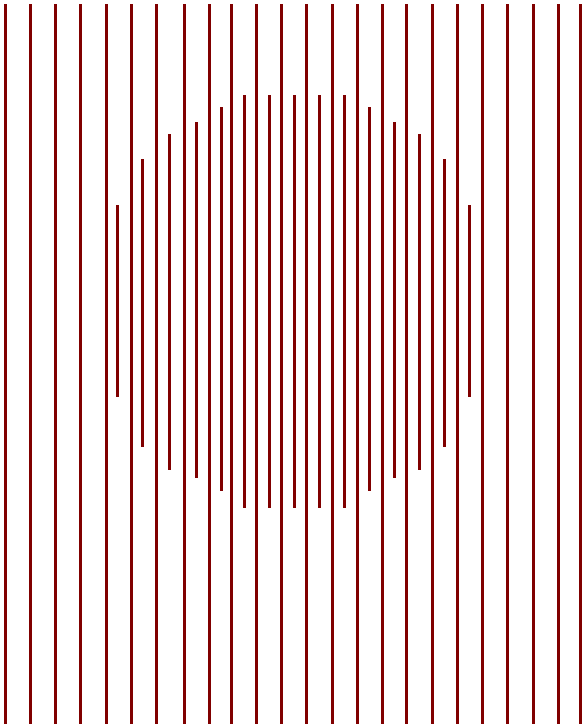
CBO PAPERS

CHANGING THE CLASSIFICATION OF FEDERAL WHITE-COLLAR JOBS: POTENTIAL MANAGEMENT AND BUDGETARY IMPACTS

July 1991



CONGRESSIONAL BUDGET OFFICE

PREFACE

This Congressional Budget Office paper examines the potential management and budgetary impacts of correcting the misgrading of federal white-collar positions and of adopting a frequently discussed alternative to the current classification system--pay banding. The paper updates some analyses from an earlier CBO report *Reducing Grades of the General Schedule Work Force* (September 1984).

The study was prepared at the request of Congressman Steny H. Hoyer, Chairman of the Federal Government Service Task Force. R. Mark Musell of CBO's Office of Intergovernmental Relations prepared the report under the supervision of Stanley L. Greigg and Earl A. Armbrust. Mary V. Braxton typed the draft and prepared the report for publication. The author gratefully acknowledges the cooperation of staff in the Office of Personnel Management's Office of Classification and Office of Systems Innovation and Simplification. Special thanks also to CBO's Bruce Vavrichek, Susan Borghard, and Richard Krop and to the Merit Systems Protection Board's Charles E. Friedman for thoughtful comments.

Robert D. Reischauer
Director

July 1991

CONTENTS

TABLES AND FIGURES

TABLES

FIGURES

BOXES

SUMMARY

The government determines how much to pay its employees with the aid of a decentralized classification system that takes into account, among other things, the duties and responsibilities of each position. Classification is intended to ensure that similar jobs are assigned equal pay and that different jobs reflect fair differences in compensation. It also aids in the evaluation of pay comparability with the private sector.

A forthcoming major study of federal practices by the National Academy of Public Administration (NAPA) is likely to increase interest in the classification of federal jobs. In addition, the Office of Personnel Management (OPM) has called for an exploration of alternatives to the current system. In light of these developments, this analysis addresses two subjects that are likely to figure prominently in discussions about classification and about which budgetary concerns often arise: (1) pay banding, an often-discussed alternative to current practice, and (2) incorrect grading of federal jobs.

THE GENERAL SCHEDULE CLASSIFICATION SYSTEM

The General Schedule (GS) is the basic pay schedule for the government's white-collar work force. It currently covers about 1.5 million workers. The Classification Act of 1949 established the schedule with 18 pay grades, each representing a different degree of difficulty and level of responsibility. The government places federal positions in pay grades by means of a classification system that involves comparing a description of a job's duties and responsibilities to official classification standards for positions. These standards, prepared by OPM, set out criteria for a position's grade and title, among other things. Unfortunately, OPM has allowed its standards to become outdated. Currently, three-quarters of all standards, covering some 760,000 workers, are 10 or more years old.

In a 1983 analysis, OPM estimated that 14.3 percent of the GS work force were classified too high. All else being equal, the government fails to get fair value for its payroll dollar from an overgraded job. CBO estimated the 1983 cost of misgrading (overgrading less undergrading) at $660 million, including the cost of retirement. What does overgrading cost the government now?

- The only current data on misgrading comes from the Department of Defense (DoD). Data from more than 2,500 random audits conducted in 1989 and 1990 show overgrading averages about 4.9 percent; almost a 50 percent reduction from the 8.7 percent reported for DoD in 1983.

- CBO estimates that the annual cost of misgrading at DoD, including higher deferred retirement costs, totals $60 million. Payroll costs alone total $50 million. Extrapolating the DoD estimates to the government as a whole, overgrading may raise federal payroll costs by $115 million each year.

- Even if better data indicated that incorrect grades throughout the government occurred with twice the frequency DoD surveys suggest, costs would still fall below one-half of 1 percent of payroll. Because federal salaries on average fall 30 percent below those offered in the private sector for comparable work, overgraded jobs, as a rule, are not overpaid jobs.

Correcting the grades of federal jobs can reduce federal costs, but the small potential savings do not necessarily translate to lower federal spending. If the Congress retains the current statutory caps as spending targets, savings from correct grading would be likely to fund other agency priorities. Agencies, moreover, often correct a grading problem by means other than downgrading. For example, agencies may, where appropriate, add duties and responsibilities. Such actions do not save money. Finally, statutes that protect the pay and grade of downgraded workers also limit near-term savings. As an alternative to an attack on misgrading, or in addition to it, the Congress could consider more fundamental personnel reform.

PAY BANDING AS AN ALTERNATIVE

Pay banding, a system that consolidates GS grades into broad pay grades, is often recommended as an alternative to the General Schedule classification system. Classification systems using pay bands generally involve fewer distinctions between levels and types of work. They offer, therefore, the advantages of simplicity and flexibility. They also more easily accommodate pay systems that tie pay raises to performance. Critics question the ability of such systems to ensure consistent outcomes and fair treatment of employees. NAPA is considering pay banding, and the government has been testing the approach at two Navy laboratories since 1980. (Two other laboratories serve as controls for purposes of comparison.)

At the Navy labs, pay bands substitute for the more narrowly defined GS grades, and "career paths" of related occupations substitute for the more specific GS occupational designations. Advancement up the salary range covered by each pay band depends on good performance on the job, as reflected in a performance rating. By contrast, length of service determines progress up the pay range covered by each GS grade for most workers.

Navy officials intended their system to improve organizational effectiveness by enhancing recruitment and retention, reducing the time and money spent on classification, and raising employee commitment, among other things. Assessment of the project's success, however, is complicated by missing data and the problems associated with quantifying some benefits. OPM did not, for example, collect data

on productivity or on other indicators of organizational effectiveness. Problems with some of the data that were collected, moreover, make it difficult to attribute observed changes to the experimental personnel system or to other factors. For example, data on turnover that OPM collected to assess the project's impact on recruitment does not include base year data. The Navy has had its successes, however, and preliminary analysis indicates that costs are small. Moreover, studies have not identified serious problems with the experiment. In fact:

- The hours that both supervisors and personnel staff spend on classification have decreased. In a 1986 report, OPM estimated that the overall savings associated with simplified classification total about 0.8 percent of payroll.

- Seven attitude surveys OPM administered during the 1979-1989 period indicate that employees' attitudes about their work and about the demonstration project have improved, offering a potential boost to performance and retention. For example, in 1979 the proportion of scientists and engineers who were satisfied with their jobs was three percentage points higher at the demonstration labs than at the control labs. By 1989, the job-satisfaction premium had grown to eight percentage points.

- Although a shortage of data makes a meaningful comparison of the costs and benefits of the demonstration project impossible, the Navy's project has not dramatically increased federal costs. According to preliminary estimates prepared by OPM, the project has, after 11 years of putting in place and developing, increased salary costs over what would have occurred otherwise by only about 6 percent; an average annual increase of about 0.5 percent.

