mr. Tom Byrne, Director, Office of ADP Evaluation on 523-8100.

Sincerely,



ALFRED M. ZUCK
Assistant Secretary for
Administration and Management



DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

ASSISTANT SECRETARY

OCT 11 1977

Dear Mr. Lowe:

This is in response to your request for review and comments on the draft report entitled "Accounting for Automated Data Processing Costs Needs Improvement" and the related guidelines. The enclosed comments were provided to us by the three Treasury activities included in your review--the Bureau of Government Financial Operations, the Office of Computer Sciences, and the Internal Revenue Service.

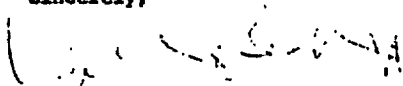
(See GAO note, p. 41.)

While we agree with the conclusions and the intent of the recommendations contained in your draft, we believe that complete implementation of the contemplated cost accounting will require significant revisions to the design and operation of Treasury accounting systems. My staff informs me that several of our bureaus have been working to develop improved cost accounting systems and that your report and guidelines will be of considerable assistance in developing adequate accounting for ADP costs.

I think it is important to point out, however, that our resources are limited and that this development effort can probably be achieved only in the long-term along with other accounting improvements. It is also important that our Treasury bureaus be given reasonable flexibility as to the detail levels at which ADP costs will be accumulated.

You may be assured that the Treasury Department will continue its efforts to provide better cost accounting information consistent with the cost and benefits of obtaining it. Thank you for the opportunity to comment on your report.

Sincerely,


William J. Beckham, Jr.
Assistant Secretary
(Administration)

Mr. Victor L. Lowe
Director, General Government Division
Room 3866
U.S. General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

Enclosures (4)

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum BUREAU OF GOVERNMENT FINANCIAL OPERATIONS

TO : Mr. Joel Cohen
Acting Director, Office of Audit

DATE: SEP 22 1977

FROM : W.A. Porteous *W.A. Porteous*
Acting Assistant Commissioner, Comptroller

SUBJECT: Draft of GAO Report on Accounting and Automated
Data Processing Cost.

The subject reports, "Accounting and Automated Data Processing Cost Needs Improvement" and "Guidelines for Accounting for Automated Data Processing Cost" have been reviewed. We concur with the GAO's opinion that the significance of ADP costs warrant additional accounting requirements. The implementation of the guidelines will have a significant impact on the design and operations of our accounting system.

Also, we are in general agreement with the conclusions and recommendations presented in the report. Our Bureau was one of the organizations reviewed by GAO. However, we are unable to determine from the profile which deficiencies pertain to our accounting system. Therefore, we are not in a position to comment on the particular findings.


OPTIONAL FORM NO. 1
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

Department of the Treasury
Washington, D.C. 20220

TO : Joal Cohen, Acting Director
Office of Audit

FROM : Francis A. McDonough, Director
Office of Computer Science 

SUBJECT: General Accounting Office Draft Guidelines for
Accounting for ADP Costs in the Government

DATE: SEP 23 1977

We have reviewed the General Accounting Office's preliminary report of a survey of ADP cost accounting practices in the Government and the proposed guidelines they developed for accounting for ADP costs. We concur with the report and endorse the guidelines they have developed.

We are quite excited about the concepts spelled out in the guidelines. It is our intention to do a detailed analysis of these documents and are considering incorporating the concepts into a coordinated ADP/Budget Planning and Accounting Program. With this in mind, we contacted Dr. Carl R. Palmer, Audit Management, at the General Accounting Office requesting permission to retain a copy of the two documents he had sent out for review. Dr. Palmer agreed to let us retain our copy and to reproduce additional copies for our own use. In addition, we set up a meeting with Dr. Palmer and his staff to discuss the practicality of implementing his proposed system in Treasury. He indicated that he has developed more detailed guidelines for implementing this system and would make them available to us. He also said that personnel from the Internal Revenue Service and Customs have been in touch with him about the proposed accounting system. We obtained the names of the individuals with whom he had talked and plan to get in touch with them.

As with any new proposal, we do have certain concerns. Primarily we are concerned with the possible impact of implementing this system while present reporting requirements imposed by the Office of Management and Budget and General Services Administration are still in effect. We feel that the cost accounting system must be integrated with the Office of Management and Budget's A-11 and General Services Administration's ADP/MIS reporting programs. We suggest that the General Accounting Office meet with these two agencies to develop a

coordinated approach. If this could be done it would meet our main objection to the cost accounting proposal.

