

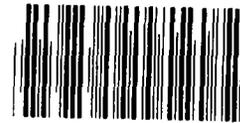
**GAO**

United States General Accounting Office 132945  
Report to the Chairman, House Committee  
on Post Office and Civil Service

May 1987

# FEDERAL PAY

## Changes to the Methods of Comparing Federal and Private Sector Salaries



132945

038873

---

---

-----  
-----



United States  
General Accounting Office  
Washington, D.C. 20548

General Government Division

B-226282

May 14, 1987

The Honorable William D. Ford  
Chairman, Committee on Post Office  
and Civil Service  
House of Representatives

Dear Mr. Chairman:

The enclosed report is in response to your December 6, 1985 request concerning changes to the methods of comparing federal and private sector salaries. It identifies recent and proposed changes to the Professional, Administrative, Technical, and Clerical Pay Survey and to the pay comparability process. It also provides information on the impact and appropriateness of these changes.

As requested by your office, we did not obtain official agency comments on this report. However, its contents were discussed with program officials who agreed with our presentation of the facts. As arranged with your office, a copy of this report will be sent to the Chairman, Subcommittee on Compensation and Employee Benefits. We are also sending copies to the Director, Office of Management and Budget, Director, Office of Personnel Management, Secretary of Labor, and other interested parties.

Sincerely yours,

*W. J. Anderson*

William J. Anderson  
Assistant Comptroller General

---

# Executive Summary

---

## Purpose

In 1986, the federal government employed about 1.5 million white-collar employees under the General Schedule at an annual salary cost of about \$38.4 billion. The President has authority to adjust salary rates for these employees annually to achieve comparability with average rates paid in the private sector for comparable work as determined by an annual Bureau of Labor Statistics survey. The President may also propose an alternative pay plan if considered appropriate because of national emergency or economic conditions affecting the general welfare. For the last 9 years alternative pay plans, providing less than amounts necessary to achieve comparability, have prevailed. While Presidents cited adverse economic impact as the reason for alternative plans, they also expressed concern over the manner in which comparable salary levels were determined. (See pp. 8 and 9.)

To improve the manner in which comparable salary levels were determined, several changes were made to broaden the annual surveys conducted in 1984, 1985, and 1986. In March 1985, the President approved a Cabinet Council on Management and Administration proposal calling for the scope of the private sector salary survey to be significantly expanded in 1987. The Chairman, House Committee on Post Office and Civil Service requested GAO to (1) identify recent and proposed changes to the survey and pay comparability determination process, (2) report on the impact of the changes on pay comparability determinations, and (3) evaluate the appropriateness of the changes. (See pp. 10 and 11.)

---

## Background

The Federal Salary Reform Act of 1962 called for federal General Schedule pay rates to be comparable to average private sector pay rates for the same levels of work. The Federal Pay Comparability Act of 1970 established the President's pay agent (the Secretary of Labor and the Directors, Office of Personnel Management and Office of Management and Budget), authorized the President to adjust salaries based on an annual survey of private sector salaries, and provided the President with authority to propose an alternative pay plan in the event of national emergency or economic conditions affecting the general welfare. (See p. 8.)

The annual Bureau of Labor Statistics survey of professional, administrative, technical, and clerical pay obtains salary data on various occupations from a sample of private sector establishments throughout the country. The pay agent uses this data to identify differences between federal and private sector salaries and determines the adjustments needed to achieve full pay comparability. In August 1986, the pay agent

reported federal employees' pay on the average lagged behind the private sector by 23.79 percent. The President proposed an alternative plan for a 2-percent increase, but Congress enacted a 3-percent increase, effective January 1987. (See pp. 9 and 10.)

---

## Results in Brief

To enhance the annual survey and pay comparability process, several changes have been implemented since 1984. These included (1) surveying additional occupations and occupational levels, (2) comparing only permanent, regular-rate employees rather than all General Schedule employees, (3) using median rather than mean salaries, and (4) obtaining data from smaller establishments and additional industries. All but one of the changes resulted in a reduction of the calculated pay gap between federal and private sector salaries. The effect of each change ranged from increasing the pay gap by 0.20 percentage points to decreasing the gap by 3.25 percentage points. (See p. 12.)

GAO believes the changes were appropriate because they improved the accuracy of pay comparability determinations by including more occupations and establishments in the survey to make it more representative of occupations and salary rates in both the federal and private sectors. Congress has directed that the annual survey be replaced with an even broader survey that would provide information on white-collar fringe benefits as well as on salaries. (See pp. 16 and 22.)

---

## Principal Findings

---

### More Occupations Surveyed

The systems analyst occupation was added because few occupations were previously surveyed in the administrative category and the survey was underrepresented in that area. Additional opportunities for matches in smaller establishments were obtained by adding the general clerk position and a purchasing assistant occupational level. The net effect of these changes is a reduction of the measured pay gap by 3.24 percentage points. (See pp. 12 and 13.)

---

### Smaller Establishments Included

Expanding the survey universe to include establishments with as few as 50 employees in 1986, instead of those with 100 or more, increased its size by 30 percent to 13.4 million white-collar workers. This reduced the

measured pay difference by 0.32 percentage points. The change however, increased the survey cost by about 55 percent (\$3.4 million to \$5.3 million). (See p. 15.)

---

**Permanent, Regular-Rate Employees**

The pay agent made a policy change in 1984 to include only permanent, regular rate employees rather than all General Schedule employees. This change reduced the pay gap by 1.20 percentage points. (See pp. 13 and 14.)

---

**Median Averages Used**

In 1984 the pay agent began calculating the pay gap using median rather than mean salary averages. This change caused the measured pay gap to decrease by 0.68 percentage points. According to the pay agent medians are less affected by salary extremes and thus better depict the center of the salary distribution. (See p. 14.)

---

**1987 Survey Plans Revised**

It was originally planned that detailed salary data from state and local governments would be obtained and used to broaden the comparison base. However, because of congressional restrictions, only general information on state and local salary schedules and pay-setting procedures will be gathered; this information will not be used in the pay comparability determinations. Other changes planned for the 1987 survey were implemented including expanding the survey to new service industries, to establishments with as few as 20 employees, and using the Employment Cost Index to update previously collected salary data. (See pp. 18 to 21.)

