

096363

3.52.13

43-0455

3



# REPORT TO THE CONGRESS



LM096363

Improvements Needed In The Survey  
Of Non-Federal Salaries Used As  
Basis For Adjusting Federal  
White-Collar Salaries B-167266

*BY THE COMPTROLLER GENERAL  
OF THE UNITED STATES*

MAY 11, 1973

~~701534~~

096363



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

B-167266

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

This report points out the need for improvements in the design and conduct of the annual survey of non-Federal salaries used as the basis for adjusting Federal white-collar salaries. The survey design is the responsibility of the President's pay agent--the Director, Office of Management and Budget, and the Chairman, Civil Service Commission--and the survey is conducted by the Bureau of Labor Statistics, Department of Labor.

We made our 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).

Copies of this report are being sent to the Director, Office of Management and Budget; the Secretary of Labor; and the Chairman, Civil Service Commission.

A handwritten signature in cursive script that reads "James B. Axtell".

Comptroller General  
of the United States

C o n t e n t s

	<u>Page</u>
DIGEST	1
CHAPTER	
1 INTRODUCTION	5
Stated purpose of comparability principle	5
Comparability process	6
2 PERSPECTIVE	10
Has comparability been achieved?	10
Prime need: better program management	14
3 NEED TO SURVEY MORE REPRESENTATIVE SAMPLE OF FEDERAL WHITE-COLLAR JOBS	15
Selection of jobs for survey	15
Need to consider external pay relationships in selecting jobs to survey	16
Conclusions and recommendations	22
Recommendations	22
4 NEED TO BROADEN PATC SURVEY UNIVERSE	24
Evolution of survey design	25
Desirability of broadening survey coverage	27
Conclusions and recommendations	35
Recommendations	36
5 NEED TO ASCERTAIN DEGREE OF RELIABILITY OF SURVEY DATA AND TO IMPROVE DATA COLLECTION PROCESS	37
Effect of job-matching variables on survey results not measured	38
Job definitions--bridge between Government and private sector jobs	42
Job matching	46
Training data collectors	52
Conclusions and recommendations	53
Recommendations	55
6 SCOPE OF REVIEW	57

APPENDIX

Page

I	Letter dated March 22, 1973, from the Director, Office of Management and Budget, and the Chairman, Civil Service Commission, to the General Accounting Office	59
II	Letter dated March 7, 1973, from the Deputy Assistant Secretary for Administration and Management, Department of Labor, to the General Accounting Office	62
III	Principal officials responsible for the administration of activities discussed in this report	65

ABBREVIATIONS

BLS	Bureau of Labor Statistics
CSC	Civil Service Commission
GAO	General Accounting Office
GS	General Schedule
OMB	Office of Management and Budget
PATC	National Survey of Professional, Administrative, Technical, and Clerical Pay

COMPTROLLER GENERAL'S  
REPORT TO THE CONGRESS

IMPROVEMENTS NEEDED IN THE  
SURVEY OF NON-FEDERAL SALARIES  
USED AS BASIS FOR ADJUSTING  
FEDERAL WHITE-COLLAR SALARIES

- 1 Office of Management and Budget 27
- 2 Civil Service Commission 13
- 3 Bureau of Labor Statistics, 3/4
- 4 Department of Labor B-167266 9

D I G E S T

WHY THE REVIEW WAS MADE

The principle that salaries for Federal white-collar employees under statutory pay systems should be comparable with salaries paid in private enterprise for the same levels of work is established by law. These systems include the General Schedule (GS), the Foreign Service schedules, and the Department of Medicine and Surgery schedules in the Veterans Administration. When white-collar compensation is increased, the law also requires a comparable increase in pay to the military forces.

GAO is making a series of reviews of the comparability process in the Federal Government because of the desirability that an independent assessment be made and because of its costs, about \$420 million a year for each 1-percent increase in pay. This report presents the results of the first phase of GAO's review--evaluation of the design and conduct of the annual survey on non-Federal salaries used as the basis for adjusting Federal white-collar salaries. GAO's continuing review and subsequent reports will cover the use of the data in adjusting Federal white-collar salaries and the structure of the statutory pay systems.

GAO's fieldwork was done at the Office of Management and Budget

(OMB), the Civil Service Commission (CSC) headquarters, the Bureau of Labor Statistics (BLS) headquarters, four BLS regional offices, and various private enterprise establishments.

FINDINGS AND CONCLUSIONS

The comparability principle was adopted to provide an objective standard on which to assess Federal salary rates. Its adoption and the provision for an annual review and an adjustment by the President have generally advanced the evolution of Federal white-collar salary determination.

The resultant pay adjustments have, on the whole, significantly narrowed the spread between Government and private sector average salary rates determined by the annual survey. (See pp. 10 to 12.) There is, however, a need to supplement and strengthen the design and data-gathering process of the annual survey to better accomplish the basic purposes for which the principle of comparability was adopted.

Federal pay policies, structures, and practices require continual evaluation and research to keep up with the constantly changing nature and composition of the labor markets and with the Government's needs. More emphasis should be given to compensation evaluation

and research in order that timely changes in the comparability process can be made.

Need to survey more representative sample of Federal white-collar jobs

The law requires that Federal white-collar salary rates be comparable with private enterprise rates for the same levels of work. The Government classifies a variety of occupations at the same grade or work level. The salary rates for each grade are uniform throughout the Federal service. However, private sector salary rates vary among occupations at equivalent Federal work levels, often substantially. (See pp. 16 and 17.)

In the annual survey, it would not be feasible to survey every Government job to determine its average salary in the private sector; rather, a select group of positions at various work levels is surveyed. (See pp. 15 and 16.)

The average private enterprise pay rate for each work level is determined by computing the simple arithmetic mean of the average rates for all jobs surveyed at that work level. These means are the bases used to assess and adjust Federal rates.

The occupational composition of the jobs selected for survey were not sufficiently representative of the variety of Federal jobs at GS-5, GS-7, GS-9, and GS-15 work levels. The job mixes at certain of those levels contained disproportionate numbers of jobs which were highly paid in the private sector, which resulted in an upward bias of the average work level rates. (See p. 16.) Therefore, selection of jobs for the survey should be based

on better analysis of each job's salary pattern in the private sector before it is designated as a benchmark for Federal pay determination.

Need to broaden non-Federal survey universe

The annual survey of non-Federal salaries is designed to estimate the national salary rates in the private sector for selected jobs comparable to those in the Federal sector. The scope of the annual survey, however, includes only the salaries earned by approximately 25 percent of non-Federal sector white-collar employees. (See p. 27.)

State and local government employees are excluded by law. Nonprofit organizations and some industry employees are excluded by administrative action. (See p. 25.) The rationale for excluding State and local governments and certain segments of the private sector is no longer valid because:

- Non-Federal white-collar employment has changed significantly since the survey was designed. Significant growth rates of private enterprise segments excluded from the survey have made them major competitors with the Government in the various labor markets. (See pp. 28 and 29.)
- The rising importance of labor-management bargaining for salaries of State and local government employees has made their pay rates reflect factors which similarly affect pay in private enterprise. (See pp. 29 and 30.)
- The types of industries and the sizes of establishments surveyed

## BEST DOCUMENT AVAILABLE

affect the national average rates obtained, the types of jobs surveyed, and the number of possible job matches. (See pp. 32 to 34.)

Including a more representative cross section of the non-Federal sector would allow the survey to reflect, proportionately, employment and pay for each of the major segments of the non-Federal sector.

### Conduct of the survey

About 120 data collectors collect salary data for 79 jobs from about 3,100 private enterprise establishments which employ about 2.9 million white-collar workers.

Job matching, a common technique used in salary and wage surveys, is a dialogue between a Federal data collector and a private enterprise official. They discuss duties, responsibilities, and skill levels of certain occupations to identify or match jobs in the establishment which are similar to jobs in the Government. Job matching appears to be an appropriate method for obtaining survey data. However, the comparability process should include a means of measuring nonsampling errors to determine the degree of reliability of the data. (See p. 38.)

There is a need to clarify and refine certain job definitions--the bridge between Government and private sector jobs--to insure more consistency in interpreting job duties and responsibilities. (See pp. 42 to 45.)

Certain surveyed jobs should be reevaluated to see whether they are really susceptible to being surveyed by the current job-matching

technique. It is questionable whether the functionally oriented job-matching technique can adequately consider personal qualifications and contributions which are important elements in ranking research-type and attorney positions. (See pp. 44 and 45.)

Additional guidance and training for data collectors is needed. (See pp. 46 to 51.) Expanding the role of the Bureau of Labor Statistics headquarters and using personnel management specialists in survey training would strengthen data collectors' skills and help ensure data consistency. (See pp. 52 and 53.)

### RECOMMENDATIONS

The Director, OMB, and the Chairman, CSC, should:

- Give more emphasis to compensation evaluation and research and to timely changes in the white-collar pay-setting process.
- Broaden the occupational sample surveyed at the GS-5, GS-7, and GS-9 levels to reflect more adequately the range of work found at these levels in the Federal Government.
- Through a reexamination of the applicability of survey criteria, expand occupational coverage of GS-15 work so that it is more representative of the range of duties and responsibilities at that level of Federal service.
- Redesign the survey to include the broadest feasible representation of the non-Federal sector. (See p. 36.)

The Secretary of Labor and the Chairman, CSC, should require BLS and CSC to clarify and refine the survey job definitions and to reevaluate the suitability of retaining research-type and attorney positions in the survey. Finally, the Secretary of Labor should require BLS to:

- Measure and report the effect on survey results of the variables inherent in the job-matching process.
- Provide additional guidance and training of data collectors. (See p. 55.)

#### AGENCY ACTIONS AND UNRESOLVED ISSUES

According to the Director, OMB, and the Chairman, CSC, the report generally presents "a good picture" of some of the questions and problems they face. They said that:

- The availability of resources limits the amount of effort that can be devoted to research and long-range planning.
- A study is being made to identify new jobs for the survey, a lengthy process.
- The study of the industry coverage of the survey will be expanded to review the exclusion

of nonprofit institutions and State and local governments and the question of establishment size.

--Job definitions were, in general, better than GAO's report suggests.

The Department of Labor said it generally agreed with GAO's recommendations relating to BLS activities but that implementing all of GAO's recommendations would require additional funds. (See apps. I and II.)

GAO continues to believe that job definitions need clarification. (See p. 42.)

#### MATTERS FOR CONSIDERATION BY THE CONGRESS

This report demonstrates the necessity for OMB, CSC, and/or BLS to critically evaluate and improve the design and conduct of the annual survey of non-Federal salaries used as the basis for adjusting Federal white-collar salaries. This report may be of use to the Congress in its continuing review of employee compensation and in its consideration of proposals which may be submitted to permit inclusion of State and local governments in the annual survey of non-Federal salaries.

INTRODUCTION

The Federal Salary Reform Act of 1962 (76 Stat. 841) established the principle, which the Federal Pay Comparability Act of 1970 (84 Stat. 1946) reaffirmed, that Federal salary rates for white-collar employees under the statutory pay system--the General Schedule (GS), the Foreign Service schedules, and the Department of Medicine and Surgery schedules in the Veterans Administration--should be comparable with private enterprise rates for the same levels of work. The law, as amended, prescribes a method for an annual review and an adjustment of these employees' salaries by the President.

This report, the first of a series of reports on the pay comparability process, covers our review of the design and conduct of the annual survey of private enterprise salaries used as the basis for assessing and adjusting Federal white-collar salary rates. Our continuing review and subsequent reports will cover the use of the survey data in assessing and adjusting these rates and the structure of the statutory pay systems.

STATED PURPOSE OF COMPARABILITY PRINCIPLE

Before the comparability principle was adopted in 1962, there was no established framework in which the Federal white-collar salary determination could be considered. Pay adjustments were based on many factors, such as the changing purchasing power of the dollar, rates paid and wage trends elsewhere in the economy, special concern for lower grade employees, rising standards of living, increases in productivity, and budgetary and economic effects of Federal pay raises. The resultant pay rates severely curtailed pay distinctions in keeping with work and performance distinctions and permitted general deterioration of the pay structure. Also, the Federal statutory pay rates placed the Government at a disadvantage in recruiting competent employees, especially those with professional, scientific, and managerial talent. Many studies recognized the need for reform in methods of determining salaries.

In February 1962 the President transmitted to the Congress a special message, accompanied by draft legislation, on Federal salary reform for white-collar employees which

recommended the comparability principle. The President enunciated the significance of the comparability principle as follows:

"Adoption of the principle of comparability will assure equity for the Federal employee with his pay equals throughout the national economy--enable the Government to compete fairly with private firms for qualified personnel--and provide at least a logical and factual standard for setting Federal salaries. Reflected in this single standard are such legitimate private enterprise pay considerations as cost of living, standard of living, and productivity, to the same extent that those factors are resolved into the 'going rate' over bargaining tables and other salary determining processes in private enterprise throughout the country."

