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WOMEN'S PAY

Converging Characteristics of Men and Women in the Federal Workforce Help Explain the Narrowing Pay Gap

Statement of Andrew Sherrill, Director
Education, Workforce, and Income Security Issues

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Highlights

Highlights of GAO-09-621T, a testimony before the Joint Economic Committee, U.S. Congress

April 28, 2009

WOMEN'S PAY

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Why GAO Did This Study

Previous research has found that, despite improvements over time, women generally earned less than men in both the general and federal workforces, even after controlling for factors that might explain differences in pay. To determine the extent to which the pay gap exists in the federal workforce, GAO addressed the following question: To what extent has the pay gap between men and women in the federal workforce changed over the past 20 years and what factors account for the gap? This testimony is based on a report that GAO is releasing today (GAO-09-279).

To answer this question, GAO used data from the Office of Personnel Management's (OPM) Central Personnel Data File (CPDF)—a database that contains salary and employment data for the majority of employees in the executive branch. GAO used these data to analyze (1) "snapshots" of the workforce as a whole at three points in time (1988, 1998, and 2007) to show changes over a 20-year period, and (2) the group, or cohort, of employees who began their federal careers in 1988 to track their pay over a 20-year period and examine the effects of breaks in service and use of unpaid leave. GAO is not making any recommendations.

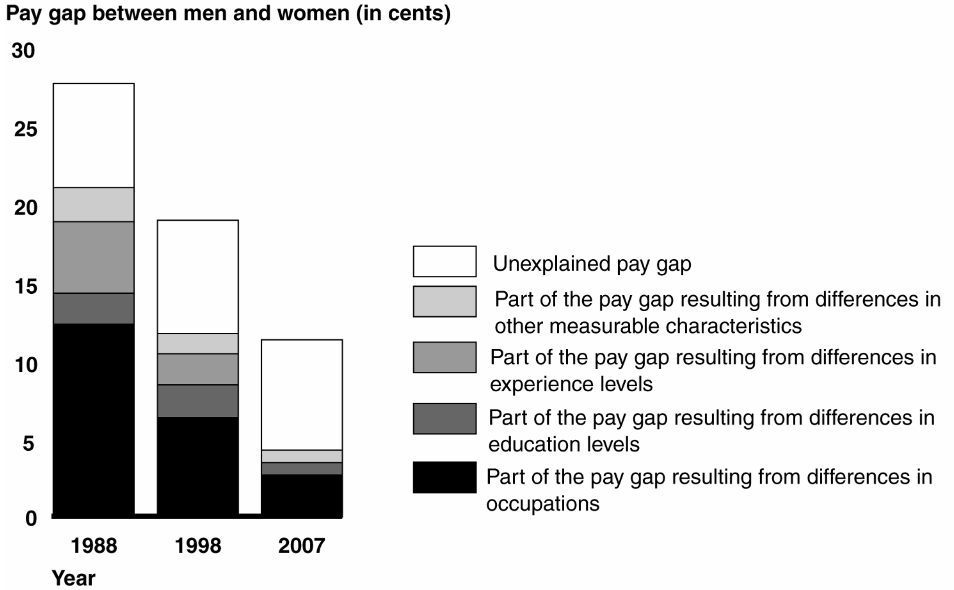
OPM and the Equal Employment Opportunity Commission reviewed the report on which this statement is based. They generally agreed with our methods and findings and provided technical comments that we incorporated as appropriate.

View GAO-09-621T or key components.
For more information, contact Andrew Sherrill at (202) 512-7215 or sherrilla@gao.gov.

What GAO Found

The gender pay gap—the difference between men's and women's average salaries—declined significantly in the federal workforce between 1988 and 2007. Specifically, the gap declined from 28 cents on the dollar in 1988 to 19 cents in 1998 and further to 11 cents in 2007. For the 3 years we examined, all but about 7 cents of the gap can be explained by differences in measurable factors such as the occupations of men and women and, to a lesser extent, other factors such as education levels and years of federal experience. The pay gap narrowed as men and women in the federal workforce increasingly shared similar characteristics in terms of the jobs they held, their educational attainment, and their levels of experience. For example, the professional, administrative, and clerical occupations—which accounted for 68 percent of all federal jobs in 2007—have become more integrated by gender since 1988. Some or all of the remaining 7 cent gap might be explained by factors for which we lacked data or are difficult to measure, such as work experience outside the federal government. Finally, it is important to note that this analysis neither confirms nor refutes the presence of discriminatory practices.

Pay gap between men and women (in cents)



Source: GAO analysis of CPDF data.