---

**Annual Survey's Future Uncertain**

The House and Senate Appropriations Committees, acting on the Department of Labor's fiscal year 1987 budget request, directed the Bureau of Labor Statistics to develop a national white-collar salary and benefits survey. The Committee requested that the survey both serve the needs of the President's pay agent and provide comprehensive information on white-collar compensation in the economy. (See p. 22.)

---

**Recommendations**

This report provides GAO's analysis of the survey and pay comparability process; it contains no recommendations.

---

**Agency Comments**

GAO did not request official agency comments on a draft of this report. Office of Personnel Management and Bureau of Labor Statistics officials involved in the pay determination process informally reviewed the report and generally agreed with the information presented.

# Contents

---

<b>Executive Summary</b>		2
<hr/>		
<b>Chapter 1</b>		8
<b>Introduction</b>	Pay Comparability Process	8
	Less Than Comparable Increases Have Been Granted	9
	Significant Survey Expansion Approved by President	10
	Objectives, Scope, and Methodology	10
<hr/>		
<b>Chapter 2</b>		12
<b>Recent Changes</b>	Adding Occupations Makes Survey More Representative	12
<b>Improved the Pay</b>	Restricting Comparison to Permanent, Regular-Rate Employees	13
<b>Comparability Process</b>	Change From Mean to Median Salaries	14
	Reducing Establishment Size Produces Few Additional Matches	15
	Conclusions	16
<hr/>		
<b>Chapter 3</b>		18
<b>Further Expansion of the Survey Will Not Be Fully Implemented</b>	Expansion Includes Additional Service Industries	18
	State and Local Governments	19
	Minimum Establishment Size Reduced to 20 Employees	20
	Survey Data Updated Using the Employment Cost Index	20
	PATC Survey's Future Is Uncertain	22
	Conclusions	22
<hr/>		
<b>Appendix</b>	Appendix I: Comparison of 1986 Federal and Private Sector Salaries by the Pay Agent	24
<hr/>		
<b>Table</b>	Table 2.1: Effect on Pay Comparability Gap of Changes Implemented During 1984 to 1986	12
<hr/>		
<b>Figure</b>	Figure 3.1: Comparative Increases in PATC and Employment Cost Index	21

---

**Abbreviations**

BLS	Bureau of Labor Statistics
ECI	Employment Cost Index
GAO	General Accounting Office
GS	General Schedule
OPM	Office of Personnel Management
PATC	Professional, Administrative, Technical, and Clerical Pay Survey

# Introduction

---

The concept of comparability—that federal employee salary rates be based on average private sector rates for similar levels of work—is contained in the Federal Salary Reform Act of 1962.<sup>1</sup> This concept was reaffirmed by the Federal Pay Comparability Act of 1970<sup>2</sup> which transferred responsibility for adjusting these pay rates from Congress to the President. In 1986 about \$38.4 billion in salaries was paid to about 1.5 million federal white-collar employees under the General Schedule (GS).<sup>3</sup>

Since 1960, the Department of Labor's Bureau of Labor Statistics (BLS) has conducted an annual Professional, Administrative, Technical, and Clerical (PATC) pay survey of private sector salaries. The survey was designed to be used to identify specific differences between federal and private sector salaries in comparable occupations and work levels in order to determine the salary adjustments necessary to achieve comparability.

---

## Pay Comparability Process

The Federal Pay Comparability Act of 1970 established the President's pay agent—currently the Director, Office of Personnel Management (OPM), the Director, Office of Management and Budget, and the Secretary of Labor—to be responsible for determining the adjustments needed to achieve federal white-collar salary comparability. The pay agent also specifies the industries to be studied, the minimum size of establishments, and the specific occupations and levels to be matched in the PATC survey.

OPM on behalf of the pay agent analyzes the survey results and develops a federal payline—a series of rates, with one rate for each General Schedule grade—to reflect the average rates of pay in the private sector. OPM determines the difference between average federal and private sector salaries at each grade and provides the pay agent with the new General Schedule pay rates that would be required to provide full comparability.

---

<sup>1</sup>Public Law 87-793, 76 Stat p 841

<sup>2</sup>Public Law 91-656, 84 Stat p 1946

<sup>3</sup>The pay levels of other statutory pay systems are linked to the General Schedule. These include the Foreign Service schedule and the schedules for certain positions in the Veterans Administration's Department of Medicine and Surgery. In addition, certain other pay systems normally adjusted in relation to General Schedule adjustments include the Executive Schedule, Senior Executive Service, Senior Foreign Service, United States Park Police, Secret Service Uniformed Division, as well as several agency pay systems which administratively adopt the General Schedule. Wage rates of federal blue-collar employees are adjusted on the basis of separate area wage surveys.

After considering the pay agent's findings and recommendations (as well as those of the Federal Employees Pay Council representing employee organizations, the Advisory Committee on Federal Pay representing third party expertise in labor relations and pay policy and other interested parties), the President can adjust salary rates for federal white-collar employees to make them comparable with private sector salary rates. Alternatively, the President has authority under the Pay Comparability Act to propose an alternative pay plan when he believes such action is appropriate because of national emergency or economic conditions affecting the general welfare. Such a pay plan goes into effect automatically unless the Congress disapproves it within 30 days

---

## PATC Survey

In 1986, the PATC survey covered 26 separate occupations and 112 occupational work levels within the 15 salary grades in the professional, administrative, technical, and clerical categories. The number of levels within each occupation varied from 1 for messengers to 8 levels for engineers. Approximately 156,000 establishments—an economic unit that produces goods or services—were included in the 1986 survey universe and about 4,700 establishments were actually visited. These establishments were selected from the most recently available state unemployment insurance reports, updated with known changes, and stratified. The establishments in the universe employed about 33.5 million workers of which 40 percent were professional, administrative, technical, and clerical.