The resultant legislation declared that the salary rates for white-collar employees would be based on the principle that such rates would be comparable with private enterprise rates for the same levels of work. Also, the legislation restated the principles in earlier legislation that there would be equal pay for substantially equal work and that pay distinctions would be maintained in keeping with work and performance distinctions.

#### COMPARABILITY PROCESS

The President has designated the Director of the Office of Management and Budget (OMB) and the Chairman of the Civil Service Commission (CSC) to act jointly as his agent in the comparability process. They are responsible for the survey design within the constraints of law. The annual survey of private enterprise salary data--known as the National Survey of Professional, Administrative, Technical, and Clerical Pay (PATC survey)--is carried out by the Bureau of Labor Statistics (BLS) of the Department of Labor. A sample is selected consisting of jobs which are "typical" of various levels of the GS pay system and which also commonly exist in private enterprise.

The private sector survey sample is designed to obtain national averages for the selected jobs since the salary-

schedules of the statutory pay systems are in force service-wide with uniform, nationwide pay rates. The survey is limited to establishments which exceed certain specified employment sizes in selected industries. The survey covers all areas of the United States except Alaska and Hawaii because employees in these two States are paid added cost-of-living differentials.

BLS obtains private enterprise data by personal visits to the establishments; reports are reviewed by senior staff in BLS's regional and Washington offices before the data is tabulated.

OMB and CSC review the PATC survey data and develop a Federal payline--a series of rates, with one rate for each GS grade--to reflect both the comparability principle and Federal intergrade relationships to apply another Federal pay principle that "pay distinctions shall be maintained in keeping with work \* \* \* distinctions."

Comparability for the other two statutory pay systems--the Foreign Service System and the system for certain employees in the Department of Medicine and Surgery--is obtained by linking a high and a low grade of each system with their equivalent GS levels. From these linked rates, a payline and salary schedule are developed.

The law provides for reviews by a Federal Employees' Pay Council--five representatives of employee organizations appointed by the President's agent--and by an independent Advisory Committee on Federal Pay--three members not otherwise employed in the Government and appointed by the President.

After considering the findings and recommendations of his agent, employee representatives, and the Advisory Committee, the President is required each October to adjust salary rates for white-collar employees to make them comparable with private enterprise. However, in case of a national emergency or economic conditions affecting the general welfare, the President may send an alternative plan to the Congress which would go into effect unless disapproved by either House. If the alternative plan is disapproved, the President is required to make the comparability adjustment. Each 1-percent increase in pay costs the Government about

\$420 million a year. Page 9 shows a functional chart on the operation of the comparability process.

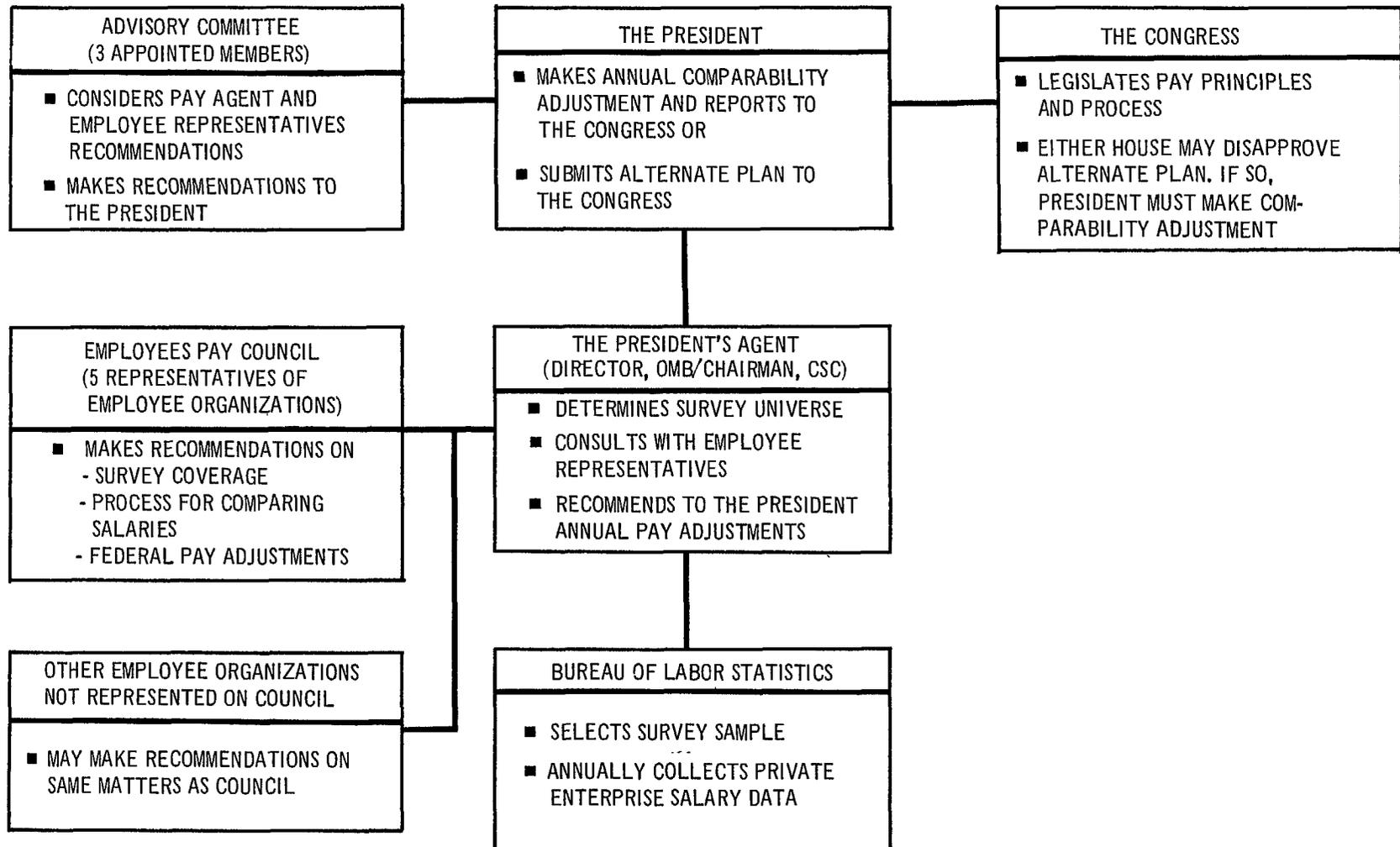
The number of man-years and payroll costs for fiscal year 1972 for the Federal pay systems affected by the comparability process were as follows:

	<u>Man-years</u>	<u>Payroll</u> (billions)
Statutory pay system:		
GS	1,305,000	\$16.5
Department of Medicine and Surgery	26,000	.4
Foreign Service	16,000	.3
Systems which move with GS:		
Other civilian (note a)	93,000	1.0
Military (note b)	<u>2,360,000</u>	<u>17.2</u>
Total	<u>3,800,000</u>	<u>\$35.4</u>

<sup>a</sup>Agencies which elect to follow the GS system although they are not required to do so.

<sup>b</sup>A 1967 law (81 Stat. 654) requires that, whenever GS compensation is adjusted upward, pay of the uniformed services be comparably increased immediately.

## FUNCTIONAL CHART ON OPERATION OF THE COMPARABILITY PROCESS



## CHAPTER 2

### PERSPECTIVE

The adoption of the comparability principle and provision for annual review and adjustment has generally advanced the evolution of Federal white-collar salary determination. The principle was adopted to provide an objective standard on which to assess Federal salary rates. The resultant pay adjustments have, on the whole, significantly narrowed the spread between Government and private sector average salary rates determined by the PATC survey. However, there is a need to supplement and strengthen the process to better accomplish the basic purposes for which the principle was adopted and to ensure a high degree of confidence in the pay determination process.

#### HAS COMPARABILITY BEEN ACHIEVED?

Before the comparability principle was enacted in 1962, PATC survey data showed that Federal salaries, except for the lowest grades, lagged considerably behind private enterprise salaries. Federal salaries continued to lag behind those in private enterprise until July 1969, when Federal salaries were raised to "full" comparability as required by a 1967 law.

#### Meaning of comparability

Comparability with the private sector is only approximate. There are deviations from comparability for certain occupations, geographic areas, and/or industries.

Comprehension of the meaning of comparability requires an understanding of the following.

- Comparability is by level of work, not by specific jobs.
- Adjustments of Federal salary rates must consider internal alignment to maintain pay distinctions in keeping with work distinctions among the various levels.
- Federal white-collar salary rates are in force Government-wide.

In the annual PATC survey, it would not be feasible to survey every Government job to determine its average salary in the private labor market. Rather, a select group of benchmark positions at various work levels are priced for setting the rates of all jobs at those levels. This does not mean strict comparability for every job because the Government classifies many heterogeneous occupations at the same work level or grade regardless of the actual pay relationships among these jobs in private industry. Moreover, OMB and CSC state that the Federal salary rates cannot be built directly on private enterprise averages because the law requires pay distinctions (intergrade differentials) in keeping with work distinctions and because the private sector average rates do not provide such distinctions. Consequently, in developing Government paylines, OMB and CSC have made many compromises. As a result of emphasis on internal alignment, the spread in pay between Government and private enterprise is often significantly different for various occupations at a work or grade level and different from the work level averages.

Since the Federal statutory pay systems require uniform, national salary rates, the PATC survey is designed to estimate the national averages of the private sector salary rates. However, various independent studies show that the private sector work force consists of distinctive major subdivisions with different salary treatments. The lower skill white-collar employees' labor market is local in character, and their salaries customarily vary significantly from one locality to another. For example, the most recently published BLS Area Wage Survey shows that the average pay rates for the private sector office clerical occupational group in the highest paid area were 40 percent greater than in the lowest paid area. The higher skill labor markets and salary patterns are generally national in character.

Work level salary comparisons between  
Federal and private enterprise

The chart on page 13 shows the comparative gaps in 1962 and 1972 between Federal white-collar salary rates and the estimated private sector average rates for the work levels surveyed by BLS. Since the actual adjustment of Federal salary rates necessarily follows the annual survey of private sector rates, the 1962 private sector rates were

as of March 1962 and the Federal rates were those which became effective in October 1962; the 1972 private sector rates were as of March 1972 and the Federal rates were those effective January 1973.

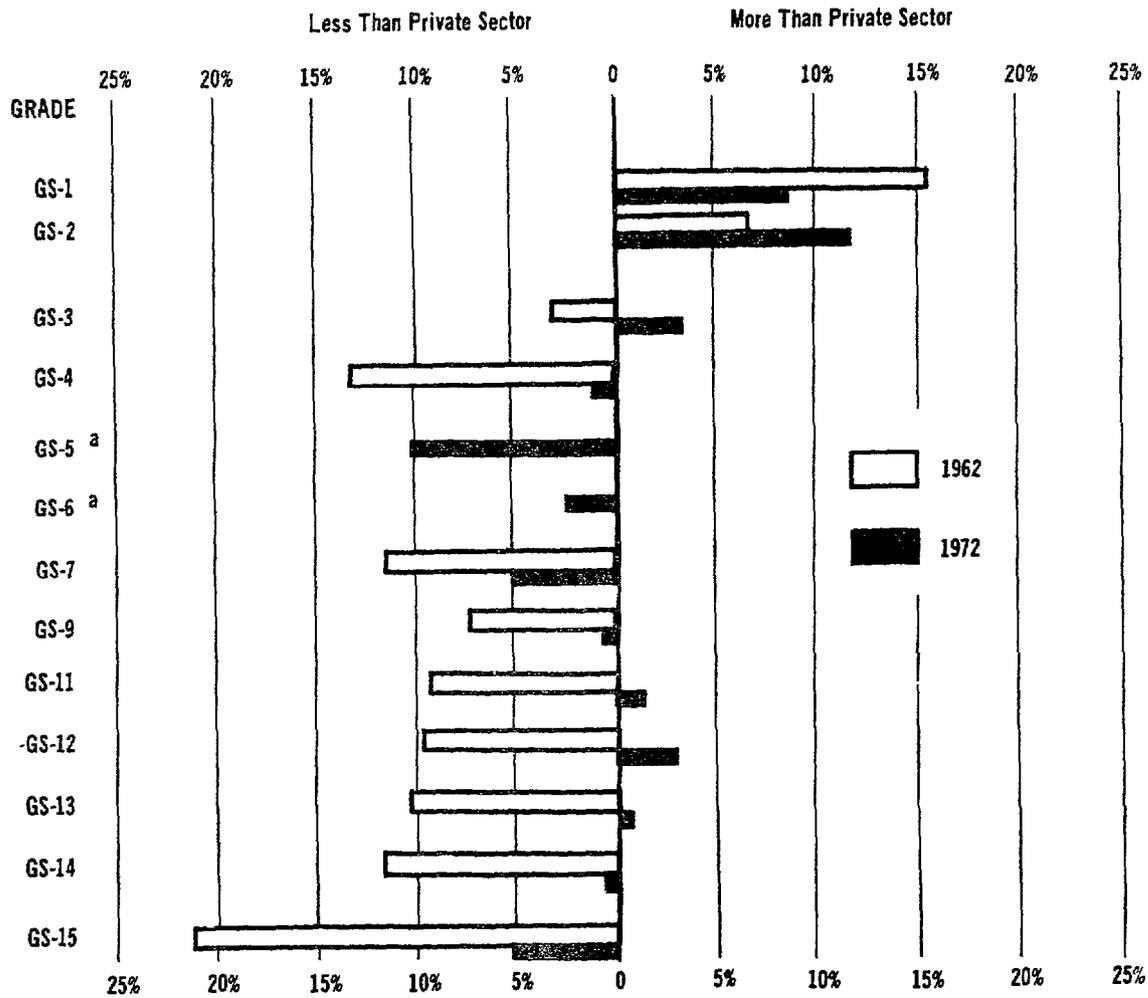
For 1972 the chart indicates that Federal salary rates for (1) the 2 lowest work levels continued to substantially exceed the estimated private enterprise average rates, (2) GS-5 lagged substantially behind the private sector rate, and (3) the remaining 10 work level deviations from private enterprise rates ranged from about 0.5 percent to 5.1 percent. However, the comparability gaps for certain work levels may not show a fair comparison between Government and private sector salary rates.