GAO's case study analysis of workers who entered the workforce in 1988 found that the pay gap between men and women in this group grew overall from 22 to 25 cents on the dollar between 1988 and 2007. As with the overall federal workforce, differences between men and women that can affect pay explained a significant portion of the pay gap over the 20-year period. In particular, differences in occupations explained from 11 to 19 cents of the gap over this period. In contrast, differences in breaks in federal service and use of unpaid leave explained little of the pay gap. However, the results of this analysis are not necessarily representative of other cohorts.

Chair Maloney and Members of the Committee:

I am pleased to be here today to discuss the gender pay gap in the federal workforce. Previous research shows that despite improvements over time, a pay gap remains between men and women in both the U.S. workforce as a whole and within the federal government. For example, in 2003, GAO found that women in the general workforce earned, on average, 80 cents for every dollar earned by men in 2000 when differences in work patterns, industry, occupation, marital status, and other factors were taken into account.[1] Our prior work has also made recommendations to strengthen federal agencies' enforcement of laws addressing gender pay disparities in the private sector and among federal contractors.[2] My statement is based on our report that is being released today, titled *Women's Pay: Gender Pay Gap in the Federal Workforce Narrows as Differences in Occupation, Education, and Experience Diminish*.[3] To prepare the report, we used data from the Office of Personnel Management's (OPM) Central Personnel Data File (CPDF)—a database that contains salary and employment-related information for the majority of civilian employees in the executive branch.[4] We used CPDF data to analyze (1) "snapshots" of the federal workforce in 1988, 1998, and 2007 to show changes in the workforce as a whole over a 20-year period; and (2) the cohort (or group) of employees who entered the federal workforce in 1988 to track differences in pay between men and women and the effects of breaks in service and unpaid leave over a 20-year period. The report includes a detailed description of our scope and methodology. We conducted our work in accordance with GAO's Quality Assurance Framework.

My statement today focuses on the following question: To what extent has the pay gap between men and women in the federal workforce changed over the past 20 years and what factors account for the gap?

[1]GAO, *Women's Earnings: Work Patterns Partially Explain Difference between Men's and Women's Earnings,* GAO-04-35 (Washington, D.C.: Oct. 31, 2003).

[2]GAO, *Women's Earnings: Federal Agencies Should Better Monitor Their Performance in Enforcing Anti-Discrimination Laws,* GAO-08-799 (Washington, D.C.: Aug. 11, 2008).

[3]GAO, *Women's Earnings: Gender Pay Gap in the Federal Workforce Narrows as Differences in Occupation, Education, and Experience Diminish,* GAO-09-279 (Washington, D.C.: Mar. 17, 2009).

[4]The CPDF does not include information for certain executive branch agencies, such as the intelligence services, agencies in the judicial branch, and most agencies in the legislative branch. The CPDF also does not include the U.S. Postal Service or members of the armed forces.

In summary, we found that the pay gap—the difference between men's and women's average pay—in the federal workforce declined from 28 cents on the dollar in 1988 to 19 cents in 1998 and further to 11 cents in 2007. For each of the 3 years we examined, all but about 7 cents of the gap could be explained by differences in measurable factors between men and women, including their occupations, and, to a lesser extent, their educational levels and years of federal experience.[5] The gap diminished over time largely because men and women in the federal workforce are more alike in these characteristics than they were in past years. For the cohort of employees who entered in 1988, we found that their pay gap grew from 22 to 25 cents on the dollar by the end of the 20-year period. Again, differences between men's and women's characteristics that can affect pay, especially occupation, explained a significant portion of the pay gap. Specifically, differences in the occupations held by men and women in this group explained between 11 and 19 cents of the pay gap over the 20-year period. On the other hand, differences in breaks in federal service and use of unpaid leave explained little of the pay gap. For both analyses, factors for which we lacked data or are difficult to measure, such as experience outside the federal government, may account for some or all of the remaining pay gap that we could not explain, and this analysis neither confirms nor refutes the presence of discriminatory practices.