---

## Less Than Comparable Increases Have Been Granted

In every year since 1977, Presidents have proposed, and Congress has agreed to, salary adjustments for federal white-collar employees at lesser amounts than required to achieve comparability with the private sector as determined by the pay agent. Presidents have cited "national emergency" and "economic conditions affecting the general welfare" as the reasons why alternative pay plans have been proposed. But other reasons have also been cited for rejecting the pay agent's findings. In the 1984 report the pay agent itself questioned the pay comparability process and said that although the principle of pay comparability is a "reasonable and desirable goal" its "implementation is in serious need of modification." The 1984 and later reports further said the methodology used resulted in "unrealistic estimates of the gap between federal and private sector pay." Among the problems cited were (1) the exclusion of smaller establishments, state and local governments, and certain service organizations from the survey and (2) the limited number of occupations compared.

As a result of not implementing the pay agent's comparability determinations, the difference as measured by the PATC survey between federal and private sector salaries grew to 23.79 percent in August 1986. The vast majority of the 1986 pay gap (over 19 percentage points) was due to prior adjustments that were previously withheld, while a much smaller amount (about 4 percentage points) occurred in 1986. Despite the PATC survey's indication of a widening gap between private and federal sector salaries, federal white-collar employees received no increase during calendar year 1986. The President proposed a 2-percent salary adjustment effective January 1987, but Congress increased the adjustment to 3 percent. Even with the pay increase the pay gap remained above 20 percent.

## Significant Survey Expansion Approved by President

Believing that the PATC survey produced unrealistically high pay estimates that did not reflect major segments of the economy, the Cabinet Council on Management and Administration proposed certain changes which were approved by the President on March 7, 1985. The changes include:

- expanding the PATC survey to include smaller establishments with as few as 20 workers in all industries (at that time minimum establishment size was 50, 100, or 250 workers depending on the industry);
- including additional service industries and nonprofit organizations not previously surveyed such as hotels and hospitals; and
- surveying state and local governments and seeking legislation for inclusion of these salaries in the comparability determination.

## Objectives, Scope, and Methodology

We undertook our review at the request of the Chairman, House Committee on Post Office and Civil Service. We were requested to review changes implemented and proposed in the Bureau of Labor Statistics PATC survey and to evaluate their appropriateness and impact on pay comparability determinations. For this review, we considered a change to be appropriate if it broadened the scope of the survey to make it more representative of occupations in the federal and private sectors and/or made pay comparability determinations more accurate.

Many changes have been made to the PATC survey since it began in 1960. In this report we concentrated on changes made beginning with the 1984 survey because (1) we have reviewed the survey several times prior to 1984, (2) the Committee was interested in recent changes, and (3) major changes in OPM's data system in 1984 preclude meaningful comparison

of survey results with 1983 and earlier years. Also, our review was limited to the changes to the survey and pay-setting process and did not include an evaluation of the survey and pay determination process as a whole.

We performed our work between February and October 1986, at the Washington, D.C. headquarters of BLS and OPM. At BLS we interviewed agency officials responsible for the PATC survey and obtained information on their role in the comparability process. We reviewed the annual PATC surveys and pay agent reports from 1970-1986. At OPM we interviewed agency officials responsible for developing the statistical model used to produce the payline, identified their roles in the pay process, and obtained the 1984 to 1986 payline computations. We identified changes by reviewing the annual pay agent reports and through discussions with OPM and BLS officials. We compared the OPM Central Personnel Data File reports on federal salary and employment levels to data used in the OPM computations to ensure that they agreed. We did not, however, verify the accuracy of the Central Personnel Data File itself. We also used a standard statistical computer program to replicate OPM's payline calculations. We were able to reproduce all of OPM's tables and we found their computations to be correct. Our work was conducted in accordance with generally accepted government auditing standards.

# Recent Changes Improved the Pay Comparability Process

Between 1984 and 1986 a number of changes were implemented which affected both the PATC survey and the manner in which the payline is determined. These changes included: adding occupations and occupational levels to the survey; limiting the comparability analysis to permanent regular-rate employees; comparing median rather than mean salary averages; and expanding the survey to include establishments with as few as 50 employees.

We found the changes to be appropriate because they broadened the scope of the survey to make it more representative of occupations in the federal and private sectors and made pay comparability determinations more accurate. Table 2.1 identifies the changes implemented between 1984 and 1986 and the effect of each change on the results of the comparability process. All but one of the changes resulted in a reduction of the calculated gap between federal and private sector salaries.

**Table 2.1: Effect on Pay Comparability Gap of Changes Implemented During 1984 to 1986**

	1984	1985	1986
Limitation to permanent, regular rate positions	-1 20		
Use of median rather than mean salary averages	-0 68		
Addition of systems analyst position at the GS-9 to GS-14 level	-3 25		
Addition of systems analyst position at the GS-15 level		- 18	
Expansion of survey to cover establishments with as few as 50 employees			- 32
Addition of general clerk position at the GS-1 to GS-4 level			+ 20
Addition of purchasing assistant position at the GS-3 level			- 01

## Adding Occupations Makes Survey More Representative

Since the start of the PATC survey in 1960, the pay agent has periodically added occupations and occupational levels to make the survey more representative of employment in both the federal and private sectors. Between 1984 and 1986 the pay agent directed BLS to add 2 occupations and 11 occupational levels (6 levels of systems analyst, 4 levels of general clerk, and 1 additional level of purchasing assistant) to further broaden the survey's scope and make it more representative of federal occupations. These additions raised the total number of occupations used in the 1986 pay survey to 26, and the total number of occupational levels to 112. By comparison the March 1977, survey used 19 occupations and 78 occupational levels. Appendix I identifies the specific occupations and occupational (position) levels used in 1986.