- The mix of jobs surveyed at work levels equivalent to GS-5, GS-7, GS-9, and GS-15 were not sufficiently representative, in our opinion, of the range of Federal jobs at those levels. The job mixes at certain of those levels contained disproportionate numbers of jobs which were highly paid in the private sector, which resulted in an upward bias of the average work level rates. (See ch. 3.)
- The scope of the survey includes 7.2 million private enterprise white-collar employees but excludes salaries earned by approximately 75 percent of non-Federal-sector white-collar employees. (See ch. 4.)

#### Supergrade salary rates

The annual survey of private enterprise salary rates does not include jobs in work levels equivalent to GS-16 through GS-18 (supergrades). OMB and CSC state that the nature of such jobs makes them unsurveyable by the job-matching technique. The supergrade payline is determined by extrapolating the internal alignment pattern established for the work levels surveyed. The supergrade GS pay rates which went into effect January 1973 were as high as \$41,734 a year. By law, however, the actual amount paid may not exceed the pay rate for level V of the Executive Schedule--\$36,000 since February 1969. (The Executive Schedule rates are required to be reviewed every 4 years by an appointed commission.) Because of the statutory ceiling, the actual pay at GS-17 and GS-18 and at the upper steps of GS-16 is less than the pay determined by the extrapolation method.

PERCENT FEDERAL SALARY RATES VARY FROM PRIVATE  
SECTOR RATES BY WORK LEVEL- 1962 AND 1972



<sup>a</sup> OMB/CSC stated that jobs surveyed for 1962 at GS-5 and GS-6 were not sufficiently representative to determine the grade averages

In 1960 CSC priced supergrade jobs in a limited number of private companies by on-the-site position classification analysis, using Federal classification standards. In 1962 the information was updated. Since that time, CSC has not made any similar studies. Therefore, there is no check on the adequacy of the supergrade rates established through the extrapolation method.

PRIME NEED: BETTER PROGRAM MANAGEMENT

The Government's pay policies, structures, and practices require continual evaluation and research to keep up with the constantly changing nature and composition of the labor markets and with the Government's needs. During the 10 years the comparability principle has been in effect, the concept has been limited to comparability with private enterprise and the design of the survey has had few changes.

Improvements are needed to achieve more reasonable comparability with the non-Federal sector in line with the basic purposes of the comparability principle. The mix of jobs surveyed needs to be improved to be more representative of the Federal work force, and the scope of the survey needs to be broadened to include each of the major segments of the non-Federal sector. Thus, the survey results would reflect the proportionate influence of Federal employment and of non-Federal employment and pay. A high degree of confidence is essential to an effective pay policy, and recent publicity indicates that questions are being raised about the Federal pay rates established through the comparability process.

Our findings show that the President's agent should give more emphasis to compensation evaluation and research and to initiating timely changes in the white-collar pay comparability process.

The Director, OMB, and the Chairman, CSC, said that research and policy development work must be viewed as an integral part of their role as the President's agent but that the availability of resources limits the amount of effort that can be devoted to research and long-range planning. They stated that occupational coverage and survey design were being studied but that the scope and magnitude of the studies may need to be reexamined in the light of our findings and recommendations.

## CHAPTER 3

### NEED TO SURVEY MORE REPRESENTATIVE SAMPLE

#### OF FEDERAL WHITE-COLLAR JOBS

We found that the jobs included in the PATC survey were not sufficiently representative of the Federal jobs at certain work levels and that the jobs included at some of those levels seemed to favor those which generally receive disproportionately higher salary rates in the private sector.

- At the GS-5 level the proportion of clerical jobs included in the survey was substantially less than that in the Federal work force, and the proportion of college-hire-type jobs, which generally receive higher pay in the private sector, included in the survey was substantially higher than that in the GS-5 Federal work force.
- At the GS-7 and GS-9 levels, the proportion of journeyman jobs included in the survey was substantially low, and the proportion of entry and developmental positions was substantially high, compared with the proportions in the Federal work levels.
- At the GS-15 level the three jobs included in the survey represented only a small portion of the types of Federal work found at that level and seemed to encompass some of the highest paid work at that level in the private sector.

#### SELECTION OF JOBS FOR SURVEY

The GS pay system covers about 1.3 million employees in 22 broad occupational groups containing about 430 specific occupations. Each occupation is slotted into one or more of the 18 GS work or grade levels.

The three criteria for including a job in the PATC survey are that the job (1) consists of work which is essentially the same in private enterprise as in the Government, (2) is numerically important in both sectors, and (3) is surveyable by the job-matching technique. Supplementing these criteria are two OMB and CSC interpretive qualifications: (1) a published CSC classification standard must cover the

job and (2) the job must exist across industry lines in the private sector. The criteria have remained virtually unchanged since the PATC survey was designed in 1959.

The PATC survey includes 17 of the approximately 430 occupations covered by GS. Represented in these occupations are 79 jobs in 13 of the first 15 GS work levels (GS-1 through GS-15). Fifty jobs relate to professional and administrative work, 9 to technical work, 5 to supervisory clerical work, and 15 to clerical work.

NEED TO CONSIDER EXTERNAL PAY RELATIONSHIPS  
IN SELECTING JOBS TO SURVEY

The Government classifies many heterogeneous white-collar occupations at the same work level. In the private sector, economic and other considerations cause occupations at equivalent Federal work levels to receive different rates of pay, often substantial. For example, the following table shows, by equivalent GS work levels, the number of jobs surveyed<sup>1</sup> and the range of the jobs' relative average pay rates--expressed as a percentage of the work level average pay rate--as estimated by the 1972 PATC survey.

<u>Equivalent GS work level</u>	<u>Number of jobs surveyed</u>	<u>Range of pay relatives (percent)</u>	
		<u>Low</u>	<u>High</u>
GS-1	2	95	105
GS-2	3	94	108
GS-3	8	90	117
GS-4	6	91	111
GS-5	10	83	116
GS-6	2	87	113
GS-7	10	82	112
GS-9	8	92	106
GS-11	9	94	106
GS-12	6	92	105
GS-13	5	94	109
GS-14	5	94	107
GS-15	3	89	112

---

<sup>1</sup>The table relates to 77 of the 79 jobs surveyed for which BLS determined data to be adequate for reliable use.

Since each job surveyed is weighted equally in determining the work level's average pay rates and since the averages are used to adjust Federal pay rates, external pay relationships should be considered in selecting survey jobs to ensure that the mix of jobs at each work level reflects a range of high- to low-paying jobs in proportion to their representation in the Federal work force at that level.

OMB and CSC state that 25 percent of GS employees are in the jobs surveyed and that this is very representative. However, we believe the survey may be focusing disproportionately on jobs which are either high or low paying in the private sector.

Underrepresentation of GS-5 clerical jobs

The current PATC job sample represents mostly college-hire positions, instead of the range of all jobs, at the equivalent of GS-5. Clerical positions are underrepresented, resulting in a possible upward bias of the private enterprise pay rate estimated for the GS-5 equivalent work level.

The following table shows the pay relationships in the private sector for the GS-5 equivalent jobs as determined by the March 1972 PATC survey.

<u>Job</u>	Average annual salary in private <u>sector</u>	Percent of average for <u>all jobs</u>
Engineer I	\$10,921	116
Chemist I	9,838	104
Auditor I	9,628	102
Job analyst I	9,441	100
Engineering technician III	9,507	101
Buyer I	9,380	100
Accountant I	9,067	96
Keypunch supervisor III	9,325	99
Draftsman II	9,201	98
Secretary II	<u>7,840</u>	<u>83</u>
Average (mean)	\$ <u>9,415</u>	<u>100</u>
Payline rate (fourth step) established January 1, 1973	\$ <u>8,465</u>	<u>90</u>

Secretary II is the only clerical position included in the 10 survey jobs and therefore has only a 10-percent influence on the average private enterprise pay rate. Using the most recently published CSC data, however, we estimate that approximately 70 percent of the GS-5 Federal employees are in clerical work.

Six of the 10 survey jobs are college-hire trainee-type jobs representing a total of less than 1 percent of the GS-5 employees. However, these six jobs have a 60-percent influence on the average private enterprise pay rate.

Four of the six college-hire jobs were assigned nationwide higher pay rates<sup>1</sup> in the Federal service for several years.

- Accountant and auditor from 1966 to 1972.
- Engineer and chemist from 1955 to 1972.

From 1966 to 1972 the average of the special rates for these four jobs exceeded the regular GS-5 salary rates by about 23 percent. Although special rates for these jobs were terminated in February 1972, Department of Labor projections point to a strong demand throughout the economy for a variety of these skills through the decade.

PATC data has consistently shown that, at the GS-5 equivalent level, college-hire employees in the private sector receive significantly higher salaries than secretaries. For example, the 1972 PATC data shows that average pay rates for college-hire jobs ranged from 96 percent to 116 percent of the average work level rate equivalent to GS-5 and that the average rate for secretaries was 83 percent. Data is not available on the relative private sector pay rates for other types of clerical jobs at the GS-5 level.

---

<sup>1</sup>The law authorizes payment of special salary rates when it is determined that private enterprise salary rates for one or more occupations in one or more areas or locations are substantially above Federal rates so as to handicap significantly the Government's recruitment or retention of qualified personnel.

In our opinion, the underrepresentation of clerical positions in the survey jobs could result in an upward bias of the average work level pay rate. We recognize that the actual GS-5 payline rate resulting from the comparability process has been considerably lower than the average rate determined by the PATC survey. However, because GS-5 is the basic college entry grade and is the grade for many clerical and technical workers, it is an important payline reference point. About 13 percent of the 1.3 million GS employees are GS-5s. Moreover, there seems to be little doubt that a high degree of employee confidence in the comparability mechanism is essential to an effective pay policy. Maintaining that confidence becomes increasingly difficult when a GS-5 employee observes that his pay rate lags substantially behind the private enterprise average.

#### Underrepresentation of full-performance jobs at GS-7 and GS-9

The sample of GS-7 and GS-9 jobs selected for survey are primarily of the developmental type, with full performance in the occupations projected at GS-11 or higher. Six of the 10 jobs used for pay setting at GS-7 and 7 of the 8 at GS-9 are jobs for which the Federal Government typically uses college-hires in career development positions. Also, four of the college-hire, career development occupations--accountants, auditors, engineers, and chemists--have been assigned special higher rates in the Federal service because private industry paid their counterparts substantially more than the norm for other jobs at the same level.

Only three full-performance or journeyman jobs, all part of the engineering job family, are included in the survey at these grades. Our study of CSC data indicates that about 46 percent of GS-7 and GS-9 Federal employees are in journeyman positions. Since only 2 (draftsman and engineering technician) of 10 PATC occupations at GS-7 and only 1 (engineering technician) of 8 at GS-9 are in the journeyman categories, the current PATC job selection is probably not representative of the Federal work performed at those levels.

#### Representation at GS-15

Coverage at the equivalent of GS-15 appears to center upon occupations which are among the highest paid in the

private sector at that level. Only three jobs--attorney, engineer, and chemist--are used in the PATC survey.