Results at the Navy project may not apply elsewhere. The Navy designed its experimental system to meet the recruitment and retention needs of two specialized facilities; laboratories employing a large number of scientists and engineers. Cost impacts of a governmentwide system would reflect the nature of the system involved. Design can incorporate features intended to keep costs down; for example, limits on raises for employees at the top end of a pay range. An increase in governmentwide payroll costs equivalent to that the Navy experiences would raise outlays by $250 million per year. If one factors in the costs of retirement, the estimate rises to $280 million. Such costs are insignificant compared with the estimated 6 percent increase projected to occur each year through the end of this century under recently enacted pay reform. Some of the costs and benefits of any pay-banding system the government might consider adopting, moreover, are already anticipated by pay reform, which allows for pay-for-performance and other features that often characterize pay-banding systems.

CHAPTER I. INTRODUCTION

The federal government assigns most of its white-collar jobs to the pay grades of the General Schedule (GS)--currently covering 1.5 million workers--by means of a decentralized classification system that takes into account the duties and responsibilities assigned to a position, along with the qualifications it requires.[1] Classification of positions affords the government a means of rationally organizing its diverse collection of jobs, which cover more than 450 professional, administrative, technical, and clerical occupations. (Appendix Table A-1 shows a distribution of the GS work force by grade and occupational category.)

Critics of the federal system for classifying positions have found it contentious, costly, rigid, and poorly administered.[2] In 1983, two reports, one by the Office of Personnel Management (OPM) and the other by the President's Private Sector Survey on Cost Control (also referred to as the Grace Commission), focused attention on two phenomena associated with the federal classification system: the large number of misclassified positions and the disproportionate number of federal jobs with high GS grades.[3] Subsequent initiatives for improved position management from both the OPM and the Office of Management and Budget (OMB) met with a mixed response from federal agencies, and interest in improving federal classification diminished considerably.[4]

Several recent developments have revived interest in the subject of classification. For more than a year, the National Academy of Public Administration (NAPA) has conducted interviews, research, and analysis as part of a major study of the federal classification system. NAPA's final report, expected shortly, will examine the current classification system and suggest a variety of reforms. In addition, OPM's strategic plan for the federal work force, released in November of 1990, calls for exploring alternatives to current practice concerning the classification

1. The Office of Personnel Management figure of 1.5 million covers full-time workers as of March 1990. Most white-collar positions in the Executive Branch are paid according to rates set out in the General Schedule.

2. For a review of the literature, see National Academy of Public Administration, *Federal Classification Study, Interim Research Results* (August 1990).

3. Office of Personnel Management, *Federal White-Collar Position Classification Accuracy* (March 1983) and President's Private Sector Survey on Cost Control, *Report on Personnel Management* (1983), pp. 82-100. For an analysis of the budgetary impacts of various proposals for improving classification, see Congressional Budget Office, *Reducing Grades of the General Schedule Work Force* (September 1984).

4. General Accounting Office, *How Certain Agencies Are Implementing the Grade Reduction Program* (January 1986).

of positions and the structuring of pay systems.[5] This approach could affect all or part of the work force the government's General Schedule now covers.

Two other developments in federal personnel operations may increase concerns about effective position classification. Last year the government enacted sweeping reforms in its pay-setting practices under the Federal Employees Pay Comparability Act of 1990 (Public Law 101-509). Pay reform did not provide for higher agency budgets. Accordingly, it could increase the attention that agencies devote to classifying positions and other management practices that help to ensure cost-effective operations. At the same time, the Department of Defense (DoD) is planning a major restructuring of and reduction in military personnel and the civilian work force that supports them. Effective classification can play a useful part in the DoD effort.

Two issues are likely to raise budgetary concerns and figure prominently in the growing debate about position classification: incorrect grading of jobs and pay banding--an often discussed alternative to current practice. Systems incorporating pay bands generally include fewer distinctions between types and levels of work than the GS system.

THE GENERAL SCHEDULE CLASSIFICATION SYSTEM

The current federal GS classification system derives its principal authority from the Classification Act of 1949, as amended.[6] The act established the General Schedule with 18 pay grades into which most white-collar positions were then slotted.[7] Each grade represents a different level of difficulty and responsibility and has a series of salary rates, or steps, associated with it. (At present, most workers advance up these steps on the basis of length of service. The majority of the nearly 250,000 workers in grades 13 through 15, however, advance according to performance under the government's Performance Management and Recognition System, referred to here and throughout as the merit pay system.) In addition to pay grade, classification determines pay plan, occupational series, and classification title.

As specified by law, the basic objectives of the federal classification system are to provide equal pay for equal work, ensure fair differences in pay for unequal work, and offer a broad, systematic approach to organizing jobs. An effective classification

---

5. Office of Personnel Management, *Strategic Plan for Federal Human Resources Management* (November 1990).

6. Public Law 81-429.

7. Since enactment of the Civil Service Reform Act of 1978 (Public Law 95-454), most positions in GS grades 16 through 18 have been converted to a separate Senior Executive Service (SES). As of March 1991, SES employment totaled nearly 8,000. The Federal Employees Pay Comparability Act of 1990 created a separate senior-level service for workers remaining in pay grades 16, 17, and 18. As of March 1990, they numbered only about 700.

system makes an important contribution to agency management. Among other things, it can aid in planning and budgeting, selecting employees, organizing work, promoting the sense of fairness that contributes to employee morale, and keeping salaries competitive. The federal classification system assigns grades, titles, and other defining elements based on the characteristics of the position being graded, rather than on the characteristics of the employee holding the position.[8] Under such an approach, an accountant sorting mail at an agency is a mail clerk for purposes of pay and personnel management, not an accountant. Agency classifiers and managers have primary responsibility for classifying positions. The OPM provides general oversight and direction.

The Role of Federal Agencies

Classification begins with the preparation of a written description, specifying the duties and responsibilities associated with a position. Depending on the agency, this task may fall to supervisors, personnel specialists, or sometimes to employees themselves. Agency classifiers use these descriptions to determine correct title, series, and grade. (Some agencies have assigned this task to managers.) The process involves comparing key elements of a position, as outlined in its description, to classification standards prepared by OPM (referred to as position-classification standards). A position standard contains a variety of information about the jobs that it covers. When a classifier makes a match between a position and its standard, that standard sets out the criteria that help determine the correct classification.

Position-classification standards represent an approach to achieving some consistency in classification decisions. As such, complete, accurate, and up-to-date standards remain a key element of an effective classification system. Even with standards, however, the current classification process leaves considerable room for the exercise of professional judgment.

The Role of OPM

Current law charges OPM with a variety of tasks under the GS classification system. Among other things, the agency makes regulations, monitors agency compliance, and renders decisions on appeals of classification actions. OPM is also responsible for preparing, publishing, and keeping position-classification standards up-to-date . At present, published standards cover almost 80 percent of the 458 federal occupational series (361 out of 458).[9] These standards cover virtually the entire full-time GS

---

8. Other approaches to classification that emphasize an individual's ability, qualifications, and other characteristics are found in the Armed Services, the U.S. Foreign Service, and the Senior Executive Service.

9. Many occupations not covered by standards have so few employees as to make developing standards an inefficient use of resources. Classifiers generally evaluate positions in these occupations using standards for related occupations.

work force (see Table 1). In 1975, OPM began issuing its standards, most of which formerly used simple narrative descriptions of work, in a factor evaluation format that employs a numerical rating system. Under the Factor Evaluation System (FES), classifiers rank positions according to nine factors, such as knowledge required, amount of supervision received, and complexity of work. The other factors used to rank positions are the nature of guidelines used, the scope and effect of work, the extent of personal contacts, the purpose of contacts, the physical demands associated with assignments, and the risks and discomforts associated with the workplace.

Each factor is assigned a range of points. (An example of a position standard in FES format is included as Figure F-1 in the Appendix.) A position's grade reflects the total of the points it merits for each factor. By using standard factors and point values, the FES system offers a more consistent approach to ranking and evaluating positions. Currently, FES standards cover almost half of the General Schedule work force.

Over the last five years, OPM has also moved to simplify standards. The effort involves using standards written in simpler language and covering multiple occupations. Wherever possible, OPM writes these generic standards in FES format. (Standards covering multiple occupations are not new. Several, such as those covering various types of engineering work, have been in use for years.) The simplification of standards was part of a broader effort to simplify the entire classification process. In simplifying the system, OPM hoped to improve efficiency and introduce an added measure of flexibility that would tailor classification to meet individual agency needs. Ironically, responses from many agencies to several prototypes suggested that the new standards were too general, and OPM has decided that future standards of this type will cover fewer, more closely related occupations. Currently, eight of these broader, more simplified standards are in use. These cover fewer than 150,000 employees. Several more simplified standards are in various stages of development.