The systems analyst occupation was added because few occupations were previously surveyed in the administrative category and the survey

was underrepresented in that area. Adding the systems analyst occupation reduced the measured pay difference by 3.25 percentage points in 1984 and an additional 0.18 percentage points in 1985. The effect in 1984 was sizeable because few jobs were previously matched in the administrative category, the salary level was low, and the new lower rates therefore carried significant weight. The addition of the systems analyst occupation increased the total number of GS-13 administrative positions in the 1984 survey from 535 to 6,627 and at the GS-14 level from 314 to 2,691. Previously only 1 occupation was surveyed in the administrative category at these grade levels. In addition, the average private sector pay for systems analysts was one of the lowest salaries in comparison to other occupations surveyed at the GS-9 and higher grade levels in 1984 and 1985.

General clerk positions at grades GS-1 through GS-4 were added in 1986 in order to make matches with employees in similar positions at the smaller establishments (employing a total of 50 or more) in the private sector which were visited for the first time in 1986. This addition increased the measured pay gap by 0.20 percentage points. General clerks in the private sector were paid higher salaries than employees in other occupations equivalent to the GS-4 level and the large number of individuals occupying that position resulted in the increase to the pay gap.

The purchasing assistant position at the GS-3 level was also added in 1986 to match positions primarily at the smaller establishments. This addition reduced the measured difference between federal and private sector salaries by 0.01 percentage points.

---

## Restricting Comparison to Permanent, Regular-Rate Employees

In 1984, the pay agent directed that only the salaries of permanent, regular-rate employees would be used in the comparison in order to improve the pay determination process by limiting comparisons to those employees actually occupying a position at the General Schedule rate on a regular basis. The pay agent stated in the 1984 report that since the objective of the comparability process is to develop new General Schedule salary rates, those employees who are not on regular-rates were eliminated from the comparison. These employees included individuals such as temporary workers, workers on special pay rates, and employees who are downgraded but temporarily receive a salary equivalent to their prior grade or salary level. Inclusion of these types of employees caused improper weighting of the federal salary data.

Special rate employees may receive as much as 30 percent higher salaries than other employees at the same grade levels. This is because their salary levels have been determined to be so substantially below private sector salaries that recruitment and retention of well-qualified persons is severely handicapped. Special pay rates are approved by OPM for occupations either on a nation-wide basis, such as for engineers at the GS-5 to GS-11 levels, or for employees in specific occupations in designated geographic areas, such as for nurses or secretaries.

Special rate salaries are set separately from General Schedule rates. OPM conducts an annual review of all special rate authorizations, and makes any adjustments it feels are required. In some years, special rate employees may not receive an increase when General Schedule rates are increased, while in other years, special rate employees may receive an increase not granted to other employees.<sup>4</sup>

The elimination of other than permanent, regular-rate employees from the comparison resulted in a 1.20 percentage point reduction in the pay gap. The majority of this percentage change resulted from the elimination of GS-5 to GS-11 engineer positions which were the highest paid federal occupations surveyed at those grade levels in 1984, but who were even more highly paid in the private sector.

---

## Change From Mean to Median Salaries

Until 1984, arithmetical mean salaries were used in comparing federal and private sector salaries. In 1984, the pay agent directed that median salaries be used. The pay agent's 1984 report said median rather than mean salaries were used to better accommodate the wide salary variations in the survey where the highest private sector rates for an occupational level were often more than twice as large as the lowest rates. The pay agent said medians are less affected by such extremes than means.

We reviewed the mean and median salaries used in the 1984 survey and found that the private sector mean salaries were higher than the median salaries in 95 of the 105 occupational levels surveyed in that year. The use of median salaries caused the 1984 pay difference to be reduced by 0.68 percentage points.

---

<sup>4</sup>For more information on the special rate program, see Federal White-Collar Special Rate Program (GAO/GGD-84-54, Mar 30, 1984)

---

## Reducing Establishment Size Produces Few Additional Matches

As a result of the President's approval of the Cabinet Council on Management and Administration's recommendations, the pay agent expanded the 1986 survey to include establishments of 50 employees or more. With the exception of establishments in the accounting, auditing, and bookkeeping service industry (which previously had a minimum employment level of 50), establishments in previous surveys all had minimum employment levels of either 100 or 250 employees.

The change increased the projected survey universe by 30 percent to a total of about 13.4 million private sector professional, administrative, technical, and clerical workers. This increased the cost of conducting the survey by about 55 percent (from \$3.4 million to \$5.3 million). While the number of establishments in the expanded survey universe more than tripled from about 43,000 in 1985 to about 156,000 in 1986, the number of job matches found in the survey sample (3,209 in 1985 and 4,717 in 1986) decreased from an average of 45 per establishment before the change in 1985 to 15 in 1986 after the expansion. This decrease occurred because on average only 3 matches were found in the smaller establishments.

The expansion significantly increased the number of clerical matches. About two-thirds of all workers matched in the smaller establishments were clerical employees while about one-third of the matches in the larger pre-expansion survey establishments were clerical employees. In total, about 15 percent of all matches in the 1986 survey were found in the new smaller establishments which accounted for about 70 percent of all establishments in the survey.

On average, salaries of employees in the new smaller establishments employing 50 or more workers were less than 10 percent lower than salaries in the larger pre-expansion establishments. A BLS analysis of the expansion showed that the lower salaries did not produce pay levels much different from previous pay levels because a much larger number of employees were matched in the larger establishments. As a result of the expansion the calculated gap between average federal and private sector pay was reduced by 0.32 percentage points.

---

## Conclusions

We believe that the occupations and occupational levels that were added improved the survey by broadening it and thus making it a more complete measure of the difference between federal and private sector white-collar salaries. The systems analyst occupation provided an additional occupation in the administrative category which was previously

underrepresented. Addition of the general clerk and purchasing assistant positions, while having little effect on the results of the survey, provided additional opportunity to obtain matches in the smaller establishments. While the expansion to smaller establishments significantly increased the number of establishments visited, this change made very little difference in the overall results of the survey.