CSC statistics indicate that the three positions represent approximately 24 percent of the 28,000 employees at GS-15. However, available Federal work force data shows that a significant number of GS-15 employees are in other occupational categories. For example, the general clerical and administrative, medical officer, and general science categories each had more than 1,000 employees, and the program management and accounting categories each had from 501 to 1,000 employees. Many more occupational categories had populations from 50 to 500.

<u>Population cluster</u>	<u>Number of occupational categories</u>
101 to 500 employees	30
50 to 100 employees	22

American Management Association data, published in May 1971, shows that middle-management research and development positions consistently receive among the highest salaries for middle-management work. Another independent survey also shows research and development managers to be among the private sector's most highly paid managers. Two of the three occupations covered in the PATC survey at the equivalent of GS-15--engineer and chemist--include research and development work within the job definition. Statistics are unavailable on precisely how many of the engineering and chemistry positions are matched at this level on the basis of research and development assignments.

PATC data shows that attorneys were receiving salaries which were 12 percent greater than the average of the three GS-15 equivalent jobs. American Management Association data shows that attorneys rank in the upper salary group among positions for which parallels might exist with Federal middle-management work. Moreover, CSC and OMB recognize the personalized nature of private enterprise attorney salary rates. Using attorney, engineering, and chemistry positions to depict the range of administrative, technical, and professional work at the GS-15 level appears inconsistent with the representation objective of the PATC survey.

CSC maintains that all GS-15 positions which meet survey criteria are now included in the sample. One of those criteria requires a published CSC classification standard to cover a job before it can be used for PATC purposes. Twenty-six of 247 types of GS-15 positions in the Federal Government are covered by such standards. Many of those 26 positions, however, are excluded from PATC because they do not meet one or more of the remaining criteria.

As a consequence of the shortage of published standards at GS-15, Federal position classification at this level depends on thorough organizational analysis and comparisons with available guides and standards for broadly related work (administrative, technical, professional, supervisory, etc.). Because of so few directly applicable standards and the classification facility developed at cross-occupational comparisons, the reasonableness of matching only jobs for which standards exist must be examined. Existence of a directly related standard is a means for buttressing decisions of equivalence between PATC job definition work levels and Federal grades.

In our opinion, requiring a CSC standard to support inclusion of a GS-15 job in the survey is unnecessarily restrictive. Reliable job level information is available elsewhere.

--Title 5, United States Code, defines the basic characteristics of all GS grades.

--At the GS-15 work level, comparisons can be drawn from standards and guides generally related to the type of work under study.

--In 1960 CSC demonstrated that its classification experts--aided by those of other agencies and consultants from private industry, the academic world, and a professional association--could classify jobs and develop salary information for private enterprise positions equivalent to GS-16, GS-17, and GS-18 positions for which no formal classification standards or job definitions existed. The study was not designed to be a full-scale survey of prevailing rates, but results did provide general indicators of executive pay levels of large corporations.

## CONCLUSIONS AND RECOMMENDATIONS

Federal GS jobs are interrelated by job evaluations based on duties, responsibilities, and qualification requirements, and the jobs are slotted into 1 of the 18 grades of the single GS salary schedule. Private sector pay rates vary, often substantially, among jobs at equivalent Federal work levels. Thus, the jobs selected at each work level for the PATC survey influence the resulting average pay rates for that work level. Therefore, the mix of survey jobs should represent the universe of Federal jobs at a given work level to help minimize the possibility of bias in the average work level pay rates.

The mix of jobs surveyed at work levels equivalent to GS-5, GS-7, GS-9, and GS-15 were not sufficiently representative, in our opinion, of the range of Federal jobs at those levels. The mix at certain of those levels contained disproportionate numbers of jobs which were highly paid in the private sector, so the average work level rates were biased upward.

Selection of jobs for the survey should, in our opinion, be based on better analysis of each job's salary pattern in the private sector before it is designated as a benchmark job in Federal pay determination. Also the requirement that a published CSC classification standard cover the job unnecessarily restricts the occupational coverage at the GS-15 level.

### Recommendations

We recommend that the Director, OMB, and the Chairman, CSC:

- Broaden the PATC occupational sample at the GS-5, GS-7, and GS-9 levels to more adequately reflect the range of work found at these levels in the Federal Government.
- Through a reexamination of the applicability of survey criteria, expand occupational coverage at the GS-15 level to achieve an occupational selection more representative of the range of duties and responsibilities found at that level in the Federal Government.

- - - -

The Director, OMB, and the Chairman, CSC, said that they were studying occupational representation to identify appropriate new jobs for PATC and to then begin developing and testing job definitions. They stated, however, that this was a lengthy process and that it was unlikely that any new jobs could be added to the survey before 1975, except for one occupation now undergoing preliminary testing.

## CHAPTER 4

### NEED TO BROADEN PATC SURVEY UNIVERSE

Although the PATC survey is designed to estimate national salary rates in the private sector, it does not sample the entire non-Federal employment universe. In general, the reasons for excluding certain segments of private enterprise and State and local governments were that (1) their white-collar employment was too small to significantly affect national salary estimates and/or (2) their pay determination did not result from free play over bargaining tables and other salary-determining processes.

We believe that the rationale for excluding State and local governments and certain segments of the private sector from the survey universe is no longer valid because:

- Significant changes have occurred in non-Federal white-collar employment since the survey was designed. The growth rate of employment in the excluded portions of the non-Federal sector has substantially exceeded the growth rate of the included portions. The survey sample is drawn from a survey universe of only about 7.2 million of the 28 million non-Federal white-collar employees.
- The rising importance of labor-management bargaining in pay determination processes for State and local government employees has made their pay rates reflect various factors which similarly affect pay in private enterprise.
- The types of industries and the sizes of establishments surveyed affect the national average rates obtained, the types of jobs surveyed, and the number of possible job matches.

We believe it is desirable to increase the coverage of the PATC survey to include a more representative cross section of the non-Federal sector so that the survey results will reflect the proportionate influence of employment and pay for each of the major segments of the non-Federal sector. Removing the exclusions may also provide opportunities for

increasing the number of jobs surveyed, to provide occupational coverage more representative of the Federal work force.

#### EVOLUTION OF SURVEY DESIGN

The Interdepartmental Committee on Civilian Compensation made a study of civilian compensation in 1957. The Steering Committee report concluded that the most serious problem in connection with Federal civilian compensation under statutory pay plans was the lack of timely and adequate response to changes in non-Federal salary levels that seriously affected the recruitment, retention, and motivation of Federal employees, particularly at the higher work levels. The Steering Committee recommended that (1) pay rates for Federal white-collar employees be adjusted annually to reflect the general levels of non-Federal pay as determined by an annual national survey and (2) exceptions be permitted for occupations in localities with urgent recruitment and retention problems.

Since a basis for broad and systematic comparisons of Federal with non-Federal white-collar salary rates did not exist, the Bureau of the Budget (now OMB) sponsored an inter-agency special work group to design a survey of non-Federal white-collar salaries. In its April 1959 report, the work group proposed a survey designed to yield estimates of salaries by occupations at various equivalent Federal work levels. The work group proposed that the survey exclude State and local governments and be limited to private enterprise except

- industry divisions of agriculture, forestry and fisheries, mining, and contract construction;
- certain transportation industries and most of the service industry division;
- establishments employing less than 100 workers;  
and
- establishments in other than standard metropolitan areas.

The executive branch interpreted the "private enterprise" provision of the comparability principle as excluding non-profit organizations.

In 1959 BLS launched the survey program. In 1961 one exclusion provision was changed to exclude establishments employing less than 250 workers.

In 1962 the President recommended, and the Congress enacted, Federal salary reform for white-collar employees which called for comparability with private enterprise as determined on the basis of appropriate BLS annual surveys.

In 1964, independent studies of the PATC survey were conducted and recommendations were made to expand coverage of private enterprise. The PATC survey was expanded in 1965 to include establishments in nonmetropolitan areas, and in 1966 the exclusion of establishments employing less than 250 employees was revised to variable sizes, ranging from 50 to 250, depending on the industry division.

In 1972 the minimum size standard for the finance, insurance, and real estate industry division was increased to 100 employees.

The 1972 PATC survey coverage by industry division and minimum size was as follows:

<u>Industry division</u>	<u>Minimum size of establish- ment (employees)</u>	<u>White-collar employees (note a)</u>	
		<u>Survey universe</u> (000 omitted)	<u>Survey sample</u>
Manufacturing	250	3,317	1,490
Public utilities (note b)	100	1,108	570
Wholesale trade	100	413	47
Retail trade	250	482	156
Finance, insurance, and real estate	100	1,608	516
Services (note c)	100	156	83
Total		<u>7,084</u>	<u>2,862</u>

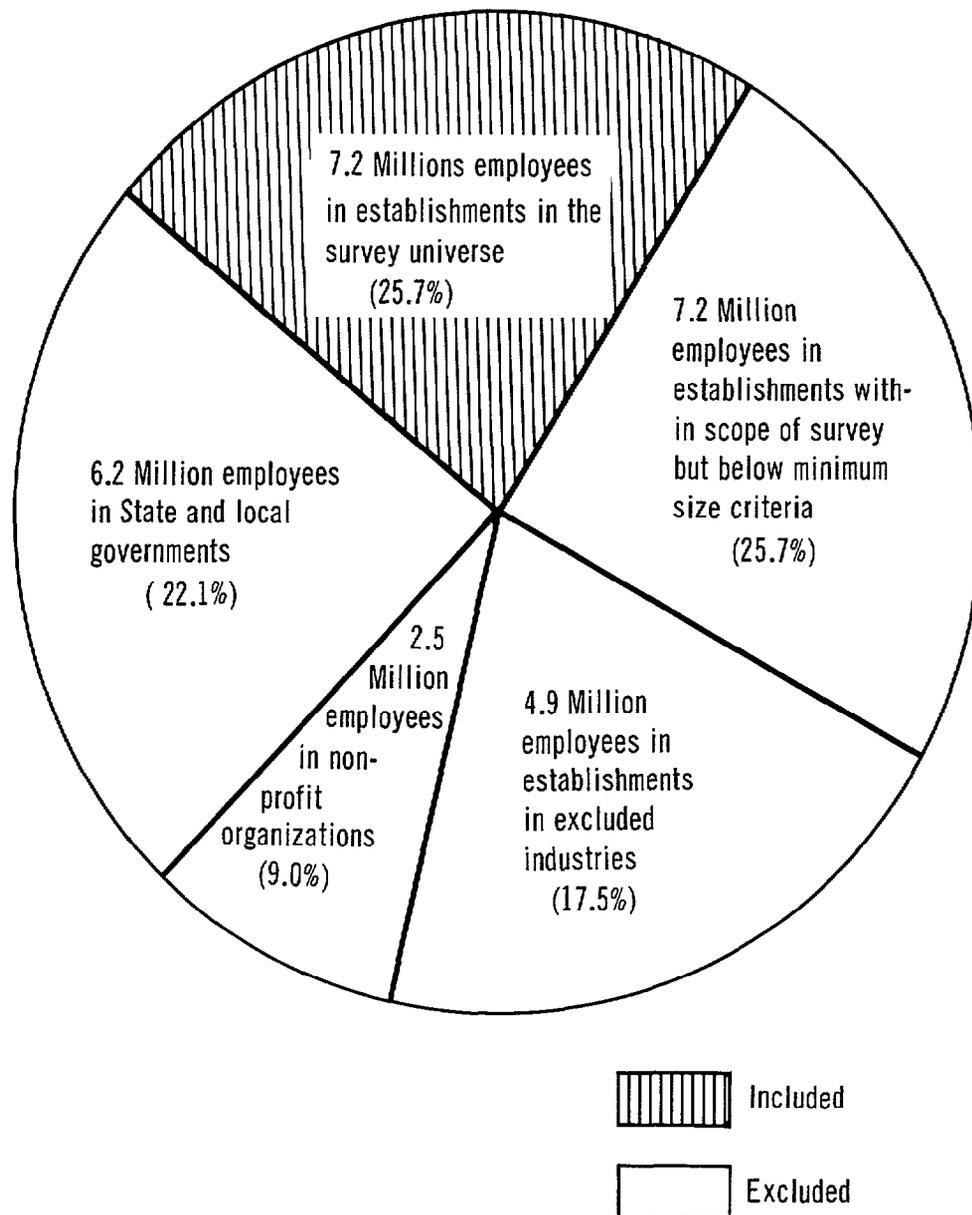
<sup>a</sup>Includes executive, administrative, professional, supervisory, and clerical employees but excludes technicians, draftsmen, and sales personnel.

<sup>b</sup>Includes only communications, gas, electricity, sanitary service, and selected transportation industries.

<sup>c</sup>Includes only engineering and architectural services and commercially operated research, development, and testing laboratory industries.