OPM appears to have fallen behind in its obligation to keep standards up-to-date. Currently, more than half the work force is covered by standards that are 10 or more years old (see Table 2). The portion of the work force covered by older standards is up by seven percentage points since CBO's last report in 1984. A moratorium on producing standards, imposed by OPM in the mid-1980s, explains a significant portion of the lost ground. OPM intended to conserve resources while reexamining the classification and pay systems. In recent years, there has been a renewed effort to update standards, and OPM currently has 44 new and revised GS standards in various stages of development. Nevertheless, many observers are concerned about the age of the current inventory of standards.[10]

---

10. See, for example, National Academy of Public Administration, *Interim Results* (August 1990), and U.S. Merit Systems Protection Board, *OPM's Classification and Qualification Systems: A Renewed Emphasis, A Changing Perspective* (November 1989).

TABLE 1. OCCUPATIONS AND EMPLOYEES COVERED BY OPM POSITION-CLASSIFICATION STANDARDS

	Number of Occupations	Number of Employees	Percent of Employees
Coverage By OPM Standards			
With Standards	361	1,410,000	98
Without Standards	97	27,000	2
Total	458	1,437,000	100
Coverage By Type of Standard			
FES Standards	77	670,000	47
Other Standards	284	740,000	51
Total	361	1,410,000	98

SOURCE: Office of Personnel Management.

NOTE: Employment figures cover full-time permanent workers as of September 1990. Position standards are those in effect in March 1991. The eight recently developed generic standards are included in the total of 361 standards. Seven are FES, and one is narrative.

TABLE 2. THE AGE OF FEDERAL POSITION-CLASSIFICATION STANDARDS (Numbers of occupations and employees covered)

Age of Standard	Occupations	Employees	Percent of Employees
Less than 10 years old	86	650,000	45
10 to 20 years old	106	555,000	39
More than 20 years old	169	205,000	14
Total	361	1,410,000	98

SOURCE: Office of Personnel Management.

NOTE: Employment figures cover full-time permanent workers as of September 1990. Standards are those in effect in March 1991.

CHAPTER II. THE GRADE STRUCTURE OF THE GS WORK FORCE AND OVERGRADING

Increases in the average grade of the GS work force since 1983 are part of a long-term trend. A variety of factors, including the growing complexity of federal work, helped push grades up. Overgrading--the placing of a position at a grade and pay higher than correct classification--may also have contributed to rising GS grades, but probably not by much. The Grace Commission addressed overgrading and its costs in its 1983 report. The forthcoming release of NAPA's study will no doubt raise the subject again. Estimating the extent of the phenomenon, however, is difficult, although there is some evidence that overgrading is not nearly as widespread as some suspect.

INCREASES IN AVERAGE GRADE

From March 1983 through March 1990, average grade for full-time permanent employees under the General Schedule and those covered by similar pay schedules increased by one-half grade, from 8.5 to 9.0.[11] While both defense and nondefense agencies show upward trends in average grade, increases for defense agencies as a group were double those for nondefense agencies (see Table 3). Despite the larger increase, however, the average grade at DoD remains below that for nondefense agencies; that is, 8.8 compared with 9.1. The pattern of rising average grade continues a long-term trend. In 1974, the average GS grade stood at 8.0, a grade below the current level. (Appendix Table A-2 shows changes in average grade by agency and occupational category.)

FACTORS CONTRIBUTING TO RISING GRADES

Many factors have contributed to the increase in the average grade of the GS work force. Although it is difficult to isolate the size of each factor's contribution precisely, it appears that a leading factor, accounting for around two-thirds of the increase since 1983, is the changing nature of governmental work (see Table 4).[12] Federal agencies have come to rely increasingly on professional and administrative workers, who generally have higher grades than workers in other occupations. The

11. About 8,000 full-time employees with permanent appointments are paid under systems tied to the General Schedule though not officially covered by it. These systems are referred to here as "similar schedules."

12. The two-thirds estimate comes from OPM data that compares the average grade of GS workers in 1990 to the average grade that would occur if each occupation in government had the same average grade as it had in 1983.

TABLE 3. INCREASE IN AVERAGE GS GRADE IN DEFENSE AND NONDEFENSE AGENCIES, 1983-1990

Agency	Average Grade		Grade Point Increase
	March 1983	March 1990	
All Agencies	8.5	9.0	0.5
Defense	8.2	8.8	0.6
Nondefense	8.8	9.1	0.3

SOURCE: Congressional Budget Office from data provided by Office of Personnel Management.

NOTE: Data cover grades of full-time workers who have permanent appointments to the General Schedule and to similar schedules.

TABLE 4. INCREASES IN AVERAGE GRADE BY AGENCY AND CHANGE FACTOR, 1983-1990
(Average grade points rounded to the nearest tenth)

Agency	Total Change 1983-1990	Increases Attributable to Shift to Higher Grade Occupations	Increases Attributable to Other Factors
All agencies	0.5	0.3	0.2
Defense	0.6	0.4	0.2
NonDefense	0.3	0.2	0.1

SOURCE: Congressional Budget Office from Office of Personnel Management data.

NOTE: Data cover grades of full-time workers who have permanent appointments to the General Schedule and similar schedules.

proportion of the federal white-collar work force in such occupations has increased from 49 percent to 54 percent since 1983. (Appendix Table A-3 provides more details on changes in the occupational distribution of the white-collar work force.) In 1978, only 46 percent of the white-collar work force held jobs designated as professional and administrative. Jobs in the fields of computer science, medicine, criminal investigation, engineering, and contracting and procurement, led the recent growth among professional and administrative occupations.

Fundamentally, the shift in the occupational mix of the work force reflects an increase in both the size and complexity of the demands placed on government. Demands such as those associated with drug related and other crime, AIDS and other life-threatening diseases, protection of the environment, regulation of banks and other financial institutions, and the highly complex weapons and control systems needed to preserve national security, often require the skills of highly trained professionals and administrators.

Among other significant factors contributing to the increases in average grade were three major reclassification actions by OPM. The three occupations involved--medical technologist, air traffic controller, and financial administrator--together account for about 13 percent of the increase in average grade since 1983. Also, the government's increasing reliance on contracting with the private sector for goods and services has raised the need for well-trained professionals to prepare and monitor contracts. Overgrading of particular jobs, too, may have contributed to the overall rise in average grade; some of it reflecting efforts by managers to compensate for below-market federal salaries.

THE OVERGRADING OF FEDERAL JOBS AND ITS COSTS

All else being equal, when an agency places a job in a pay grade higher than that warranted by the duties and responsibilities of the job, the government fails to get fair value for its payroll dollars. Some argue that because current federal salaries are below market rates, overgraded jobs are not necessarily overpaid jobs. (Although, to the extent that lower-than-market salaries force an agency to hire workers with less human capital--such as education and experience--overgrading can still lead to overpaying job holders.) But with the pay raises provided for under the Federal Employees Pay Comparability Act of 1990, federal pay should gradually move toward comparability with nonfederal markets.[13] And overgrading has other costs, because it undermines a system designed to organize federal work in a fair and efficient manner. Estimating the costs of overgrading is difficult, however, because there is little current data on the extent of the problem. Moreover, current

13. Under the act, employees may receive annual pay raises linked to increases in the nonfederal sector as measured by the Employment Cost Index. Beginning in 1994, workers may also receive raises designed to shrink the gap between federal and nonfederal salaries in local areas to 5 percent or less over nine years.

laws that protect the grade and pay of downgraded workers limit the near-term savings available from correcting overgrading.

The Difficulties of Grading and Estimating the Number of Misgraded Jobs

How are positions assigned to the wrong grade? Some misgrading may result from error or poor judgment. Even when done by highly-trained classifiers using well-prepared, up-to-date position-classification standards, assigning grades involves a great deal of judgment. Jobs may also be misgraded during the normal course of reorganizations or because missions change. Managers who feel that the low federal salaries of recent years have made it difficult to recruit and retain workers may also overstate positions to obtain higher grades and higher pay.