We agree with the pay agent that comparing salary data using medians is appropriate because medians are less affected by salary extremes and thus better depict the center of salary distribution. We also agree with the policy change to exclude from the comparison temporary and downgraded employees because their salaries are not permanent or typical. Excluding special rate employees has merit because their salaries are determined by other means. However, over time this practice could cause the survey to become less and less representative of the federal workforce for which it was intended to set rates. The trend towards lower federal salaries, relative to those in the private sector, may result over time in more special rates. This would in turn cause more groups of employees to be excluded from the survey



# Further Expansion of the Survey Will Not Be Fully Implemented

The pay agent planned to further expand and change the PATC survey in 1987. In addition to adding five new occupations, the 1987 survey was to:

- include service and nonprofit establishments in the survey (only a few service industries were previously in the survey scope);
- obtain salaries from state and local government establishments (this data would be gathered for information purposes only since the Salary Reform Act prohibited the inclusion of such salaries in the payline);
- expand survey coverage to establishments with as few as 20 employees; and
- use the BLS Employment Cost Index (ECI) to update salary data collected in the 1986 survey (visits to these establishments would not be made in 1987 because of the large expansion to service and government establishments).

Congress did not provide the \$2.062 million that the Department of Labor requested to carry out the expansion. As a result BLS is not gathering specific salary data from state and local governments. It is, however, gathering general information such as salary schedules and pay setting procedures but such data will not be used in the comparability process. BLS was also able to survey the service and nonprofit establishments and lower the establishment size criterion as planned because of the funds saved by using the ECI, in lieu of visits, to update the 1986 salary data. Instead of funding the expansion, the House and Senate appropriations committees recommended that (1) the PATC survey be phased out of existence, (2) the additional requested \$2.062 million be used to support a new national white-collar salary and benefit survey, and (3) BLS report to Congress by August 1987 on the new survey's scope and how the survey will be used by the pay agent.

## Expansion Includes Additional Service Industries

The 1987 survey includes additional service industries and nonprofit organizations not previously covered such as those providing health, social and educational services, museums and art galleries, and membership organizations. The pay agent believes this expansion will identify a large number of jobs which can be matched with a significant number in the federal service. In addition three new occupations not previously surveyed (registered and licensed practical nurses and nursing assistants) were added to the survey in anticipation of obtaining additional job matches

As long ago as 1973<sup>5</sup> we endorsed such expansion, saying:

“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.”

According to the January 1987 BLS Employment and Earnings Report, the number of employees in service industries increased by about 200 percent over the last 25 years from approximately 7.4 million in 1960 to about 22 million in 1985. In comparison, employment in manufacturing industries (one of the major industries previously surveyed) increased over the same period by only about 15 percent, from 16.8 million to 19.3 million employees. Adding nurses and nursing assistants to the survey should increase the federal coverage by over 35,000 positions.

## State and Local Governments

Although the law prohibits including state and local government salary data in the comparability process, the pay agent and BLS planned to gather specific salary data in the 1987 survey from about 1500 state and local governmental units to show the effect on the pay difference if such data were included. However, as a result of the appropriations' committees instructions, BLS will only gather general information on how salaries are set by state and local governments, rather than the specific salary data.

As we have reported in the past,<sup>6</sup> we believe state and local government employees should be included in the comparability process because they are a significant portion of the country's workforce and have grown over the years. A BLS Employment and Earnings Report shows that, in 1960, about 6.1 million workers or about 11 percent of the national work force, were employed in state and local governments. By 1985, about 13.5 million workers were employed by state and local governments, representing 14 percent of the total national work force. Further, over the years labor management agreements have become increasingly

<sup>5</sup> Improvements Needed In The Survey Of Non-Federal Salaries Used As Basis For Adjusting Federal White-Collar Salaries (B-167266, May 11, 1973).

<sup>6</sup> Improvements Needed In The Survey Of Non-Federal Salaries Used As Basis For Adjusting Federal White-Collar Salaries, (B-167266, May 11, 1973 ), Federal Compensation Comparability Need For Congressional Action (FPCD-78-60, July 21, 1978), and Proposal To Lower The Federal Compensation Comparability Standard Has Not Been Substantiated (FPCD-82-4, Jan 26, 1982)

important in setting state and local government salaries in a manner similar to private industry salaries.

---

### Minimum Establishment Size Reduced to 20 Employees

Beginning in 1987, the PATC survey universe was further expanded to include establishments that employ as few as 20 employees. Previously the survey's minimum establishment size was 50 employees in 1986 and 50, 100, or 250 (depending on the industry) in 1985, and before.

As discussed in chapter 2, the expansion to establishments with as few as 50 employees in 1986 increased the cost of the survey by about \$1.9 million but had a negligible effect on the payline because the smaller firms had fewer job matches compared to those in the larger establishments (average of 43 job matches at pre-expansion establishments versus three at the new, small establishments).

---

### Survey Data Updated Using the Employment Cost Index

BLS estimated in 1985 that a fully expanded PATC survey—with the new service and nonprofit establishments, establishments with as few as 20 employees, and state and local governments—would increase the survey universe to 69 million workers. In an effort to reduce the number of establishment visits this would require, BLS proposed using the ECI to update salary data collected the previous year. The ECI is a principal federal economic indicator that measures changes in compensation levels for all occupations in the non-farm economy. It includes state and local governments but excludes the federal government. As proposed by BLS, PATC survey data collectors would visit establishments representing selected industries in one year, and establishments representing other industries in the alternate year. Salary information for the establishments visited in the prior year would be updated using the ECI.