DESIRABILITY OF BROADENING SURVEY COVERAGE

We estimate that the universe from which the sample is drawn for the PATC survey includes establishments which employ about 21 million white-collar workers, or 75 percent of the non-Federal white-collar employees excluding the self-employed. The following chart--estimated from BLS data from the 1971 Current Population Survey and the 1971 PATC survey--shows by segment of non-Federal employment the number and percentage of white-collar employees in establishments included and excluded from the survey universe.



As shown in the following table, the growth rate of white-collar employment in the excluded portion of the non-Federal sector has substantially exceeded the growth rate of the included portion since inception of the PATC survey.

	<u>White-collar employment</u>		<u>Percent increase</u>
	<u>1960</u>	<u>1971</u>	
	(millions)		
Industries in scope of survey	(a)	7.2	
Industries in scope of survey but in establish- ments below minimum-size criteria	<u>(a)</u>	<u>7.2</u>	
	<u>9.7</u>	<u>14.4</u>	48
State and local governments	2.8	6.2	121
Excluded industries	2.3	4.9	113
Nonprofit organizations	<u>1.9</u>	<u>2.5</u>	32
	<u>7.0</u>	<u>13.6</u>	94
Total non-Federal (excluding self- employed)	<u>16.7</u>	<u>28.0</u>	68

a

The 9.7 million includes employees in establishments below the minimum-size criteria. Information was not available to break out such establishments.

A Department of Labor forecast of 1980 employment levels indicates that industries currently included in the survey will continue to employ a decreasing proportion of non-Federal workers. The Department predicts that national employment will increase by approximately 23 percent from 1968 to 1980. Significant increases are expected in employment partially or completely excluded from the current survey, such as State and local governments at 52 percent, the service industry at 40 percent, and the construction industry at 35 percent. In comparison, employment in the manufacturing industry, which constitutes about half of the employment in the current survey universe, is projected to increase by only 11 percent.

It does not seem reasonable to exclude the salaries of employees in such a large segment of the economy. Our specific comments on the exclusions follow.

### State and local governments

In presenting the comparability concept to the Congress in 1962, Administration representatives stated that the average salaries paid by private enterprise would represent a "fair-wage" standard that the economy places as the proper value of Federal employees' services. They stated that such salaries gave objective and proper weights to all legitimate pay factors, such as dollar purchasing power, standard of living, and productivity, which were resolved into the "going rate" in the labor-management bargaining process. State and local government salaries were considered to be "administered" rates lacking the economic characteristics of private enterprise salaries. The executive branch reasoned that State and local government salaries would have little effect on national averages since their weight would be lost in the overwhelming weight of private enterprise data.

The significant increase in the number of State and local government employees and the changes in salary determination processes have, in our opinion, negated the original rationale for the survey restriction.

At the time the survey was designed, State and local governments employed approximately 6.1 million workers, including approximately 2.8 million white-collar employees. In 1971, the total number of employees had increased to 10.2 million and the number of white-collar employees had more than doubled to 6.2 million, or 22 percent of all non-Federal white-collar employees. Employment projections through 1980 show that the growth rate will continue to be substantial.

State and local government employees are now generally covered by merit systems, are highly organized in labor unions and employee associations, and engage extensively in collective bargaining with their employers.

BLS reports that State and local government employees became much more organized during the 1960s. By 1970 about 2.7 million State and local employees were members of unions and employee associations. A 1969 International City

Management Association survey of 2,072 cities with populations of 10,000 or more disclosed that, in the 1,536 responding cities, 64 percent of the employees were organized.

The degree to which State and local government white-collar workers are organized and bargain collectively is particularly germane to an analysis of the "administered rates" rationale for excluding them from the PATC survey. BLS identified collective-bargaining agreements covering about 1.1 million State and local government employees, of which 369,000, or 33.6 percent, were white-collar employees. In comparison, BLS statistics on key collective-bargaining agreements in private enterprise indicated that, of about 8.8 million employees covered by the agreements, only about 500,000, or 5.7 percent, were white-collar employees. This comparison indicates that State and local government white-collar employees are more highly organized than their counterparts in private enterprise. In fact, bargaining with organized government employees who desire to bargain is required by law in 17 States, and bargaining with selected groups of employees is required in 13 additional States.

#### Nonprofit organizations

Nonprofit organizations have not been included in the PATC survey because the executive branch believes that these organizations do not fulfill its definition of "private enterprise"--the total complex of economic institutions called business which seek to yield a return on the owners' money and in which a fair wage emerges from free play of all the economic forces over the bargaining tables.

The legislative history of the 1962 act does not indicate that the Congress intended to exclude nonprofit organizations from the PATC survey. In our opinion, there is perceived no reason why the term "private enterprise" could not be construed as including nonprofit organizations.

White-collar employment in nonprofit organizations grew from about 1.9 million in 1960 to an estimated 2.5 million in 1971. These employees, representing about 9 percent of the 28 million non-Federal white-collar employees, were employed in the following nonprofit industries.

<u>Industry</u>	<u>Number of white-collar employees</u>
Hospital	950,000
Health services	150,000
Education	1,100,000
Welfare services	100,000
Nonprofit membership organizations	<u>250,000</u>
Total	<u>2,550,000</u>

Health care occupations are not included in the PATC survey, even though Federal employment in medical and health occupations ranks fourth in size among the 22 nonpostal white-collar occupation groups. CSC has indicated that medical and health occupations are not surveyed because very few health care employees are employed in private enterprise as defined by the executive branch.

A major benefit from including nonprofit hospital and health services industries in the survey would be increased occupational coverage. To be included in the survey, it is necessary that a high degree of similarity exist between the Federal and non-Federal job. Our comparison of eight occupations in Federal and nongovernment hospitals (1969 BLS Industrial Wage Survey of Hospitals) revealed that 65,000 Federal employees had basically the same job titles as 551,000 employees in nongovernment hospitals. Our analysis was not in sufficient depth to estimate the number of job matches that would result from the PATC survey. However, the large number of health care employees in both Federal and nongovernment hospitals with the same job titles is evidence that increased occupational coverage and significant numbers of job matches may be made possible by including health occupations in the PATC survey.

Non-Federal hospital employees' salaries are determined, in part, by area, local, or State-wide surveys of similar positions in other hospitals. Moreover, in consonance with the "fair wage" concept cited by the executive branch, collective bargaining appears to be as prevalent among white-collar hospital employees as it is with white-collar employees in other industries.

Excluded industries

The executive branch excluded selected private enterprise industries on the basis that their white-collar employment was too small to have any significant effect on national salary estimates or was concentrated in establishments below the minimum-size criteria. Excluded from the survey are all industries in the divisions of agriculture, forestry, and fisheries; mining; contract construction; and certain industries in the transportation and service divisions.

White-collar employment in the excluded industries has more than doubled since the survey was designed, increasing from 2.3 million in 1960 to 4.9 million in 1971. The 4.9 million employees represent about 17.5 percent of all non-Federal white-collar employees.

Our review showed that 40 percent of the employees in the excluded industries are employed by establishments that exceed the minimum-size criteria. For example, if all service industry division establishments with 100 or more employees were surveyed, the percentage of employee coverage would be 41.4 percent. This is greater than the coverage obtained from two industry divisions currently surveyed--wholesale trade employee coverage at 24.4 percent and retail trade employee coverage at 19.9 percent.

Adding the excluded industries to the survey universe could increase the number of employees in the universe; could produce additional job matches; and could provide more and better balanced occupational coverage, particularly at the higher salary levels. For example, the scope of the 1972 PATC survey covered the following numbers of private sector employees for use in setting the salary of Federal employees at the GS-14 level.

<u>Occupation and class</u>	<u>Number of employees in scope of survey</u>
Attorney V	898
Chemist VII	1,573
Chief accountant IV	218
Director of personnel IV	346
Engineer VII	14,438

Numerous employees in the engineer VII occupation were employed in the service industries included in the PATC survey. It is reasonable to expect that, if the excluded industries of accounting, auditing, and bookkeeping services (148,000 white-collar employees) and legal services (186,000 white-collar employees) were surveyed, additional employees in some of the other occupations would be included in the scope of the survey, to better balance occupational coverage at the GS-14 level.

#### Establishments below minimum size

The executive branch determined that minimum-size criteria were necessary if the PATC survey was to be efficient and economical.

Current minimum-size criteria eliminate as many private enterprise white-collar employees as are included in the survey (7.2 million of 14.4 million employees in the industries surveyed). Further, the survey universe size is very sensitive to changes in the minimum-size criteria because they can produce significant changes in survey universe coverage and in the average salary rates obtained. For example, increasing the size criteria for all establishments to 2,500 employees, as has been suggested on occasion, would restrict coverage to establishments employing only about 11 percent of all workers in the industries surveyed. Further, on the basis of the results of the 1971 PATC survey, the change would increase average salaries by about 6 percent.

Size criteria used for the PATC survey apply to the total number of employees in an establishment, whereas the survey itself is concerned only with white-collar employees in specific occupations. Therefore, setting size criteria by industry division--a group of industries with a similar function or type of operation, e.g., manufacturing--assumes that all industries and establishments in the division have similar relationships between total employees and white-collar employees. Our review showed that the relationship of total employees to white-collar employees varied significantly among the industries of a division. For example, in the service industry division, the minimum size is 100. The accounting, auditing, and bookkeeping industry and the legal services industry are excluded from the survey because total employment in each establishment is characteristically low. However, both of these

industries have extremely high levels of employment of white-collar employees in occupations surveyed.

Much can be done to broaden survey coverage in compliance with the comparability principle by a more selective use of size criteria in the PATC survey. To ensure representation, we believe that the size criteria should be at the lowest levels consistent with the cost of the survey and the benefits derived. Setting size criteria at the industry level rather than at the industry division level should be thoroughly explored and evaluated.

BEST DOCUMENT AVAILABLE

## CONCLUSIONS AND RECOMMENDATIONS

The comparability principle was adopted to provide a logical and factual standard for assessing and adjusting salary rates for white-collar employees.

The PATC survey is designed to make national estimates of white-collar salary rates in private enterprise, since Federal employees are located throughout the Nation and their salary rates are uniform Government-wide. The scope of the survey, however, excludes salaries earned by approximately 75 percent of non-Federal white-collar employees. The rationale for continuing to exclude such a large sector of non-Federal employees is, in our opinion, no longer valid because (1) the significant growth rates of the excluded segments have made them major competitors with the Government in the various labor markets and (2) the rising importance of labor-management bargaining in salary determination processes for State and local government employees has made their salary rates reflect various factors which similarly affect pay in private enterprise.

Since non-Federal salary rates vary among geographic areas, types of industries, sizes of establishments, and jobs at equivalent Federal work levels, we believe that the PATC survey sample should be drawn from the broadest feasible universe of the non-Federal sector so that the survey results reflect the proportionate influence of employment and pay for each of the major segments of the non-Federal sector. Also, a broader survey universe would provide opportunities for increasing occupational coverage to make it more representative of the Federal work force.

We believe, therefore, that OMB and CSC, in cooperation with BLS, should redesign the PATC survey with a view toward including in the survey universe, where feasible, State and local governments, nonprofit organizations, and the other industries currently outside the scope of the survey. Setting the minimum-size criteria at the industry level rather than at the industry division level should also be considered.

Redesigning the survey requires extensive planning, development, testing, and evaluation. On the basis of such evaluation, OMB and CSC should broaden the coverage to include other sectors of private enterprise and should propose

to the Congress that the principle of comparability with private enterprise be broadened to the entire non-Federal sector so that State and local governments can be included in the survey universe.

### Recommendations

We recommend that the Director, OMB, and the Chairman, CSC, (1) redesign the survey universe to cover the broadest feasible representation of the non-Federal sector and (2) after testing and evaluation of the new design, implement the design changes which can be made administratively and propose to the Congress legislation to broaden the comparability principle to the entire non-Federal sector to enable inclusion of State and local governments.

- - - -

The Director, OMB, and the Chairman, CSC, said they had decided to study the industry coverage of the PATC survey as a result of discussions with the Employees' Pay Council. They stated that, on the basis of our findings, they would also review the exclusions of nonprofit institutions and State and local governments and the question of the appropriate minimum size of establishments.

## CHAPTER 5

### NEED TO ASCERTAIN DEGREE OF RELIABILITY

#### OF SURVEY DATA AND TO IMPROVE

#### DATA COLLECTION PROCESS

The PATC survey estimates, through a sampling method, the national average of salary rates in the private sector to assess and adjust salary rates of Federal white-collar employees.

Private enterprise salary and other data is collected for 79 jobs. About 120 BLS data collectors obtain the data from a statistical sample of about 3,100 private enterprise establishments which employ about 2.9 million workers in professional, administrative, supervisory, and clerical occupations.