In a 1983 analysis, OPM estimated that 14.3 percent of the GS work force was overgraded and 1.5 percent was undergraded. For nondefense agencies, OPM found 16.7 percent of all positions overgraded, and 8.7 percent of all Department of Defense positions overgraded. Most striking, however, overgrading occurred almost four times as often in Washington, D.C. as in all other areas combined. Although only about 20 percent of all full-time GS employees work in the Washington metropolitan area, it accounted for 40 percent of all overgraded jobs.[14] Using OPM's findings, CBO estimated that the 1983 net payroll cost of incorrect grading (overgrading less undergrading), including the costs of future retirement benefits, totaled some $660 million.[15]

No one knows how much overgrading takes place. Many people feel that the number of overgraded jobs has increased in recent years. Those who support this view point out that once positions are overgraded, they tend to remain so. Even when incumbents leave an overgraded job, an agency is likely to rehire at the higher grade. They argue, moreover, that recent developments may have caused the rate of job overgrading to rise. The temptation to compensate for below-market salaries by overgrading, for example, has probably grown. At the time of OPM's 1983 report, which estimated overgrading at 14.3 percent, the President's Pay Agent estimated the gap between federal and private-sector salaries at about 20 percent. Current estimates put the gap at about 30 percent. Moreover, in 1988 OPM relaxed certain requirements that may have helped ensure accurate job grading. In a letter transmitting guidance to agencies, OPM canceled requirements for periodic reviews of position classification designed to ensure the accuracy of classification. Also, OPM delegated authority to agencies to review classification decisions changing

---

14. Office of Personnel Management, *Federal White-Collar Position Classification Accuracy* (March 1983). The OPM analysis involved audits conducted in 1980 and 1981 of over 700 GS full-time permanent positions.

15. Congressional Budget Office, *Reducing Grades* (September 1984), pp. 21-23.

large blocks of positions.[16] (Formerly, agencies had to consult with OPM on classification and job grading actions affecting 20 or more positions.) The OPM intended its action to simplify position classification, but it may have done so at the expense of accuracy.

At the same time, other developments may have helped reduce or keep the overgrading problem in check. The budgetary restraint that has characterized recent years may have, in some cases, made it harder for agencies to bear the cost of inaccurate grading. Special rates may have reduced some of the temptation to use the classification system to get higher pay for workers. For agencies that can afford them, special rates provide for higher salaries designed to help agencies address staffing problems caused by uncompetitive federal pay and other factors. These rates have been authorized since 1955, but their use has expanded greatly only in recent years. Currently, special rates cover more than 185,000 employees, a number that is up five-fold over the 1983 level.[17] Of course, the classification system itself, with its 2,200 classifiers, requirements for documentation, and provisions granting employees legal recourse against unfair actions, serves to limit abuse and to provide fair treatment of employees.

Given the conflicting trends and the limited data available, it is difficult to estimate precisely how much incorrect grading has changed since the 1983 OPM study. Selected data available from DoD indicates that things are no worse than in 1983, or perhaps even somewhat improved.

Incorrect Grading at DoD and Its Costs

The only current data available on misgrading comes from the DoD. As part of its annual personnel management evaluation, DoD performs random audits to test the accuracy of position classification. For the years 1989 and 1990, data from more than 2,500 audits show overgrading averaging 4.9 percent of all positions and undergrading averaging 2.1 percent (see Table 5). The overgrading rate is well under the 8.7 percent that OPM reported for DoD in 1983. But rates varied considerably by service, from a low of 1.1 percent for the Air Force to a high of 8.9 percent for the Army, just over the overall DoD rate OPM reported for 1983.

Although DoD selects positions for audit at random, it audits only selected installations each year. DoD schedules audits so that each year's selected installations cover about the same portion of the civilian work force and so that all installations are audited at least once every five to seven years. Even so, DoD

16. Office of Personnel Management, Federal Personnel Manual Letter 511-10 (March 1988).

17. The Federal Employees Pay Comparability Act of 1990 authorizes the use of a variety of other supplements to pay that could assist agencies to recruit and retain workers. These include authority to hire above the minimum salary of a pay grade, geographic pay differentials, and recruitment and retention bonuses.

officials claim that data show fairly consistent results in recent years, and believe that each year's results fairly represent their entire agency.

Accordingly, CBO estimated the approximate cost of misgrading at DoD, based on audits for 1989 and 1990. More precise estimates would require detailed information on the grade distribution of misgraded jobs and the level of over- and undergrading; information not readily available from the DoD. Better estimates may be possible after the Army releases the results of a comprehensive audit. The results, expected later this summer, will reflect audits of more than 900 positions.

Assuming that misgraded jobs at DoD have the same average grade and step as the work force as a whole, and that, on average, the positions are misgraded by one grade, then the estimated 1991 net cost of incorrect grading for GS workers at the DoD totals $60 million, including deferred retirement costs. Payroll costs alone total $50 million; $90 million for overgrading, less $40 million for undergrading. Extrapolating the DoD experience to the government as a whole, overgrading would raise federal payrolls by $115 million--$200 million for overgrading, less $85 million for undergrading. The net costs would amount to about 0.2 percent of the federal white-collar payroll.

TABLE 5. THE PERCENT OF THE DEPARTMENT OF DEFENSE WORK FORCE IN OVER- AND UNDERGRADED POSITIONS

	Average for 1989 and 1990		
	Over-Graded	Under-Graded	Total Misgraded
Army	8.9	3.3	12.2
Navy	2.7	1.5	4.2
Air Force	1.1	0.7	1.9
Total	4.9	2.1	7.0

SOURCE: U.S. Army Civilian Personnel Evaluation Agency, U.S. Navy Office of Civilian Personnel Management, and U.S. Air Force Civilian Personnel Plans and Evaluation Division.

NOTE: Details are rounded independently. The two-year average for the Air Force masks a significant increase in overgrading between 1989 and 1990, from 0.5 percent to 1.7 percent. Air Force officials believe the increase reflects survey coverage and does not represent long-term trends in overgrading at the agency.

Federal Budget Deficits and the Costs of Incorrect Grading

While not insignificant, especially in light of the many interests and problems competing for limited federal funds, incorrect grading does not seem to represent a major drain on federal resources. Even if misgrading throughout the government occurred twice as often as DoD data suggest, its cost would still represent less than one-half of 1 percent of payroll. (Of course, it may represent a far greater gain or loss to the employee in a misgraded position.) The cost of misgrading, moreover, appears insignificant when compared with the savings that the government achieves, estimated at about 30 percent of payroll, by continuing to pay salaries below those offered in the private sector. Compared with the private sector, in fact, overgraded jobs may not be overpaid jobs. This will change, however, as the government gradually moves toward comparability under recently enacted pay reform.

Regardless of the potential savings involved, translating correct grading into near-term budgetary reductions presents certain problems. If the Congress retains current statutory caps as targets for spending, the savings from correct grading would be applied to other agency priorities. Even to obtain savings, the Congress would have to require that agencies correct overgrading by downgrading. They have other alternatives--for example, adding duties and responsibilities--that do not necessarily free up resources for other priorities. Such alternatives may often make more sense than downgrading for getting work done in an organization. Downgrading, moreover, has costs of its own, including damage to employee morale. Even with downgrading, current statutes that protect the pay and grade of regraded workers delay savings to the government.[18] Under these statutes, downgraded workers keep their same grade and pay for two years. Thereafter, workers whose salaries exceed the top step of their correct grade receive half the annual governmentwide pay adjustments granted at that step until the top salary at the new grade catches up.[19] Eliminating or curtailing grade and pay protection, however, would also lower employee morale. Moreover, the prospect of a disrupted workplace, might make federal managers more reluctant to downgrade jobs in the first place. As an alternative to attacking misgrading directly, or in addition to it, the Congress could choose to focus on basic changes to the GS classification system.

18. 5 U.S.C. 5361 et seq.

19. Assuming a governmentwide pay adjustment of 4 percent, for example, a worker earning $25,000, whose correct grade is GS-6, would receive a pay increase equal to 2 percent of the salary at Step 10 of that grade ($24,598), or about $492. Full pay increases would commence only when the salary for GS-6, Step 10, catches up to what the employee is then earning.

CHAPTER III. PAY BANDING AS AN ALTERNATIVE TO CURRENT PRACTICE

Analysts have offered a variety of recommendations for improving federal classification. Over the years, they have called for more relevant, up-to-date position-classification standards, more oversight and direction from OPM, better communication between OPM and agencies, and simplification of the classification process. As part of its improvement efforts, the OPM has sought to improve the training of classifiers, update position-classification standards, and explore possible applications of computer technology to the classification process. Substituting a system that consolidates the grades of the GS schedule into broad pay ranges, or pay bands, would represent more fundamental reform.