As stated in our 1981 report,<sup>7</sup> we believe it is unnecessary to do a full-scale PATC survey annually, and the ECI appears to be a valid update measure for the pay agent to use. In a 1982 report<sup>8</sup> and in 1986 testimony<sup>9</sup> we reiterated our position that the ECI should be used to update

---

<sup>7</sup>Federal Pay-Setting Survey Could Be Performed More Efficiently (FPCD-81-50, June 23, 1981)

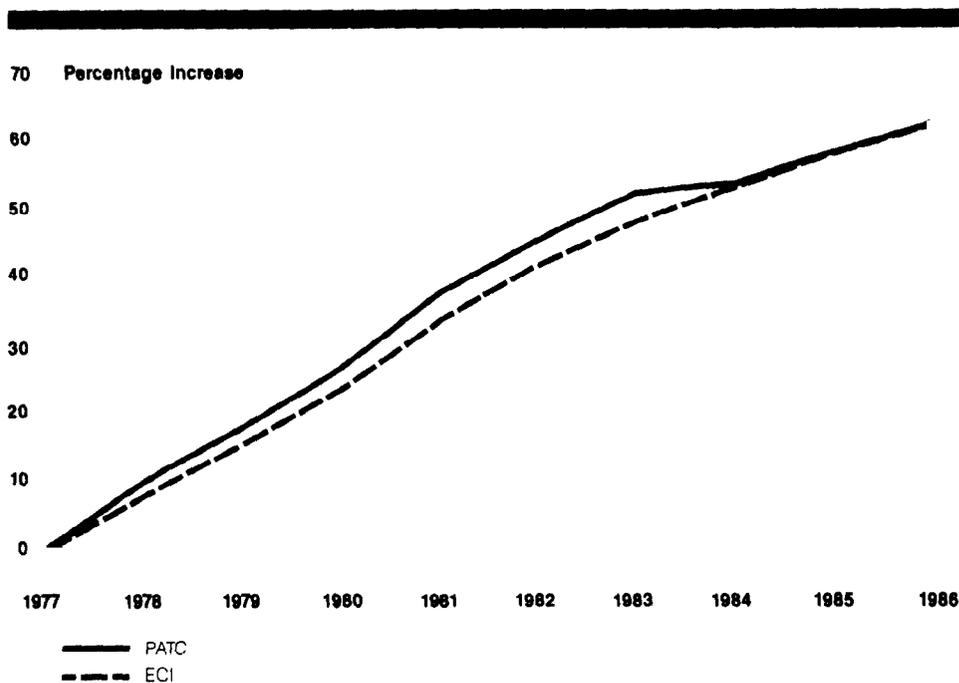
<sup>8</sup>Additional Improvements Needed in the National Survey of Professional, Administrative, Technical, and Clerical Pay (FPCD-82-32, Apr 5, 1982)

<sup>9</sup>Statement of Rosslyn S. Kleeman, Associate Director, General Government Division, Before the Subcommittee on Compensation and Employee Benefits, Committee on Post Office and Civil Service, House of Representatives, on Federal Pay (Mar 19, 1986)

private sector salary information rather than visiting every establishment annually. The same position was held in a 1975 report by the President's Panel on Federal Compensation<sup>10</sup> and in a 1979 report by the Advisory Committee on Federal Pay<sup>11</sup> which supported under appropriate circumstances less frequent PATC surveys and interim salary adjustments based on a BLS index of the average change in national white-collar pay rates.

To test the usefulness of the ECI as an alternative to annual PATC surveys, we compared the average annual salary increases shown by the ECI and PATC surveys. We found that the results of the two surveys closely parallel each other. As shown in figure 3.1, private sector salaries measured by the PATC survey increased by 61.69 percent from 1977 to 1986 compared to a 61.61 percent increase in private sector salaries measured by the ECI.

Figure 3.1: Comparative Increases in PATC and Employment Cost Index



<sup>10</sup>Report to the President of the President's Panel on Federal Compensation (Rockefeller Report) December 2, 1975

<sup>11</sup>Eight Years of Federal White-Collar Pay Comparability, by the Advisory Committee on Federal Pay, June 29, 1979

---

## PATC Survey's Future Is Uncertain

The President's fiscal year 1987 budget requested about \$5.5 million for the Department of Labor to carry out the 1987 PATC survey, about \$3.409 million for the survey as previously designed, and an additional \$2.062 million for the planned expansion. Both the House and Senate Appropriations Committees denied Labor's request for \$2.062 million for the expansion. The Committees want to replace the PATC survey with a national white-collar survey of fringe benefits as well as salaries and including state and local governments and small businesses. The House Committee said the white-collar work force is the fastest growing segment of U.S. workers, and the lack of data on their compensation was a serious statistical weakness. They directed that the funds requested by BLS to expand the PATC be used instead to design a new survey that provides general information on the levels of compensation of all segments of the white-collar work force. They also directed that the new survey meet the needs of the federal pay agent.

The Committees approved the additional \$2.062 million to begin the planning, testing, and implementation of the new survey. The House Committee report also requested BLS to provide Congress by August 1987 with a plan for implementing the new survey. The Committees added that any fiscal year 1987 expansion could still take place, but funding should come from other agencies like it did for the 1986 survey expansion. As a result of the Committees' actions, only general information about state and local government salaries will be collected in the 1987 survey. All other 1987 changes previously planned are being implemented.

---

## Conclusions

We believe that the PATC survey provides a sound basis for comparing government and private sector salaries, and that the many changes that have been made to the survey over the years have substantially improved its precision. We also believe that BLS's original plans for the 1987 survey—to include new industries and state and local governments, and to use the ECI to update a portion of the data—were generally appropriate. The additional coverage would provide a broader base for comparing federal and private sector salaries, and use of the ECI would increase BLS efficiency and reduce the burden on the private sector to supply survey information.

Because the decrease in establishment size to 50 employees added relatively few matches in 1986 and had no significant effect on the calculated payline, the further drop to 20 in 1987 may not be cost effective,

---

**Chapter 3**  
**Further Expansion of the Survey Will Not Be**  
**Fully Implemented**

---

despite the additional coverage achieved. If this is the case, the desirability of continuing to survey the smaller establishments will need to be reconsidered.