The PATC survey results, similar to the results of any statistical-sampling survey, are subject to uncertainties--sampling and nonsampling errors--which should be measured to determine the degree of reliability of the results. BLS determines and reports the PATC sampling errors--differences between the average salary rates as estimated from the PATC sample and the average salary rates that would have been obtained had the entire universe been surveyed. However, the effects of nonsampling errors have not been determined. Judgments of one type or another have a major role throughout the PATC survey.

In our opinion, the language and content of the PATC job definitions--along with the differences in matching techniques and differences in knowledge and cooperation of respondents--can affect the accuracy of job-matching decisions. If the variables inherent in the job-matching process cause systematic mistakes, the salary rates obtained from the sample would tend to cause consistent overestimates or underestimates of the true average salary rates. Since the survey data is used as the basis for assessing and adjusting Federal salaries and since each 1-percent increase in pay costs the Government about \$420 million a year, it is essential, in our opinion, that the reliability of the data be known.

Also the job-matching process could be improved by clarifying some job definitions and by improving matching and data collection techniques, which should upgrade the quality of survey data.

#### EFFECT OF JOB-MATCHING VARIABLES ON SURVEY RESULTS NOT MEASURED

Job matching is a common technique used in both the public and the private sectors for salary and wage surveys. In the PATC survey, the job-matching process is a dialogue between a BLS data collector and an establishment official (respondent) in which they discuss duties, responsibilities, and skill levels of certain occupations to identify or match jobs in the establishment which are similar to jobs in the Government. The tools by which a general understanding can be reached are the PATC survey job definitions and the establishment's job descriptions, organization charts, and other records.

The rationale for using job matching in the PATC survey is that in such a massive survey, it is infeasible for data collectors to use any more profound form of job evaluation. Whether job matching, position classification, or other forms of job analysis are used, the end result is, in essence, the same--the assignment of a job to a level relative to other positions based on an evaluation of duties and responsibilities.

The data obtained during job matching is affected by many variables, such as differences in probing techniques, data collectors' judgments, and respondents' knowledge and cooperation. The data collected goes through various review processes which detect and correct many errors. However, nowhere in the comparability process is an attempt made to measure and report the effect of job-matching variables on the survey results to determine the degree of reliability.

#### Review process limitations

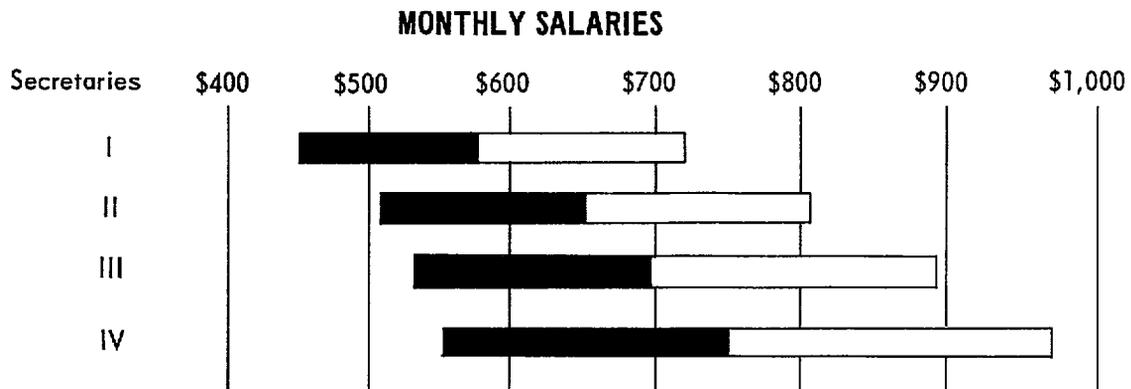
BLS reviews the quality of survey data through (1) desk reviews of the data collectors' schedules by the regions and Washington headquarters and (2) revisits to selected establishments by senior regional staff personnel who rematch some of the jobs to evaluate the data collectors' job-matching

decisions. Although the review process helps minimize the number of errors resulting from the variables surrounding the job-matching technique, its effectiveness in detecting and correcting errors is limited.

Desk reviews have one inherent limitation--reliance on written documentation to evaluate job-matching decisions. It is extremely difficult for any written documentation to adequately explain the reasoning behind the data collectors' decisions. Moreover, we observed that data collectors often did not include in their schedules (1) adequate information on their job-matching decisions (see p. 50) or (2) establishment data, such as job descriptions (see p. 49). As a result, desk reviews are generally directed to identifying and analyzing inconsistencies in salary rates and numbers of employees on the assumption that such irregularities are indicative of possible errors.

Errors in job matches, however, may not necessarily be indicated by extreme or inconsistent salary rates. For example, we noted cases where data collectors determined the skill level of an occupation by comparing the salary rates paid with rates expected to be found in that occupation rather than by determining job duties and responsibilities. (See p. 48.)

Moreover, the considerable overlapping of salary ranges between the various work levels of occupations creates conditions where reviews of extreme salary rates will probably not detect mismatches in the broad center spectrum of the salary ranges. This situation can be demonstrated by the salary data obtained for secretaries in the 1972 PATC survey. The following chart shows, by the various skill levels of secretaries, the median monthly salary paid and the monthly salary ranges within which 80 percent of the secretaries were paid.



Recognizing the limitations of desk reviews, BLS has established a quality control program to provide a further means for evaluating job-matching decisions. The program consists of revisits to verify the data initially obtained and observations of data collectors in collection situations. Revisits are especially useful as a review method because they permit data collectors' decisions to be independently tested in the actual job-matching situations. The errors found during those revisits are corrected.

The number of quality control revisits has been limited by a lack of available staff. For the 1971 PATC survey, BLS planned to revisit 10 percent--or about 300--of the establishments surveyed. However, BLS representatives told us that, due to a lack of available staff, only 201 establishments actually were revisited. One region revisited only about 2 percent of its assigned establishments. For the 1972 PATC survey, staffing difficulties forced BLS to reduce its revisits to 5 percent--or about 150--of the establishments surveyed.

BLS procedures state that, for establishments new to the survey, the reviewer must examine at least 50 percent of the jobs previously matched by the data collector. For those establishments not new to the survey, reviewers are required to concentrate on any new professional jobs added to the current year's survey, job matches in which salary rates have not changed since the prior year's survey, and job matches added or dropped since the last survey.

However, certain regions did not systematically make revisits during the data collection period but, instead, grouped revisits near the end of that period. We believe that such delays limit the effectiveness of the quality control program because the lessons learned from the revisits are disseminated too late to benefit the data collectors in the current year's survey.

BLS recognizes the need to ascertain  
degree of reliability of survey data

The need for an evaluation of the uncertainties that arise from differences in data collectors' judgments was recognized in an independent study of the statistical methods and procedures of the PATC survey made in 1964 under contract with the Bureau of the Budget. The contractor found that:

- The level distinctions of the various PATC occupation definitions were difficult to apply because generally jobs in an occupational series constitute a continuum of duties and responsibilities and did not fall into the neat boundaries implied in the job level concept.
- The judgment of the data collector was reflected in the job matches. Although training and supervision may be expected to produce a fair degree of uniformity in data collectors' judgments, two data collectors might have different judgments.
- Reviews of information obtained during job matching were limited because the original data accessible to the data collector--the record of his conversation with the establishment official, the position classification descriptions, and other written materials--were not available to the reviewer.

As a result of the contractor's recommendation, in February 1966 BLS initiated a response analysis program to evaluate, on a continuing basis, the effect on survey results of differences arising from the interview and response process--biases, differences of opinion, random errors, etc. A BLS official told us that a study was made in 1966 but that it was too limited to draw overall conclusions on the effect of nonsampling errors on the PATC survey results. Budgetary considerations precluded BLS from continuing and improving the response analysis program. The BLS official said that, from a "subjective point," the limited 1966 study, as well as informal programs of revisits in other surveys, indicates that data collection procedures are unbiased and that random errors generally balance out. However, BLS officials stated that there was a need for a formal continuous response analysis program.

JOB DEFINITIONS--BRIDGE BETWEEN  
GOVERNMENT AND PRIVATE SECTOR JOBS

Survey jobs must fulfill the criterion of essential similarity of work in both the Government and private industry. The content of definitions and reasonably consistent interpretations of content are crucial to the acquisition of valid data. Job definitions describe the general characteristics of the job, the direction received, typical duties and responsibilities, and the supervision given to others.

CSC and BLS develop, test, and maintain job definitions; CSC is responsible for determining that the definitions include the characteristics which are grade determining. Definitions are derivatives of CSC position classification standards from which ideas, examples, phrases, and sentences often have been extracted verbatim. Supplemental instructions in the form of questions and answers are provided to data collectors to aid in applying definitions.

Our review showed that the preponderance of definitions meshed well with CSC position classification standards. However, the contents of certain definitions do not include all characteristics which may have important grade-determining effects. Also, in a number of cases, work level distinctions would be difficult for data collectors to make on the basis of only the definitions and supplemental instructions.

Although we recognize that definition wording and supplemental instruction content can never ensure that data collectors make exactly uniform interpretations and precise job matches, we believe that further clarifications and refinements could improve job matching.

Improvements needed

Individuals making judgments should have a reasonably common and complete understanding of the job definitions which govern their decisionmaking. We believe that some of the job definitions and supplemental instructions are not conducive to that type of understanding, since

- many key words and phrases are not defined,
- certain essential information is missing, and

--some positions do not appear to be susceptible to the job-matching technique.

Preparing definitions is difficult; position classification soundness must be coupled with an appreciation for the realistic demands of job matching. Furthermore, distinctions between Federal job levels are frequently subtle. This explains the need for extensive standards under the current position classification methodology. Even with thorough and often extensive standards as guidelines, Federal position classification must rely on intensive fact finding and the professional judgment of specially trained analysts for decisions on appropriate job grades.

On the other hand, PATC definitions deal primarily with occupational highpoints. Without personnel management backgrounds, BLS data collectors are being asked to make, on a mass basis, judgments similar to those made by position classifiers, despite severe limitations on fact finding and the use of less sophisticated analytical guidelines.

Our study of the definitions shows that in a number of cases the BLS data collectors are left to their own interpretative devices because terms have not been defined or illustrated by specific examples to show the practical meanings. This is particularly a problem at the higher work levels of certain administrative and technical occupations. For example:

- Accountant V deals with "unusually novel and complex accounting system" and "fundamental and complex accounting matters."
- Chemist VI is concerned with "problem area of considerable scope and complexity" and "unconventional or novel approaches."
- Attorney V works with "matters of substantial importance," and attorney VI works with "legal problems of the highest importance."

We acknowledge that a definition is to be considered in its entirety rather than as discrete words or phrases. Regardless, definition wording is almost the only medium for developing understandings between BLS data collectors and

respondents. Without a common understanding of definition meanings, proper job matches may not be made.

The PATC definitions for some typist, stenographer, secretary, draftsman, and engineering technician jobs may cause the collector to obtain pay data from more than one work level. Part of the difficulty may lie in the existence of Federal positions in a type of work at other levels of duties and responsibilities than a BLS data collector might know exist. For example, the PATC survey covers only two categories of typists (I and II) equivalent to GS-2 and GS-3, respectively. Neither the definition nor supplemental instructions tell the data collector that some Federal typing work is both above (at GS-4) and below (at GS-1) the defined PATC levels. There is a distinct likelihood, then, that data on jobs equivalent to GS-1 and GS-4 could be included within PATC levels I and II.

The final issue associated with PATC definitions relates to the suitability of the BLS matching techniques for certain research-type and attorney positions.

Research duties and responsibilities are included in the PATC job definitions for certain work levels of the chemist and engineer occupations. In most Federal research positions where direct and personal leadership of, and participation in, the activities of a research team or unit is a primary basis for employee selection, the CSC Research Grade Evaluation Guide is the current principal classification tool. The guide stresses the interplay between the research assignment and the individual qualifications of the employee. In the case of a research position, these personal qualifications and scientific contributions can be grade controlling, being weighted twice as heavily for grade-determining purposes as the other factors covered by the guide--the research situation or assignment, the supervision received, and the guidelines and originality. The guide even suggests convening a panel of subject matter experts to assist in arriving at the proper grade level for a research position.

Thus, true research positions must be examined closely to determine their real value. It appears that the job-matching technique cannot sufficiently consider the Federal elements of a research position since there is practically no contact with job holders and very limited, if any, interaction with their supervisors.

Attorney positions present similar problems. OMB and CSC have recognized that attorney salary rates tend to be personalized, which could account for the wide range of salary rates at various levels. The report of the Job Evaluation and Pay Review Task Force (established pursuant to Public Law 91-216, Job Evaluation Policy Act of 1970, 84 Stat. 72) states that job evaluation plans normally do not apply to attorney positions in industry and that personal competence ranking is used for setting attorney salary rates. Also, we noted that respondents had limited knowledge of attorney duties. Some BLS regions, in their reports to BLS headquarters, have also commented on the difficulty in matching attorney positions because respondents had very limited contact with the the establishments' legal staffs. Consequently, the reasonableness of the functionally oriented job-matching technique for attorney positions seems to be questionable.