Some have questioned whether the current system's problems warrant such dramatic action. Nevertheless, pay banding remains the most discussed reform proposal. The forthcoming NAPA report will include a design for a banding system that could serve as a model for the government. In addition, the government is testing pay banding at several agencies (see Box 1). The Navy boasts the longest running and best documented of these test projects. (Alternate personnel systems and practices are also in place at agencies that are not required to participate in the General Schedule system. These organizations include the General Accounting Office, the Postal Service, and the Tennessee Valley Authority. Together, exempt agencies have over 1 million employees. The system in place at GAO incorporates pay for performance and broad pay bands.)

Systems employing pay bands generally involve fewer distinctions between both types and levels of work. They offer, therefore, the advantages of simplicity and flexibility. Also, they more easily accommodate pay plans that tie raises to performance, the typical practice in the private sector.[20] The simplicity and flexibility of pay banding, of course, is gained at the expense of the precision brought to decisions about classification. Accordingly, some question the ability of pay banding systems to ensure consistent outcomes and fair treatment of employees. Some also question the emphasis banding systems often give to performance, arguing that experience and adaptability are also important. Results from the Navy demonstration project suggest that pay banding can, with only modest increases in cost, lead to improvements in personnel management.

20. Section 111 of the Federal Employees Pay Comparability Act of 1990 requires the Office of Personnel Management to establish a labor-management committee to advise it on the design and establishment of systems that will strengthen the link between the pay of federal General Schedule workers and their performance. The legislation requires the committee to report by November of 1991 to the Director of OPM.

Box 1
OPM PERSONNEL MANAGEMENT DEMONSTRATION PROJECTS

The Civil Service Reform Act of 1978 (Public Law 95-454) authorized establishment of up to 10 demonstration projects to explore new concepts and approaches to personnel management. The government now has six major projects under way. These projects currently involve about 23,000 white- and blue-collar workers. The five projects outside the Navy's are described below. Like the Navy, two of the five projects--one at the National Institute of Standards and Technology and one at the Air Force's McClellan Air Base--test new approaches to job classification.

National Institute of Standards and Technology (NIST). This project, mandated by Congress in the National Bureau of Standards Authorization Act for Fiscal Year 1987 (Public Law 99-574), commenced in January 1988 and covers 3,000 white-collar employees at research sites in Maryland and Colorado. These labs undertake research and development in physical measurement. The project addresses difficulties NIST experienced in attracting quality researchers. Like the Navy Demonstration Project, the NIST experiment features simplified classification with broad pay bands and pay raises based on performance. The project also provides for pay and benefit comparability with the private sector.

Air Force/Defense Logistics Agency (DLA) Pacer Share. This project was carried out in February 1988 in the Directorate of Distribution of the Sacramento Air Logistics Center, McClellan Air Force Base, and covered 1,800 blue- and white-collar employees. The Directorate provides parts and equipment to customers on base and throughout the world. As a result of DoD depot consolidations, more than half of the employees covered by Pacer Share were transferred to DLA in April 1991. The project now continues as an interagency demonstration. Pacer Share was designed to demonstrate that the productivity and quality of work of an organization can be improved by establishing a more flexible personnel system and a productivity gainsharing system based on organizational performance. Under the gainsharing program, the Air Force returns to employees half of any savings from improved organizational performance.

Department of Transportation/Federal Aviation Administration (FAA). In 1989, FAA started testing retention allowances designed to attract and retain well-qualified employees for hard to fill facilities in Chicago, Los Angeles, New York, and other areas. The project, involves 2,100 white-collar employees.

FBI. The project tests retention allowances and relocation bonuses designed to help the New York City office recruit and retain workers. The New York office employs 2,100 agents and support staff. The project, authorized by the Congress in 1988, is not a Civil Service Reform Act demonstration.

The Forest Service and the Agriculture Research Service. In 1990, these two agencies began testing a decentralized hiring system that features a streamlined examining process, recruitment incentives, and relocation allowances. The project may involve up to 5,000 new hires.

THE NAVY DEMONSTRATION PROJECT

The Navy's demonstration project, started in 1980, was originally set up to run five years. In 1988, the Congress extended the project to 1995. Altogether, the project and its evaluation involves four naval laboratories and about 16,000 employees. The four labs employ a variety of professional, administrative, technical, and clerical workers, although scientists and engineers make up about half the total number of employees. The new pay and position classification system was put into effect at two laboratories, the Naval Weapons Center at China Lake, California, and the Naval Ocean Systems Center at San Diego, California (see Box 2). These labs employ 8,700 workers. Two other laboratories, where there were no changes, serve as controls for purposes of comparison; the Naval Surface Warfare Center at Dahlgren, Virginia, and White Oak, Maryland, and the Naval Air Development Center at Warminster, Pennsylvania. Although the four labs have different specific responsibilities and locations (see Box 2), they also have many similarities. The Director of Navy Laboratories manages all four, and each is engaged in Navy research, development, testing, and evaluation. Finally, all four labs employ large numbers of scientists and engineers.

The changes in personnel practices the Navy project adopted were designed to address problems that both demonstration labs had in recruiting high quality scientists and engineers and in keeping the best of these employees. Among other things, the new personnel system at the demonstration labs features pay raises tied to performance, and a simplified classification system employing broad pay bands.

Classifying Positions at the Demonstration Labs

At the two demonstration labs, the classification system groups related occupations into "career paths." The labs feature five such paths. Scientists, engineers, and other professionals, for example, make up one path; budget analysts, personnel specialists, and other administrative employees make up another. The other three paths cover technicians, technical specialists, and clerical personnel. Each career path is associated with a range of salaries. Each salary range, in turn, is divided into broad pay bands (see Figure 1). These bands span at least two GS grades and represent, as do GS grades, different degrees of difficulty and responsibility. Under the system, for example, a GS-13 engineer would fall in pay band III of the career path for scientists, engineers, and other professionals.

Classification at the demonstration labs generally involves fewer and less discrete decisions than those required by the GS system. Under the demonstration project, a position is assigned to a pay band representing a broadly defined level of difficulty rather than to a more narrowly defined General Schedule grade. As such, the Navy's system permits the use of shorter, simpler position-classification standards and position descriptions.

Box 2

LABORATORIES INVOLVED IN THE NAVY DEMONSTRATION PROJECT

Demonstration Sites

Naval Weapons Center at China Lake, CA — Pilot personnel system began July 1980

Location: Upper Mojave Desert, 150 miles northeast of Los Angeles.

Civilian Employment: 5,400 with 48 percent in science, engineering, and other professional occupations.

Mission: Principal research, development, testing, and evaluation (RDT&E) center for air warfare and missile systems (except anti-submarine warfare).

Naval Ocean Systems Center at San Diego, CA — Pilot personnel system began July 1980

Location: Point Loma, 7 miles from downtown San Diego.

Civilian Employment: 3,300 with 58 percent in science, engineering, and other professional occupations.

Mission: Principal RDT&E center for command control, communications, ocean surveillance, surface- and air-launched undersea weapons, and submarine arctic warfare.

Control Sites

Naval Surface Warfare Center at Dahlgren, VA and White Oak, MD

Location: 40 miles south of Washington, D.C., and 20 miles east of Fredericksburg, VA.

Civilian Employment: 4,900 with 58 percent in science, engineering, and other professional occupations.

Mission: Principal RDT&E center for surface ship combat systems, ordinance, mines, and strategic systems support.

Naval Air Development Center at Warminster, PA

Location: About 20 miles north of Philadelphia.

Civilian Employment: 2,700 with 64 percent in science, engineering, and other professional occupations.

Mission: Principal RDT&E center for aircraft, airborne anti-submarine warfare, aircraft systems, and surface ship, submarine, and aircraft navigation.

FIGURE 1. CAREER PATHS AND PAY BANDS AT THE NAVAL OCEAN SYSTEMS CENTER

	Equivalent GS Grades																	
Career Paths	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Scientists, Engineers, Senior Staff: Pay Bands	A				I				II			III		IV		V		
Technicians: Pay Bands[a]	A				I				II		III	n.a.						
Technical Specialists: Pay Bands[a]	A				I				II		III	n.a.						
Administrative Specialists: Pay Bands	A				I				II		III	n.a.						
General Clerical: Pay Bands	A			I	II		III		IV			n.a.						

SOURCE: Congressional Budget Office from information provided by the Office of Personnel Management.

NOTES: If qualified, technicians, technical specialists, and administrative specialists at the top of their career path can enter, at band III, the career path for scientists, engineers, and senior staff. General Clerical staff can enter, at band III, the administrative, technical specialist, or technician career path.