We have attached two separate papers developed by members of our staff that address more specifically some other comments on the preliminary report and suggested guidelines.

Attachment

GAO note: Attachments to this memorandum were not given to us and are not reproduced here.

**Internal Revenue Service
memorandum**

date: SEP 28 1977

to: Director, Office of Audit
Department of the Treasury

from: Assistant Commissioner (Data Services)

subject: GAO Reports on Accounting for ADP Costs

We have reviewed the GAO report "Accounting for ADP Costs Needs Improvement" and the draft "Guidelines for Accounting for ADP Costs." We agree with the overall concept that cost accounting is an effective process for making users aware of data processing costs for their various programs.

Comments on "Accounting for ADP Costs Needs Improvement"

Our comments on the report are few because the report is mainly factual. We agree with the conclusions drawn throughout the report on the need for the establishment of ADP cost centers and cost reporting systems. As we will describe later in this memorandum, IRS has been taking steps which are in the direction of achieving these objectives through the establishment of the Assistant Commissioner (Data Services) and by setting up the IRS Funding of Data Services Study Group.

Even though we are working to develop an improved system for identifying ADP costs, we do currently have cost reporting methods which are for the most part consistent with the general concepts described in this first report. In the report (p. 1 and p. 18) there are statements suggesting that federal agencies are providing inadequate information to support their budget requests to the President and to Congress. The major ADP reports prepared for distribution outside of IRS are the ADP Long-Range Plan prepared for Treasury and OMB, the Schedule A-11 43A prepared for Treasury, OMB and Congress, and the ADP MIS prepared for GSA. In all cases, these reports are developed in IRS according to the respective instructions outlined by the requesting organizations, and include appropriate indirect and support costs. However, depreciation and capitalization are not requested in the instructions and are therefore not reported. In addition, line item requests for ADP expansion, within IRS budget documents, include only direct costs in conformance with OMB Circular A-11 instructions.

(See GAO note, p. 39.)

(See GAO note, p. 41.)

In summary, the GAO reports are valuable as flexible guidelines for IRS to consider, and we feel that adopting them would be a step forward toward providing management and users with useful information. Hopefully, before these guidelines become requirements, we will be given sufficient time for implementation to tailor these guidelines to meet the unique needs and special conditions of the Service.

We appreciate the opportunity to comment on this material.


Patrick J. Tuttle



VETERANS ADMINISTRATION
OFFICE OF THE ADMINISTRATOR OF VETERANS AFFAIRS
WASHINGTON, D.C. 20420

OCTOBER 25 1977

Mr. Gregory J. Ahart
Director, Human Resources Division
U. S. General Accounting Office
441 G Street, NW
Washington, DC 20549

Dear Mr. Ahart:

Thank you for giving us an opportunity to review and comment on your draft reports, "Accounting for Automatic Data Processing Costs Needs Improvement" and "Guidelines for Accounting for Automatic Data Processing Costs".

Although the Veterans Administration (VA) has cost centers assigned to each Central Office service and to all our Data Processing Centers (including each organizational element), we agree that improvement is needed in the procedures for automatic data processing (ADP) cost accounting. Our present Department of Data Management Cost Distribution Report reflects cost by subsystem distributed to the user. However, the VA General Ledger and Cost Accounting Systems can be modified to capitalize the cost of equipment and software and to provide for depreciation. Thus, cost centers can be expanded to capture all costs. To accomplish this, the General Ledger will need accounts for computer equipment, computer software and depreciation for each. In addition, the cost centers would have to be expanded to include system development personnel regardless of departmental assignments.

Since cost accounting is customarily concerned with costing existing operations, future contingencies usually are not built into an organization's cost accounting system. Estimating costs for proposed new ventures or changes in technology often involves developing somewhat different cost categories on an ad hoc basis for planning purposes. Therefore, it is not unusual that the items mentioned in your "Specific Exclusions" section are not considered costs under current ADP practice. However, considering the tendencies of computer technology and utilization, these areas are prime candidates for automation in the near future and GAO guidelines for costing in these areas would be helpful.

Once again, thank you for allowing us to reply to these draft reports.

Sincerely,

A handwritten signature in dark ink, appearing to read "Max Cleland".

MAX CLELAND
Administrator

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