## JOB MATCHING

The job-matching process of the PATC survey is a massive effort to collect private enterprise salary data for use in assessing and adjusting salary rates of Federal white-collar employees. BLS devotes extensive efforts annually formulating a collection plan, issuing instructions, administering and supervising the data collection, collecting survey data, and reviewing and processing the data collected. BLS stated that its data collection, analysis, and processing costs for the PATC survey during fiscal year 1972 totaled about \$660,000.

The data collector and the respondent are the keys to the matching process. The collector's ability to ask the right questions and use available records and the respondent's knowledge of the duties and responsibilities of the establishment's employees are vital to obtaining quality data.

During our observations of data collection at 83 establishments, we noted that job-matching techniques varied widely. We observed many instances where data collectors made matching decisions only after holding extensive discussions and making apparently sound judgments; however, during many other visits, we observed job-matching practices that we believe need to be improved. Our specific comments on these matters follow.

### Extent of probing

Data collectors probe to obtain quality information on employees' job duties and responsibilities. BLS requires that the data collectors consider all elements of PATC definitions during job matching. When matching jobs at establishments which were in the prior year's survey, BLS requires the data collectors to consider the reasons for the judgments made in the prior year and to document any basic changes they make, but specific instructions are not provided on the extent of reexamination necessary.

Our observations of job matching at 83 establishments, 81 of which had been in the prior year's PATC survey, showed that the amount of dialogue in the job-matching process varied widely. For example, some data collectors extensively

examined the least complex clerical positions; others matched jobs, including high-level professional positions, with little or no examination.

In the latter instances, the data collector quickly satisfied himself that no major organizational changes had occurred since the prior year's survey. He then read the establishment job titles for the positions matched in the prior year's survey, and the respondent provided the current number of employees in these positions and their salary rates. Thus, a large number of jobs were matched and salaries obtained in a relatively short period. For example, at one manufacturing establishment employing approximately 3,800 workers, salary rates were collected for about 866 matched positions--covering 9 occupations at 40 different work levels--in about 1 hour, with little probing. In contrast, at a manufacturing establishment with about 3,100 employees, another data collector probed more extensively and took 2-½ hours to match 88 positions covering 4 occupations at 20 different work levels.

Data collected with minimal probing is treated the same in terms of quality as is data obtained through more thorough probing. We noted numerous instances where prior year's matches were significantly changed after very brief probing. Therefore, it is reasonable to conclude that the quality of data varies with the degree of probing.

#### Use of PATC job definitions

PATC job definitions, the basic job-matching tool, describe the general characteristics of the job, typical duties and responsibilities, direction received, and responsibility for directing others.

In applying definitions, BLS requires that:

"All of the elements in each level definition must be considered in making a classification judgment. It is possible, for example, that individuals classified at different levels of an occupation perform work of essentially the same complexity, but have significant differences in direction received or in responsibility for the direction of others."

We noted, however, that data collectors usually did not cover a definition in its entirety. Occasionally the collector read, or the respondent reviewed, the PATC definition, but usually the collector gave an abbreviated description. Often a key phrase was the only description used by the data collector to reach a common understanding with the respondent of the specific work level of the occupation. While most of the key phrases used were based on excerpts from PATC definitions, some were based on the collector's own interpretation of the definitions. The clerical occupations and the lower work levels of the professional occupations were more likely to be matched by use of key phrases.

The use of key phrases often resulted in rapid job matches; many data collectors and respondents appeared desirous of minimizing the time spent in job matching. Reliance on brief descriptions, however, may cause important elements of the definition to be ignored and may result in different interpretations by the collector and the respondent.

The use of salary rates to identify the skill level of an occupation should not be the major criterion since it is contrary to the purpose of the survey, which is to obtain salary data for a given level of an occupation. We observed instances in which data collectors used salary rates as a guide to job matching. Although we could not determine to what extent salary rates influenced job matching, we noted instances in which salary rates were used as the key element in matching when sufficient information on duties and responsibilities could not be obtained. For example, at one establishment the data collector and the respondent agreed to match two positions at the engineer VII level. After obtaining the salary rates, however, the collector thought that the rates were too high to justify the initial matches and therefore changed the matches to the engineer VIII level. The respondent described the positions as highly complex and secret, and discussions on duties and responsibilities were held to a minimum. Also, no attempt was made to determine if the positions were beyond the engineer VIII level.

Several data collectors told us that they had difficulties in applying certain PATC job definitions. One of the most frequent comments concerned a difficulty in distinguishing between the various occupational work levels,

especially for the higher levels of the professional occupations. Other comments included problems in understanding and applying the attorney definition and difficulty in matching employees in lower level professional occupations who were not expected to advance.

#### Use of establishments' records

BLS encourages data collectors to use establishments' job descriptions, organization charts, and other records to obtain a general understanding of the establishments' operation and to identify and confirm jobs to match. Data collectors are encouraged also to include these documents as part of the collection schedules (documentation of matching visits) in order to assist collectors in subsequent surveys. BLS regional officials said that such documents are also useful in the regional office review process.

We noted that data collectors reviewed establishments' organization charts and job descriptions at only 17 of the 83 establishments. Of the 83 completed schedules, 13 included partial organizational charts and only 2 included 1 or more job descriptions. Most of the establishments' documents used pertained to one component of the establishment and/or occupation. At the two establishments new to the survey, the collectors discussed organizational structures and establishment job descriptions but did not review or obtain any documents. Establishments' documents would seem to be a valuable aid in matching jobs, especially when data collectors do not have the benefit of job-matching data from a prior year's survey.

We believe that added emphasis on the use and inclusion in collection schedules of establishments' organization charts, job descriptions, and other information on establishments' business operations would further aid BLS data collectors in arriving at reasonable job-matching decisions and would aid in the data review processes.

#### Use of independent survey data

In each of the four BLS regions we visited, we were told of instances in which other organizations also conducted regional or local salary surveys. Many establishments participated in, and subscribed to, these surveys. During two

of our observations, BLS data collectors used independent survey reports to obtain matches and salaries for the PATC clerical occupations. In these instances, the data collectors did not fully participate in the job-matching process and in one case did not obtain current salary data; survey instructions discourage these practices.

BLS headquarters has no written policy or guidelines concerning the use of independent survey data. With the existence of numerous independent salary surveys, it appears that a BLS policy and criteria are needed to guide the regions and data collectors on the extent, if any, that such surveys can be used in the PATC survey.

### Documentation of job-matching decisions

The BLS procedures require data collectors to:

- Record all judgments in the job-matching process so that the schedule can be properly reviewed and understood.
- Explain the absence of entries for occupations which would normally be found in an establishment. (Such entries as "no match" are not considered to be adequate if there is reasonable expectation that the job might exist in the establishment.)
- Explain the absence of entries for occupational levels which would normally be found in such an establishment.

The purposes of such documentation are to ensure that the salary obtained is for the job matched, to provide clarifying explanations needed for schedule review, and to provide information useful for job matching in subsequent surveys.

Our review of the completed schedules for the 83 establishments showed many instances where the documentation did not meet the above requirements. For example, 32 of the schedules did not explain changes from the prior year's survey in the number of matches found for certain occupational levels, and 29 did not explain the decisions for excluding certain occupations which would normally be found in such an establishment.

BLS regional offices have also noted the lack of schedule documentation. One regional office, in providing its data collectors with information on a prior year's problems, pointed out several instances in which various types of matches were not adequately documented. Also, senior staff members commented on the lack of schedule documentation during quality control revisits to certain establishments. Five of the 89 quality control reports we reviewed included such comments.

We noted that schedule documentation was a vital and widely used tool in the job-matching and review processes, which demonstrates the need for data collectors to adhere to the criterion for complete documentation.

BEST DOCUMENT AVAILABLE

## TRAINING DATA COLLECTORS

The BLS regional offices generally are responsible for both on-the-job and classroom training for data collectors. After initial orientation in data collection techniques, new collectors usually spend several weeks observing experienced data collectors and then collect data while being observed by the experienced collectors. Often this experience is gained in one of the less difficult BLS wage surveys. Collectors gradually become experienced in a variety of the BLS surveys in such fields as wages and industrial relations, prices and living conditions, productivity and technical developments, and occupational statistics before they are trained to collect PATC data. Collectors with 1 or more years of data collection experience are used for the PATC survey.

Regional officials, some data collectors, and BLS task force reports have pointed out the desirability of placing additional emphasis on PATC training. Officials of two of the four regions we visited expressed the need for additional direction and assistance in PATC training from BLS headquarters. Officials of one region believed that a training specialist from BLS headquarters, with regional office assistance, should design and hold PATC training sessions to aid in ensuring uniformity of PATC definition interpretation. Officials of another region pointed out that the preparation of training materials is difficult and time consuming and that greater participation by BLS headquarters would be helpful.

Some data collectors also expressed the need for additional PATC training. Several collectors believed that a self-training course on the PATC survey similar to a course prepared for the Area Wage Survey program would be helpful. A BLS working group, organized in 1970 to prepare a plan for developing an overall PATC training program, reported that the method of training new PATC collectors had become inadequate in certain respects. The group recommended the development of a formalized training program covering the PATC survey's background, basic concepts, scheduling procedures, and occupations.

A 1971 BLS task force report on data collection and processing also stressed that additional attention should be given to various BLS training activities and made several

recommendations, including a recommendation for increasing the budgeting commitment for training.

Because of the importance of the PATC survey and the need to improve certain job-matching techniques, we believe that increased efforts to strengthen PATC training are warranted.

#### CONCLUSIONS AND RECOMMENDATIONS

It is essential, in our opinion, that the comparability process include a means of measuring the degree of reliability of the survey data beyond the current quality control program and desk reviews of collected data.

The establishment of a sound method or program to measure reliability will require considerable study and testing. We believe that, in considering the various options available for designing the best possible program, BLS should not consider only existing in-house resources and capabilities. Instead, BLS should also consider the desirability and feasibility of using Federal personnel management specialists with expertise in Federal position classification or in particular surveyed occupations. We also believe that such a program should be under strong central direction, including reporting responsibility at the national, rather than regional office, level.

There are also opportunities for improving the job-matching process, which probably would improve the quality of survey data. Specifically, there is a need for:

1. Clarification and refinement of certain job definitions to ensure more consistency in interpreting PATC job duties and responsibilities.
2. Reevaluation of certain surveyed jobs to see whether they are really susceptible to being surveyed by the job-matching technique.
3. Additional guidance to data collectors, through written instructions and/or training, on

--the application of PATC job definitions;

- probing techniques, including emphasis on the extent they are needed to ensure adequate matches;
- use of establishment job descriptions and other records to assist in and confirm job matches; and
- adequate documentation of their bases for job-matching decisions, to aid reviewers and later years' data collectors.

Some of the regions made their quality control revisits near the end or shortly after the PATC survey collection period. We believe that these revisits should be conducted throughout the survey period so that problem areas can be promptly brought to the attention of data collectors for use in the current year's survey.

The BLS regional offices have been delegated the responsibility for training data collectors for PATC surveys. We believe the role of BLS Washington headquarters in this training should be expanded to strengthen data collectors' skills and to help ensure data consistency. We believe also that the training of data collectors would be enhanced by using personnel management specialists to assist in preparing PATC training materials and in conducting field training sessions, particularly those relating to interpreting and applying PATC job definitions.

Numerous independent salary surveys are conducted by various organizations. BLS should issue a policy statement and criteria to guide the regions and data collectors of the circumstances, if any, under which such salary surveys can be used in the PATC survey.

Although BLS officials believe their experience indicates that the data collection procedures are unbiased and that random errors generally balance out, they generally agreed with our comments and conclusions on the need for a response analysis program to measure nonsampling errors and the need for improvements in job matching.

## Recommendations

We recommend that the Secretary of Labor require BLS to

- establish a response analysis program to measure and report the effect on PATC results of the variables in the job-matching process and
- implement the above suggestions for providing additional guidance and training to data collectors.

We recommend also that the Secretary of Labor and the Chairman of CSC require BLS and CSC to clarify and refine the PATC job definitions and to reevaluate the suitability of retaining the research-type and attorney positions in the PATC survey.

- - - -

The Department of Labor said that the recommendations for improvements were persuasively argued and that it generally agreed with the recommendations relating to BLS activities.