Bands labeled "A" generally cover apprentices, student aides, and co-op students.

n.a. = not applicable.

a. The "technicians" career path primarily covers those engaged in engineering. The career path for "technical specialists" covers other technicians.

The Navy designed its classification system for simplicity and flexibility. Under the system, the decisions involved in classifying work become less complex and the potential for both error and disagreement drops. Classifiers, for example, no longer have to concern themselves with the often subtle distinction between professional work at grade 12 and professional work at grade 13. Assigning and organizing work, moreover, does not require managers to observe as many fine distinctions between levels of work and occupations as does the GS system, thus offering a potential boost to management effectiveness.

The Navy's design also offered potential advantages in recruiting and retaining workers. Broad pay bands increase the range of salaries a laboratory can offer to potential new hires. For employees that a laboratory might hope to keep, the broad pay bands offer the opportunity for much greater pay growth. Finally, and perhaps most important, the Navy designed its system to accommodate a pay-for-performance plan. Compared with the GS grade system, broad pay bands provide a wider range of salaries, at a given level, within which to make performance-based pay distinctions. (Under the GS system, most grades have salaries with a 30 percent range from top to bottom at each grade. As previously mentioned, pay bands cover at least two GS grades.)

Pay for Performance at the Demonstration Labs

Under the GS system, the government adjusts General Schedule rates in January of each year. Most employees (those not under merit pay systems) automatically receive these raises. As described earlier, employees may also receive "within-grade" increases tied to length of service. Employees move up the salary range of each grade by means of these within-grade raises. By contrast, pay raises under the Navy system depend on good performance, as under the merit pay system. By tying pay to performance, officials hoped to encourage good employees to stay longer and poor performers to leave sooner than they would have otherwise.

Pay adjustments occur in two segments. The first reflects governmentwide pay increases granted automatically to other GS workers in January of each year. All employees rated fully successful or better receive the full, annual governmentwide adjustment. Because the minimum and maximum salary rates of each pay band increase by the full amount of the annual adjustment, employees who receive no or limited pay raises because of poor performance may find themselves in a lower pay band. Few workers, however, receive poor ratings. For 1990, less than one half of 1 percent of the work force at the demonstration labs were rated below the fully successful level. Poor performance ratings are also rare in the government's merit pay program. They are rare in some large, private-sector firms as well.

The second segment of pay adjustments, referred to as incentive payments, substitutes for within-grade and other increases under the GS system. It is by means of these payments that employees move up the salary range covered by a pay band. The size of the pool of funds for incentive payments primarily reflects the amount, measured as a percent of payroll, that laboratories spent in the past on awards,

within-grade increases, and certain other pay supplements. At the China Lake Weapons Center, the pool for incentive awards amounts to 2.4 percent of pay. At the Ocean Systems Center it amounts to 2.3 percent. The share of the pool awarded an employee reflects points earned in annual performance appraisals. (Points also add up to an overall rating that determines the portion of the governmentwide adjustment earned. As previously mentioned, a rating of fully successful or better earns a full comparability adjustment.) The method of determining point values varies by laboratory, but is designed so that the total value of points awarded does not exceed the amount in the pay pool.

In 1984, both demonstration labs also began offering bonuses. These bonuses, like incentive awards, are granted on the basis of performance. Generally, the demonstration labs use bonuses to reward good performance at temporary assignments or for one-time accomplishments. Labs also use bonuses to reward employees for whom pay increases are not appropriate; for example, an employee at the top of a pay band. The pool of funds available for bonuses is 0.8 percent of payroll at China Lake and 1.0 percent of payroll at the Naval Ocean Systems Center (NOSC). Together bonuses and incentive awards amount to 3.2 percent of payroll at China Lake and 3.3 percent of payroll at NOSC.

SOME RESULTS FROM THE NAVY PROJECT

In addition to simplicity, flexibility, better recruitment and retention, and the other anticipated benefits described in the previous section, Navy officials hoped the demonstration project would increase the commitment of employees to and satisfaction in their work. The overarching objective of the project, of course, remains more effective operation of federal laboratories.

Unfortunately, after over a decade of experiment and analysis, available data and information provide only a sketchy picture of the costs and benefits of the demonstration project. OPM continues to refine its analysis of costs, and analysis of benefits is hampered by missing or poor data and the complexity of quantifying some benefits. Among the more serious problems is that no data were collected, on either the productivity of lab operations or the quality of lab work, on which to base an assessment of organizational effectiveness.[21] One can conclude with a fair degree of reliability that the project has simplified personnel administration and improved the attitudes that employees have about their work. Results for other project objectives, such as improved retention, are less clear. No analysis, however, has identified any serious problems with the experimental personnel system. And

21. Monitoring productivity for research, development, testing, and evaluation (RDT&E) is not widespread in private or government organizations because developing meaningful measures of output is difficult. The Department of Defense (DoD) has, however, developed a generalized guide for organizations and managers to quantify and assess quality and productivity; but no concerted effort was made to apply the guide to the demonstration project despite strong interest at one of the control sites (Dahlgren, VA).

whatever the project's advantages are, they appear to have been gained with only modest increases in federal costs.

Finally, it is important to remember that the Navy designed its experimental pay banding and pay-for-performance systems to meet the specific recruitment and retention needs of two specialized facilities; laboratories employing large numbers of scientists and engineers. A system designed with more general applicability could have very different features and thus very different impacts.

Personnel Administration

Analysis by OPM indicates that personnel administration at the Navy demonstration labs has been simplified. The hours that both supervisors and personnel staff spent on each classification action dropped. So did the number of actions. [22] (OPM compared the performance of the demonstration labs with their performance before installing the new personnel practices and with the performance of the control laboratories.) OPM estimated that the savings associated with simplified classification amounted to about 0.8 percent of total payroll at the demonstration sites. Most of the savings reflected the smaller amount of time supervisors spent on each classification action. The OPM estimates provide a quantification of resources liberated by simplification and available for commitment to other laboratory activities. Liberated supervisory time is then probably devoted to activity that is more directly related to laboratory research and development. OPM has not updated its estimate and qualifies its conclusions by pointing out the difficulties of measuring and comparing the time employees devote to different tasks. OPM also notes that savings associated with the other advantages of the demonstration project occur, but cannot be quantified.

Recruitment, Retention, and Employee Attitudes

Both the General Accounting Office (GAO) and OPM have observed improvements in recruitment at the demonstration labs. Determining how much of the improvement is attributable to the demonstration project, however, is difficult. OPM maintains that the project's higher starting salaries had the greatest impact on recruitment success. But the lab's intensified recruitment efforts may also account for some of the improvement. OPM reports that recruitment programs at all four labs are far above the government norm.

GAO's analysis found that the average college grade point average (GPA) of newly hired junior professionals increased slightly at both demonstration labs

---

22. Office of Personnel Management, *Summary Assessment of the Navy Demonstration Project* (February 1986), pp. 30-34.

between 1980 and 1985.[23] The OPM analysis, which is still under review, also shows a rise in the GPA of new hires, but only at one demonstration lab (data for the other lab were incomplete). At the same time, according to OPM, GPAs at the control labs have held steady. OPM also reports that the demonstration labs have become better able than the control labs to fill vacancies, and that the frequency with which job offers are accepted has increased. (GPAs are, of course, only an imperfect measure of the quality of newly hired employees.)

In order to assess the impact of the demonstration project on retention, the OPM conducted a number of analyses of employee turnover. On this basis, OPM maintains that recruitment and retention, particularly of superior performers, has improved.[24] OPM's analyses, however, acknowledge important limitations. They suffer from missing base-year data and from the lack of information about a variety of factors that influence employee turnover, including the important one of employee tenure.[25] Accordingly, it is difficult to attribute the observed changes in turnover to an experimental personnel system.

Consistent with the objectives of the demonstration project, OPM data show that turnover rates at the demonstration labs were generally lower and less erratic than those at the control labs (see Table 6). The trend in rates, however, varied according to the group and the time period. (CBO considered all years for which data were available.) The overall trend in rates for all white-collar workers at both the control and demonstration labs between 1981 and 1989 was upward. At the demonstration labs, the rate increased from 8.3 percent to 8.6 percent. The rate for the control labs rose from 8.7 percent to 9.6 percent, but fluctuated dramatically over the period. For superior performers, a group of great concern to the Navy, turnover rates fell between 1984 and 1989 at both the demonstration and the control labs. But contrary to expectations, the decreases were generally steeper at the control labs. For scientists and engineers with superior performance, for example, rates at the demonstration labs dropped from 4.6 percent to 4.0 percent; a 13 percent decrease. At the control labs rates dropped from 6.7 percent to 5.2 percent; a 22 percent decrease.