# Comparison of 1986 Federal and Private Sector Salaries by the Pay Agent

Grade	Position surveyed	Equivalent GS job series	Median private sector salary	Median federal salary
<b>GS-1</b>	File Clerk I	GS-305	\$10,108	
	General Clerk I	GS-303	10,200	
	Messenger	GS-302	11,340	
	<b>Weighted median salary</b>		<b>10,356</b>	<b>\$9,339</b>
<b>GS-2</b>	Drafter I	GS-818	12,999	
	Accounting Clerk I	GS-525 <sup>a</sup>	11,995	
	File Clerk II	GS-305	11,495	
	General Clerk II	GS-303	12,167	
	Key Entry Operator I	GS-356	12,583	
	Typist I	GS-322	12,252	
	<b>Weighted median salary</b>		<b>12,342</b>	<b>10,501</b>
<b>GS-3</b>	Drafter II	GS-818	15,599	
	Engineering Technician I	GS-802 <sup>a</sup>	16,557	
	Accounting Clerk II	GS-525 <sup>a</sup>	14,247	
	File Clerk III	GS-305	15,060	
	General Clerk III	GS-303	14,994	
	Key Entry Operator II	GS-356	16,119	
	Personnel Clerk/Assistant I	GS-203	14,091	
	Purchasing Assistant I	GS-1106	13,519	
	Stenographer I	GS-312	18,139	
	Typist II	GS-322	16,008	
<b>Weighted median salary</b>		<b>15,746</b>	<b>11,840</b>	
<b>GS-4</b>	Accounting Clerk III	GS-525	17,471	
	Computer Operator I	GS-332	13,495	
	Drafter III	GS-818	19,980	
	Engineering Technician II	GS-802 <sup>a</sup>	19,992	
	Personnel Clerk/Assistant II	GS-203	16,200	
	Photographer I	GS-1060	15,972	
	Accounting Clerk III	GS-501 <sup>a</sup>	17,471	
	General Clerk IV	GS-303	18,624	
	Purchasing Assistant II	GS-1106	16,639	
	Secretary I	GS-318	15,599	
	Stenographer II	GS-312	22,152	
	<b>Weighted median salary</b>		<b>17,364</b>	<b>14,149</b>

**Appendix I  
Comparison of 1986 Federal and Private  
Sector Salaries by the Pay Agent**

<b>Grade</b>	<b>Position surveyed</b>	<b>Equivalent GS job series</b>	<b>Median private sector salary</b>	<b>Median federal salary</b>
<b>GS-5</b>	Accountant I	GS-510	\$20,892	
	Auditor I	GS-511	21,491	
	Chemist I	GS-1320	22,391	
	Buyer I	GS-1102	20,992	
	Job Analyst I	GS-221	22,091	
	Programmer I	GS-334	20,992	
	Accounting Clerk IV	GS-525	21,192	
	Buyer I	GS-1105	20,992	
	Computer Operator II	GS-332	16,893	
	Drafter IV	GS-818	24,461	
	Engineering Technician III	GS-802 <sup>a</sup>	23,669	
	Personnel Clerk/Assistant III	GS-203	19,447	
	Photographer II	GS-1060	22,991	
	Accounting Clerk IV	GS-501 <sup>a</sup>	21,192	
	Purchasing Assistant III	GS-1106	22,046	
	Secretary II	GS-318	17,820	
	<b>Weighted median salary</b>		<b>19,179</b>	<b>\$16,310</b>
<b>GS-6</b>	Computer Operator III	GS-332	20,992	
	Personnel Clerk/Assistant IV	GS-203	22,982	
	Purchasing Assistant IV	GS-1106	28,200	
	Secretary III	GS-318	20,492	
		<b>Weighted median salary</b>		<b>22,066</b>
<b>GS-7</b>	Accountant II	GS-510	24,990	
	Auditor II	GS-511	25,490	
	Chemist II	GS-1320	26,989	
	Public Accountant I	GS-512	20,488	
	Buyer II	GS-1102	25,998	
	Job Analyst II	GS-221	24,014	
	Programmer II	GS-334	24,490	
	Buyer II	GS-1105	25,998	
	Computer Operator IV	GS-332	24,140	
	Drafter V	GS-818	30,489	
	Engineering Technician IV	GS-802 <sup>a</sup>	28,158	
	Photographer III	GS-1060	26,264	
	Secretary IV	GS-318	23,478	
	<b>Weighted median salary</b>		<b>25,643</b>	<b>20,200</b>

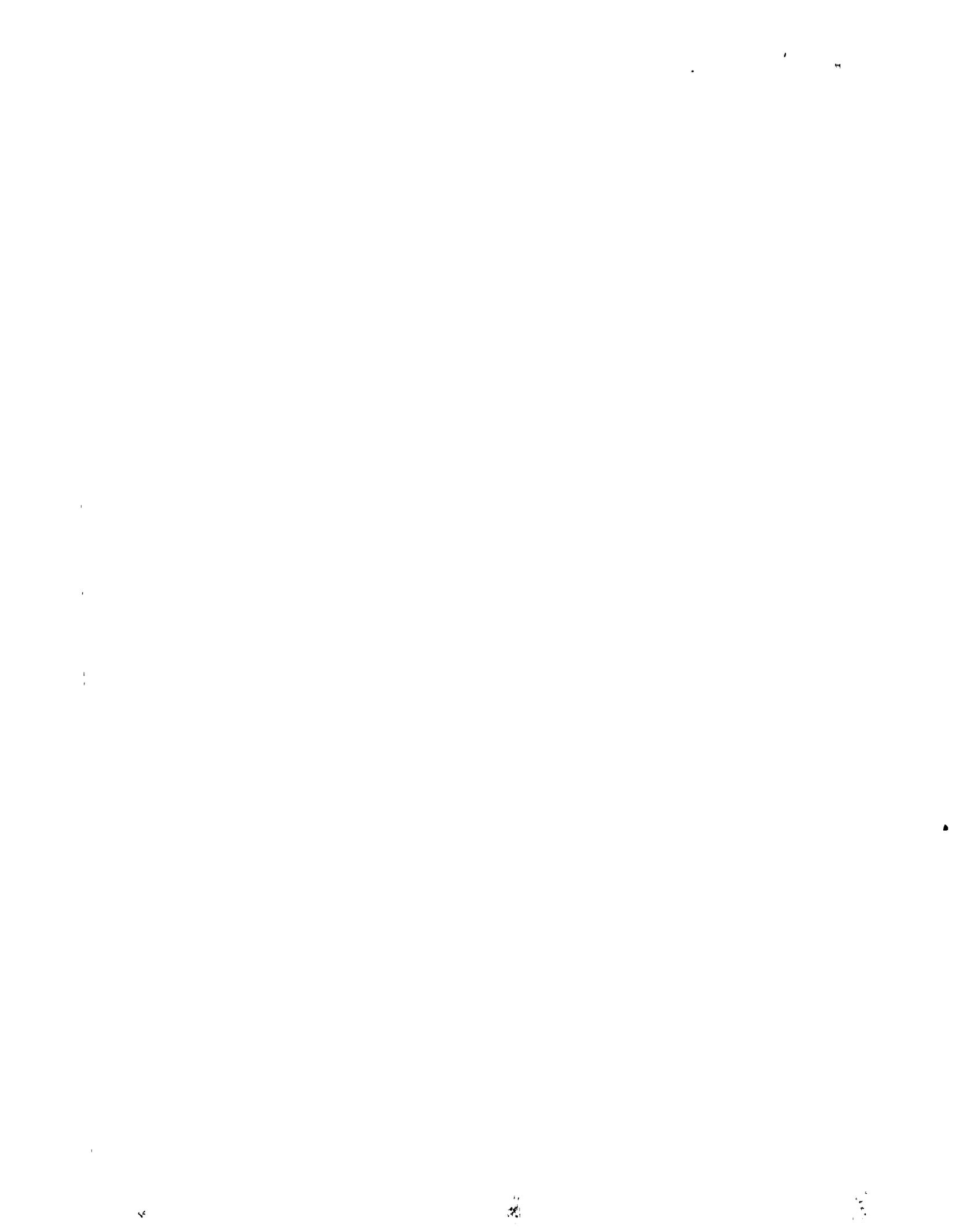
**Appendix I  
Comparison of 1986 Federal and Private  
Sector Salaries by the Pay Agent**