The Director, OMB, and the Chairman, CSC, said that the job definitions were, in general, better than the report suggests but that there was always room for improvement. They stated that it was difficult to incorporate all possible nuances of work level distinctions in job definitions of reasonable length and that longer definitions would be self-defeating because of the difficulty in applying them carefully and accurately in survey visits. OMB and CSC stated further that, on the basis of the job definition maintenance program, they were convinced that the job definitions provided a sound basis for proper job matchings.

We believe that increases in the length of job definitions need not be extensive. In the previously mentioned typist II situation (see p. 44), for example, a statement could be inserted in either the job definition or the supplemental instructions that typing work exists above that work level.

The job maintenance program, a review of job definitions for one or more occupations each year, is carried out jointly

by a senior CSC classification specialist and a BLS representative. The team visits private enterprise establishments and discusses the survey definitions with the respondents to see if the terms are current and meaningful and are capable of producing proper job matches. CSC officials told us that the maintenance team does not systematically evaluate job matches made during the PATC survey and that finding bad matches is only by happenstance. In our opinion, analyzing job matches would provide the maintenance team with information valuable to achieving the maintenance program objectives.

The Director, OMB, and the Chairman, CSC, said that, although they were doubtful of our conclusion that research-type and attorney positions were not susceptible to being surveyed by the existing job-matching technique, they would schedule these positions for further study during the next job maintenance review.

## CHAPTER 6

### SCOPE OF REVIEW

We reviewed the design and conduct of the annual survey of private enterprise salary data. Specifically, we examined whether:

- The occupations selected for the survey were representative of the applicable Federal work force.
- The private establishments surveyed were representative of private enterprise.
- The survey universe was sufficiently broad to accomplish the basic purposes of the comparability principle.
- The survey results were sufficiently accurate for Federal pay-setting purposes.

We made our review at OMB, CSC headquarters, BLS headquarters, four BLS regional offices, and various private enterprise establishments.

Our review included an examination of pertinent legislation, policies, procedures, documents, records, studies, and reports. We also conducted interviews with OMB, CSC, and BLS officials and observed BLS representatives in their job-matching visits to 83 private establishments during the 1972 PATC survey.

1972 PATC SURVEY  
REPORT OF RESULTS

We reviewed the design and conduct of the survey of private enterprise during 1972. Specifically, we examined whether:

- The organizations selected for the survey were representative of the applicable Federal work force.
- The private establishments surveyed were representative of private enterprise.
- The survey universe was sufficiently broad to accomplish the basic purposes of the comparability principle.
- The survey results were sufficiently accurate for Federal pay-setting purposes.

We made our review at OMB, CSC headquarters, BLS headquarters, four BLS regional offices, and various private enterprise establishments.

Our review included an examination of pertinent legislation, policies, procedures, documents, records, studies, and reports. We also conducted interviews with OMB, CSC, and BLS officials and observed BLS representatives in their job-matching visits to 85 private establishments during the 1972 PATC survey.

... MAR 22 1973 ...

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

DOCUMENT AVAILABLE

Attn: Mr. Forrest R. Browne, Deputy Director  
Federal Personnel and Compensation Division

Dear Mr. Staats:

We have reviewed the draft report prepared by your office entitled "Need for improvements in design and conduct of annual survey of non-Federal salaries used as a basis for adjusting Federal white-collar salaries." As we function jointly as the President's Agent in the Federal pay comparability process, we have decided to comment jointly on the draft report.

The report in general seems to us to present a good picture of some of the questions and problems that currently face us with respect to the National Survey of Professional, Administrative Technical, and Clerical Pay (PATC Survey). We note with interest that the report recognizes the need for some of the studies which we already have underway, although the scope or magnitude of some of these current projects may need to be reexamined in the light of your findings and recommendations.

The report recommends broadening the occupational coverage of the PATC Survey at the GS-5, 7, 9, and 15 levels in order to make the occupational mix of the survey more representative of the distribution of Federal employees among occupations at those levels. We are now engaged in a study of occupational representativeness, from which we hope to be able to identify appropriate new jobs for the survey and then to begin the development and testing of additional job definitions. This, however, is a lengthy process, and it is unlikely that we will be able to add any new jobs to the survey before 1975 at the earliest (other than in one occupation, for which definitions are now undergoing preliminary testing). Any changes in the occupational coverage of the PATC Survey will, of course, have to be discussed with the Federal Employees Pay Council before any conclusions are reached or decisions made.

## APPENDIX I

In our report to the President on September 1, 1972, we indicated that we have decided to study the industry coverage of the PATC Survey as a result of our discussions with the Pay Council. This study will consist of a reevaluation of the criteria for industry coverage and a reexamination of each of the presently excluded industries. On the basis of your findings, we will also review the exclusion of non-profit institutions and state and local governments, and the question of appropriate minimum-size-of-establishment cutoffs.

We believe that the job definitions that have been developed for the PATC Survey are, in general, better than the draft report suggests, although we concede that there is always room for improvement. It is very difficult to capture all the possible nuances of work level distinctions in job definitions of a reasonable length, but longer definitions would be self-defeating because of the difficulty of applying them carefully and accurately in survey visits.

We do have a program of maintenance for the PATC job definitions. Each year the job definitions for an occupation or several occupations are carefully reviewed in visits to private enterprise establishments. Both a senior classification specialist from the Civil Service Commission and a representative from the Bureau of Labor Statistics participate in these visits, and the subject job definitions are discussed in detail with the survey respondents to see if the terms in the definitions are current and meaningful, and to see if proper job matches are being produced. Every job definition in the PATC Survey has been the subject of a maintenance review at least once in the last 8 years, and some have been reviewed as many as 3 times in that period. These reviews have convinced us that, by and large, the current job definitions do provide a sound basis for proper job matchings.

The draft report criticizes the present inclusion in the survey of the attorney occupation and research-type positions in the chemist and engineer occupations, since, the draft suggests, the jobs of these two categories of employees are highly personalized and are therefore not suitable for the job-matching process. While we are doubtful that this is in fact the case, particularly for the attorney occupation, we will schedule these two categories for study in our next maintenance review.

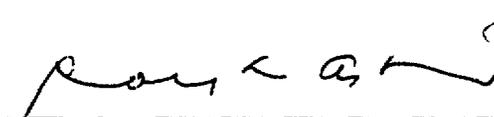
Since we note that the Department of Labor has also been asked to comment on your draft report, we do not propose to comment on those sections of the report dealing with the conduct of the PATC Survey. However, we do intend to explore with the Bureau of Labor Statistics ways in which our maintenance reviews can be made more supportive of their quality control efforts, as well as ways in which a greater input of Federal position classification expertise can be brought to the survey process.

MENT AVAIL ABLE

APPENDIX I

Your draft report repeatedly emphasizes the need for more research in various areas of the design and conduct of the PATC Survey, and we agree completely that research and policy development work must be viewed as an integral part of our role as the President's Agent in the Federal pay comparability process. However, the availability of resources always limits the amount of effort that can be devoted to research and long-range planning.

As yet, we are not in a position to estimate the total resources that would be required to expand our research and development efforts to the extent recommended in your draft report. However, it does appear that expanding our study of the PATC Survey universe and strengthening our job definition research and development programs will require significant additional expenditures.



Roy L. Ash  
Director  
Office of Management and Budget



Robert E. Hampton  
Chairman  
U.S. Civil Service Commission

**U.S. DEPARTMENT OF LABOR  
OFFICE OF THE ASSISTANT SECRETARY FOR ADMINISTRATION  
WASHINGTON**

MAR 7, 1973

Mr. George D. Peck  
Assistant Director  
Manpower and Welfare Division  
General Accounting Office  
Washington, D.C. 20548

BEST DOCUMENT AVAILABLE

Dear Mr. Peck:

Thank you for the opportunity to review and comment on the draft report to the Congress on the need for improvement in design and conduct of the annual survey of non-Federal salaries used as the basis for adjusting Federal white-collar salaries. The Department of Labor's role in the comparability process is executed by the Bureau of Labor Statistics which, as the draft report recognizes, has no responsibility for such policy decisions as the scope of the survey. We will not, therefore, evaluate those recommendations involving policy matters. We do, however, provide estimates of the costs of the recommendations to the Department.

The draft report is based on a detailed, thorough, and knowledgeable review of the comparability process. Its recommendations for improvements are persuasively argued and we would agree, generally, with those relating to the BLS controlled activities. In fact, the BLS always has been anxious to make some improvements in the survey, and we welcome the support of the General Accounting Office in securing funds to carry out these improvements. We are concerned, however, that readers of the report may question the design and quality of the survey beyond that warranted by the facts. In fact, the report supports some of its recommendations with concern for public confidence in the pay comparability process. It is this same concern that prompts a request for some acknowledgement of the general reliability of the survey within its present framework. For example, not until one reads three-fourths of the way through the report does one find the type of statement that should be an early generalization: "Our review showed that the preponderance of defini-

Mr. George D. Peck--2

tions meshed well with CSC position classification standards" (p. 53). The reader is thus informed that the deficiencies found in some definitions do not form a basis for destruction of public confidence in the survey process as a whole.

The major recommendations affecting the survey can be grouped under five major headings:

1. Broaden scope of survey to include all non-Federal sectors now excluded and add smaller establishments to all sectors.
2. Expand the occupational coverage, particularly in jobs equivalent to GS grades 5, 7, 9 and 15.
3. Improve job definitions.
4. Improve data collection and review training program.
5. Provide measures of nonsampling variability.

The first two recommendations are directed to policymakers, including the Congress if non-Federal governments are to be included. While we will not comment on the expansion recommended, it was of course necessary to make certain assumptions if we were to derive cost estimates. The assumptions attempted to define the minimum level of activity consistent with the concepts embodied in the recommendations. The estimate derived from those assumptions yields a survey approximately three times the size of the present PATC activity. The estimated cost of the first two recommendations is \$2,275,000 and 101 man-years.

Recommendation number 3 would involve both CSC and BLS in an extension and elaboration of the ongoing "job maintenance" program. The cost is estimated at \$17,000 and one position.

There is general agreement that an improved training program (number 4) must be implemented. Additional resources must be allocated for the development of training techniques and guides and a total training program commitment. The use of Federal personnel specialists in the training process will be seriously considered. The cost of the recommended training program is \$350,000 and 13 man-years.

APPENDIX II

Mr. George D. Peck--3

Finally, the recommendation for publishing measures of nonsampling variability is, as the report notes, a BLS goal. A well-designed quality measurement program is \$230,000 and 10 man-years.

The increased costs of implementing all of the recommendations are estimated at approximately \$2.9 million and an additional 125 employees. These figures represent the total increase assuming full implementation of all of the recommendations, and both the total figures as well as the ones for the individual items are subject to revision based upon a more detailed analysis of the program requirements. Obviously, such implementation would not occur simultaneously; it would have to be phased in after, as the report notes, significant testing and evaluation.

We cannot be sure whether the improvements in either program expansion or the tightening of our own procedures will yield significant differences in the pay line as now derived. However, if the improvements yield increased public confidence in the comparability process, the resources required are minuscule relative to the aggregate salaries the process supports.

Sincerely yours,



TOM KOUZES  
Deputy Assistant Secretary  
for Administration and Management

PRINCIPAL OFFICIALS RESPONSIBLE FOR THE  
ADMINISTRATION OF ACTIVITIES DISCUSSED IN THIS REPORT

Tenure of office  
From                      To

DEPARTMENT OF LABOR

SECRETARY OF LABOR:

Peter J. Brennan	Feb. 1973	Present
James D. Hodgson	July 1970	Feb. 1973

COMMISSIONER OF LABOR STATISTICS:

Ben Burdetsky (acting)	Jan. 1973	Present
Geoffrey H. Moore	Mar. 1969	Jan. 1973

OFFICE OF MANAGEMENT AND BUDGET

DIRECTOR:

Roy L. Ash	Feb. 1973	Present
Caspar W. Weinberger	June 1972	Feb. 1973
George P. Shultz	Jan. 1970	June 1972

CIVIL SERVICE COMMISSION

CHAIRMAN:

Robert E. Hampton	Jan. 1969	Present
-------------------	-----------	---------







Copies of this report are available at a cost of \$1 from the U.S. General Accounting Office, Room 6417, 441 G Street, N.W., Washington, D.C. 20548. Orders should be accompanied by a check or money order. Please do not send cash.

When ordering a GAO report please use the B-Number, Date and Title, if available, to expedite filling your order.

Copies of GAO reports are provided without charge to Members of Congress, congressional committee staff members, Government officials, news media, college libraries, faculty members and students.

**AN EQUAL OPPORTUNITY EMPLOYER**

**UNITED STATES  
GENERAL ACCOUNTING OFFICE  
WASHINGTON, D. C. 20548**

**OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300**

**POSTAGE AND FEES PAID  
U. S. GENERAL ACCOUNTING OFFICE**



**SPECIAL FOURTH-CLASS RATE  
BOOK**