---

23. General Accounting Office, *Observations on the Navy's Personnel Management Demonstration Project* (May 1988).

24. Office of Personnel Management, *Turnover in the Navy Demonstration Laboratories 1980-1985* (December, 1988) and unpublished data from a forthcoming report. The measure of turnover used expresses employee separations in a given year as a percentage of the average employment in that year. Separations, for purposes of the analysis, consist primarily of resignations, retirements, and transfers to other agencies.

25. The relationship between tenure and turnover is well documented and not unique to government. The relationship is inverse and reflects in part the value placed on compensation packages that, like the government's, rewards service and age primarily by providing progressively larger pensions. See Congressional Budget Office, *Employee Turnover in the Federal Government* (February 1986), pp. 17-22. For an analysis of governmentwide turnover, see U.S. Merit Systems Protection Board, *Who is Leaving the Federal Government? An Analysis of Employee Turnover* (August 1989).

TABLE 6. EMPLOYEE TURNOVER AT THE DEMONSTRATION AND CONTROL LABORATORIES INVOLVED IN THE NAVY DEMONSTRATION PROJECT

	1981	1984	1985	1986	1987	1988	1989
All White-Collar Workers							
Control Labs	8.7	12.3	13.6	10.9	15.0	9.1	9.6
Demonstration Labs	8.3	8.5	9.9	9.7	9.4	8.9	8.6
White-Collar Workers with Superior Performance							
Control Labs	n.a.	8.0	10.2	8.5	11.3	6.8	6.2
Demonstration Labs	n.a.	5.7	6.2	7.4	5.6	5.0	5.5
Scientists, Engineers, and Other Professionals with Superior Performance							
Control Labs	n.a.	6.7	10.4	7.3	9.1	5.9	5.2
Demonstration Labs	n.a.	4.6	5.0	6.0	5.5	4.2	4.0

SOURCE: Office of Personnel Management.

NOTE: n.a. = not available.

OPM offers more convincing evidence of the demonstration project's effects on employee attitudes. OPM's concerns with the subject stem from the important relationship between such factors as job satisfaction and turnover and overall performance. To assess employee attitudes, OPM conducted seven surveys between 1979 (the year before the demonstration project was carried out) and 1989. All supervisors were polled, as well as a random sample of 25 percent of all nonsupervisory staff. Survey questions covered an array of subjects, including job satisfaction, support for the demonstration project, and intent to look for another job. Generally, data show trends supporting the objectives of the demonstration project.[26]

26. Office of Personnel Management, *Turnover in the Navy Demonstration Laboratories 1980-1985* (December 1988), *Effects of Performance-Based Pay on Employees in the Navy Demonstration Project: An Analysis of Survey Responses 1979 to 1987* (December 1988), and unpublished OPM data.

Data, for example, show higher job satisfaction at the demonstration labs for the entire 10-year period. More important, the job-satisfaction advantage at the demonstration sites grew considerably. In 1979 the percentage of scientists and engineers indicating satisfaction with their work stood at 73 percent at the control labs and 76 percent at the demonstration labs; a premium of three percentage points. By 1989, the figures were 73 percent and 81 percent respectively--a premium of eight percentage points.

The Cost of the Demonstration Project

While the limitations associated with the existing data and information do not permit a meaningful comparison of costs and benefits, one can conclude with a fair degree of reliability that the Navy project has not resulted in dramatic increases in federal pay and benefit costs. According to preliminary estimates prepared by OPM, the demonstration project has increased salary costs, over what might have occurred otherwise, by about 6 percent. Both of the project's major interventions--grade banding and performance-based pay--contributed to the increase. Preliminary analysis suggests that grade banding has proven the most costly innovation, accounting for about two-thirds of the rise in costs. Banding, by removing barriers between grades, permitted many employees to achieve career and salary advancements that would have been impossible under the GS system. According to OPM, the remaining third of the increase in salary costs at the demonstration labs is associated with the project's pay-for-performance practices, in particular the use of a fixed pool of funds for incentive pay raises.

OPM states that by employing fixed pools, the demonstration labs may have awarded more in raises than the control labs, where the overall amount spent reflects employees' performance and years of service. In addition, in calculating the size of the pools, the demonstration labs included a factor that reflects amounts previously paid out as one-time cash awards. Therefore, they probably averaged more in permanent salary increases than did the control labs where awards are still made. OPM also points to additions to the pools designed to reflect anticipated work force and other changes. OPM believes these may have raised costs at the demonstration labs.

OPM bases its estimates on 1989 and 1990 data for scientists, engineers, and other professionals, who together account for about two-thirds of payroll. OPM estimated costs by comparing control labs with demonstration labs. (Comparisons with different labs may not yield the same or similar results.) OPM defined costs as the difference between the actual salary expenses of the demonstration sites and the expenses that would occur if the demonstration sites had the same average salary, by level, and the same employment distribution, by level, as the control labs. The analysis also employed multivariate regression analyses to exclude cost differences caused by factors unrelated to the experimental personnel system, including those attributable to occupational distribution (scientists versus engineers), tenure, and educational attainment.

It is worth noting that the OPM estimate represents the cumulative effect of the Navy's experience over nearly 11 years (July 1980 through 1990) of carrying out and development. Averaged over the entire period, salary costs amount to a modest increase of 0.5 percent per year. An equivalent increase in governmentwide GS payroll would raise federal expenses by $250 million (in 1991 dollars). If the costs of retirement are included, the estimate rises to $280 million. Such cost increases would be insignificant compared with the 6 percent average annual increase in costs projected through the turn of the century. Some of the costs and benefits of any pay banding system the government might adopt, moreover, are anticipated by pay reform, which allows for pay-for-performance, bonuses, and other features that often characterize such systems.[27]

In the interest of reducing budget deficits or pursuing other spending and tax priorities, the government may, of course, choose to forgo some or all of the potential benefits and costs of pay and other personnel reforms.[28] The government can always insist that reform meet requirements of budget neutrality, but meaningful reform would almost certainly entail some costs.[29] To keep costs down, the government could modify the scope and design of reform. With regard to pay banding, for example, reform measures could emphasize bonuses over raises, employ fairly narrow bands, and limit raises for employees at the top end of their pay band.

---

27. For an analysis of the costs of implementing federal pay reform, see Congressional Budget Office, *Federal White-Collar Pay Reform: Costs and Financing* (September 1990).

28. Current budget projections make no specific allowance for federal pay raises other than those necessary to match average increases expected in the private sector. Accordingly, some budget plans might call for limits in effecting pay comparability under pay reform. For a discussion of pay raises under pay reform and the CBO baseline, see Congressional Budget Office, *The Economic and Budget Outlook: Fiscal Years 1992-1996* (January 1991), p. 89.

29. The demonstration project at the National Institute of Standards and Technology (NIST) adopted personnel reforms similar to those of the Navy, along with a requirement of budget neutrality. NIST measures its success in meeting its goal by comparing actual costs to projections based on costs prior to the adoption of the reforms. For a discussions of the NIST project and budget neutrality, see Office of Personnel Management, *Second Annual Evaluation Report, National Institute of Standards and Technology Personnel Management Demonstration Project* (August 1990).

APPENDIX

TABLE A-1. NUMBER OF FULL-TIME WHITE-COLLAR FEDERAL WORKERS BY GRADE AND OCCUPATIONAL GROUP, MARCH 1990 (In thousands)

Grade	Professional Jobs	Administrative Jobs	Technical Jobs	Clerical Jobs	Other Jobs[a]	All Jobs
GS-1	0	[b]	[b]	1	[b]	1
GS-2	0	[b]	1	6	[b]	7
GS-3	0	[b]	4	40	1	45
GS-4	[b]	[b]	21	113	6	140
GS-5	3	8	50	121	11	193
GS-6	[b]	1	59	38	6	103
GS-7	13	27	85	16	6	147
GS-8	[b]	4	19	6	3	32
GS-9	40	68	44	3	3	158
GS-10	2	17	8	1	[b]	29
GS-11	67	104	24	[b]	2	196
GS-12	85	107	16	[b]	1	209
GS-13	66	68	4	[b]	[b]	138
GS-14	36	37	1	[b]	[b]	73
GS-15	20	15	[b]	0	[b]	35
Total	332	456	336	343	38	1,505

SOURCE: Congressional Budget Office from Office of Personnel Management data.