<b>Grade</b>	<b>Position surveyed</b>	<b>Equivalent GS job series</b>	<b>Median private sector salary</b>	<b>Median federal salary</b>
<b>GS-8</b>	Computer Operator V	GS-332	\$29,112	
	Secretary V	GS-318	27,389	
	<b>Weighted median salary</b>		<b>28,710</b>	<b>\$23,030</b>
<b>GS-9</b>	Accountant III	GS-510	30,488	
	Attorney I	GS-905	30,304	
	Auditor III	GS-511	31,887	
	Chemist III	GS-1320	33,487	
	Public Accountant II	GS-512	22,479	
	Buyer III	GS-1102	32,820	
	Job Analyst III	GS-221	29,188	
	Programmer III	GS-334	29,118	
	Systems Analyst I	GS-334	28,800	
	Engineering Technician V	GS-802 <sup>a</sup>	32,400	
	Photographer IV	GS-1060	31,212	
	<b>Weighted median salary</b>		<b>30,472</b>	<b>23,985</b>
	<b>GS-11</b>	Accountant IV	GS-510	38,984
Attorney II		GS-905	39,000	
Auditor IV		GS-511	38,984	
Chemist IV		GS-1320	41,220	
Public Accountant III		GS-512	25,992	
Buyer IV		GS-1102	40,870	
Job Analyst IV		GS-221	37,082	
Personnel Director I		GS-201	38,400	
Programmer IV		GS-334	34,860	
Systems Analyst II		GS-334	34,886	
Photographer V		GS-1060	34,109	
<b>Weighted median salary</b>			<b>35,243</b>	<b>29,018</b>
<b>GS-12</b>	Accountant V	GS-510	\$48,300	
	Attorney III	GS-905	48,980	
	Chemist V	GS-1320	50,380	
	Chief Accountant II	GS-510	48,000	
	Engineer V	GS-800 <sup>a</sup>	50,436	
	Public Accountant IV	GS-512	31,487	
	Personnel Director II	GS-201	46,560	
	Programmer V	GS-334	43,344	
	Systems Analyst III	GS-334	41,400	
<b>Weighted median salary</b>		<b>44,154</b>	<b>\$35,83</b>	

**Appendix I**  
**Comparison of 1986 Federal and Private**  
**Sector Salaries by the Pay Agent**

<b>Grade</b>	<b>Position surveyed</b>	<b>Equivalent GS job series</b>	<b>Median private sector salary</b>	<b>Median federal salary</b>
<b>GS-13</b>	Accountant VI	GS-510	\$60,600	
	Attorney IV	GS-905	62,975	
	Chemist VI	GS-1320	60,900	
	Chief Accountant III	GS-510	61,812	
	Engineer VI	GS-800 <sup>a</sup>	58,568	
	Personnel Director III	GS-201	61,975	
	Systems Analyst IV	GS-334	48,381	
	<b>Weighted median salary</b>		<b>54,231</b>	<b>\$43,238</b>
<b>GS-14</b>	Attorney V	GS-905	77,969	
	Chemist VII	GS-1320	72,395	
	Chief Accountant IV	GS-510	78,811	
	Engineer VII	GS-800 <sup>a</sup>	67,800	
	Personnel Director IV	GS-201	72,271	
	Systems Analyst V	GS-334	57,786	
	<b>Weighted median salary</b>		<b>64,976</b>	<b>51,835</b>
<b>GS-15</b>	Attorney VI	GS-905	101,859	
	Engineer VIII	GS-800 <sup>a</sup>	78,540	
	Systems Analyst VI	GS-334	71,496	
	<b>Weighted median salary</b>		<b>80,803</b>	<b>61,842</b>

<sup>a</sup>Includes one or more closely related occupations



---

Requests for copies of GAO reports should be sent to:

U.S. General Accounting Office  
Post Office Box 6015  
Gaithersburg, Maryland 20877

Telephone 202-275-6241

The first five copies of each report are free. Additional copies are \$2.00 each.

There is a 25% discount on orders for 100 or more copies mailed to a single address.

Orders must be prepaid by cash or by check or money order made out to the Superintendent of Documents.

---

United States  
General Accounting Office  
Washington, D.C. 20548

Official Business  
Penalty for Private Use \$300

Address Correction Requested

---

First-Class Mail  
Postage & Fees Paid  
GAO  
Permit No. G100