NOTE: Details were rounded independently. Totals may not, therefore, reflect the sums of job categories.

The Federal Employees Pay Comparability Act of 1990 (Public Law 101-509) creates a separate senior level service for employees formerly in grades 16, 17, and 18. As of March 1990, these employees numbered about 700.

a. Workers in this category are primarily in law enforcement related occupations. Also included are occupations for which agencies did not report a category.

b. Total rounds to less than 1,000.

FIGURE F-1. REPRINT OF A POSITION-CLASSIFICATION STANDARD FOR CORRESPONDENCE CLERK, GS-4

OPM Benchmark Description

Series	Grade	BMK#
GS-309	04	01

CORRESPONDENCE CLERK, GS-4

Serves in a correspondence unit of a military personnel command activity composing responses to a variety of common requests, questions, and complaints related to an individual's military status or record. These responses require examination of service records, but do not require more involved technical determinations such as those made by military personnel examiners.

Duties

—Reads incoming correspondence concerning current and former service members written by service members themselves, their relatives, employers, prospective employers, creditors, commanding officers, military finance centers, attorneys, congressmen, federal, state, and local government agencies, and other authorized parties.

—Identifies the specific kind of information required to answer the correspondence which has been screened and coded to any one of 10 general categories by the "make ready" unit. Determines the correspondent's entitlement to such information.

—Searches individual service record "jackets," records on microfiche, and service record information retrieved electronically via computer terminal to gather information on an individual's current military status or past record such as the date and place an individual entered the military service, his or her current duty station, current rate of pay, periods of active and inactive duty, disciplinary actions taken against the individual, training received, dates and places of duty, past assignments, rates or ranks held at particular periods of time, etc. Information is used to determine eligibility for and preparation of upgraded or reissued discharge papers and certificates; to determine eligibility for particular medals and citations; to prepare necessary documents certifying an individual's military or civilian status for a court's use in determining his or her susceptibility to garnishment in child support, alimony, or mortgage default cases; to prepare service transcripts needed by a former service member for use in

FIGURE F-1. (Continued)

Series	Grade	BMK#
GS-309	04	01

obtaining specialized employment such as work as a merchant seaman; etc.

—Composes letters, messages, or telegrams to other military commands, branches of service, or other appropriate sources to request information not found in records at hand or omitted from the incoming correspondence or information needed to resolve conflicting or inconsistent information found in initial search.

—Composes correspondence arranging information gathered into logical sequence and appropriate format including any necessary forms. Submits completed draft letters to typists for typing in final form instructing them on matters such as format, addressees, addresses, and necessary number of copies. Assembles final correspondence into a prescribed "package" of letter, attachments, and enclosures in the right number of copies and submits it to the authorized official for signature.

Knowledge Required by the Position—Level 1-3—350 points

—Knowledge of the internal organization of military service member records and the relationships of their parts in order to search records and extract service information required in developing accurate and adequate written responses to a variety of requests, questions, and complaints, and to recognize errors, inconsistencies, or omissions in service record information.

—Knowledge of the various military services' personnel management related organizations, such as Finance, Reserve, and Records Centers and their functions and terminology such as that related to duty status, rank, and pay in order to understand incoming correspondence, to identify and contact in writing likely sources for needed information, and to compose accurate replies.

—Knowledge of the rules for entitlement to a variety of military certificates, decorations, and citations in order to determine the response to a correspondent's request for issuance or reissuance.

FIGURE F-1. (Continued)

Series	Grade	BMK#
GS-309	04	01

—Knowledge of the rules of grammar, spelling, and punctuation for composing correspondence and reviewing correspondence composed or typed by others.
—Knowledge of unit rules and procedures for recording assignments, for selecting the proper format, releasing service member information, and contacting other offices in the employing organization and other military components.

Factor 2, Supervisory Controls—Level 2-2—125 points

The employee answers routine correspondence in selected categories routed directly to the unit. The unit supervisor or authorized assistant provides instructions on changes in rules or unit procedures. The employee independently identifies, gathers, selects, and organizes the appropriate information. Completed replies are checked for accuracy, responsiveness, and adherence to unit procedure.

Factor 3, Guidelines—Level 3-2—125 points

Guidelines include model letters, a Departmental correspondence manual, Military Personnel Command directives, correspondence unit directives, duty station directories, and posters depicting and explaining military decorations. Since each correspondent's circumstances are unique and information provided by the correspondent is not always complete or consistent, each reply requires exercise of judgment in selecting the most appropriate of several alternatives offered by the guidelines. Where inconsistencies or gaps in information cannot be resolved and correspondent's status remains unclear, the situation is referred to the supervisor.

Factor 4, Complexity—Level 4-2—75 points

The employee composes responses to several different categories of situations, each requiring information gathering and organization. Information searches require determining which of several types of records may exist and their location either in local files and data banks or in those of other organizations. Information provided by incoming correspondence or in the records at hand is often incomplete and there are often a number of different types of records

FIGURE F-1. (Continued)

Series	Grade	BMK#
GS-309	04	01

to locate. Depending on the circumstances, a number of different kinds of correspondence may be composed to obtain and convey information before a final reply is composed. Responses vary with such things as the kind of personnel matter involved and the extent of the inquirer's understanding of the military personnel system.

Factor 5, Scope and Effect—Level 5–2—75 points

The purpose of the work is to develop timely and factual replies to current or former service members, to their commanding officers, close relatives, courts of law, Government agencies, and other authorized parties having requests or questions related to the service member's military status or record.

The work affects the accuracy of court actions such as allowing garnishment of an individual's pay. It also affects the acceptability of a former service member's claim for veterans' benefits, application for employment in the Merchant Marine, or request for U.S. citizenship.

Factor 6, Personal Contacts—Level 6–1—10 points

The employee has contacts with employees within the correspondence unit, with employees in related or support units such as "make ready" clerks, military personnel examiners, "Freedom of Information/Privacy Act" specialists, and typists.

Factor 7, Purpose of Contacts—Level 7–1—20 points

Contacts are to question or explain incomplete information; to provide instructions on format, forms, and enclosures; to explain a correspondence situation and request guidance on release of information; and to request additional forms.

Factor 8, Physical Demands—Level 8–1—5 points

The work is done primarily while sitting at a desk. Occasional walking and carrying of service record jackets, forms, letters, and manuals are necessary.

FIGURE F-1. (Continued)

Series	Grade	BMK#
GS-309	04	01

Factor 9, Work Environment—Level 9–1—5 points

The work involves only normal risks or discomforts typical of an office setting and requires no special safety precautions.

TOTAL POINTS—790

SOURCE: Office of Personnel Management.

TABLE A-2. INCREASES IN AVERAGE GS GRADE BY TYPE OF AGENCY AND OCCUPATION, 1983-1990

Agency	Average Grade		Grade Point Increase
	March 1983	March 1990	
All Agencies			
Professional	11.8	11.8	0
Administrative	11.0	11.2	0.2
Technical	7.3	7.4	0.1
Clerical	4.6	4.8	0.2
All Workers	8.5	9.0	0.5
Defense			
Professional	11.7	11.7	0
Administrative	10.6	10.9	0.3
Technical	7.6	7.8	0.2
Clerical	4.5	4.7	0.2
All Workers	8.2	8.8	0.6
Nondefense			
Professional	11.8	11.9	0.1
Administrative	11.3	11.5	0.2
Technical	7.0	7.1	0.1
Clerical	4.7	4.8	0.1
All Workers	8.7	9.1	0.4

SOURCE: Congressional Budget Office from Office of Personnel Management data.

NOTE: Data cover full-time permanent employees covered by the General Schedule and similar pay plans. The average grade given for "all workers" for each agency include workers for whom no occupation was specified and workers in the "other" occupational category, which mainly includes guards, police, correctional officers, and similar occupations. The increases shown for "all workers" reflect shifts, between 1983 and 1990, in the distribution of workers among the four occupational categories (see Table A-3). The increases shown for each category separately, by definition, do not.

TABLE A-3. PERCENT DISTRIBUTION OF THE FEDERAL WORK FORCE BY OCCUPATIONAL CATEGORY, 1983 AND 1990

	1983	1990
Professional	20	23
Administrative	29	31
Technical	23	22
Clerical	25	22
Other	3	2
Total	100	100

SOURCE: Congressional Budget Office from Office of Personnel Management data.

NOTE: Data cover full-time permanent General Schedule employees.