Background

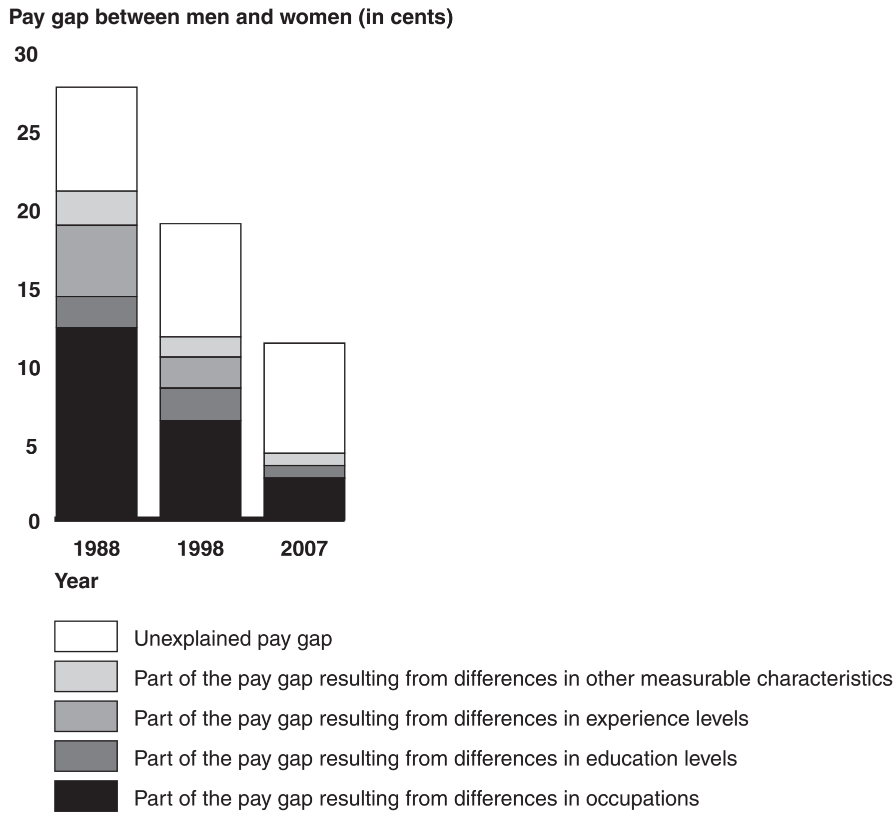
The federal government has experienced significant changes over the past 20 years, particularly in the people it employs and the type of work its employees perform. Since 1988, the federal workforce has become increasingly concentrated in the professional and administrative fields, which typically require a college education. Conversely, the past 20 years have seen significant decreases in clerical and blue-collar occupations. While we are not certain what accounts for the decline in these occupations, possible reasons include the phasing out of many defense-related jobs after the end of the Cold War, increased use of automation, and contracting out to the private sector. Overall, the federal workforce has more education and experience than it did 20 years ago. The proportion of federal employees with a bachelor's degree or higher increased from 33 percent in 1988 to 44 percent in 2007. Similarly, the average years of federal service increased from 13 to 15 years over this period, and the proportion of employees with over 20 years of experience increased from 21 to 34 percent.

[5] In this report, measurable factors are those factors for which we have CPDF data.

Converging Characteristics Explain Substantial Decline in the Federal Pay Gap between 1988 and 2007

Before accounting for differences in measurable factors, we found that the pay gap between men and women in the federal workforce declined significantly between 1988 and 2007. Specifically, for every dollar earned by men in 1988, women earned 28 cents less. This gap closed to 19 cents by 1998 and closed further to 11 cents by 2007. Using a statistical model we developed, we were able to estimate the extent to which different measurable factors contributed to the pay gap. Besides gender, these measurable factors included work characteristics, such as occupational category, agency, and state; worker characteristics, such as education level, years of federal experience, bargaining unit status, part-time work status, and veteran status; and demographic characteristics such as age, race and ethnicity, and disability status. Our statistical results show that differences in measurable factors account for much of the gap in the years we examined. As shown in figure 1, the individual factors that contributed most to the pay gap were differences between men and women in the occupations they held, their educational levels, and their years of federal experience.

Figure 1: Federal Workers: Proportion of the Pay Gap Explained by Differences in Measurable Factors between Men and Women and Remaining Unexplained Gap



Source: GAO analysis of CPDF data.

While occupation, education, and federal experience accounted for much of the pay gap, the convergence between men and women with respect to these factors largely explains why the gap diminished over time.

- Occupation: We found that the pay gap decreased in part because clerical, professional, and administrative occupational categories—which together accounted for 68 percent of federal jobs in 2007—became more integrated by gender between 1988 and 2007. In particular, changes in the government's clerical workforce explain a large reduction in the pay gap. In 1988, the clerical workforce—which accounted for 38 percent of all female federal workers—was among the lowest paid. From 1988 to 2007, the clerical workforce shrank in size by about 61 percent, and also became more integrated—i.e., the proportion of women decreased from 85 percent to 69 percent. In addition, the proportion of women in professional positions rose from 30 percent to 43 percent, and those in administrative positions rose from 38 percent to 45 percent.

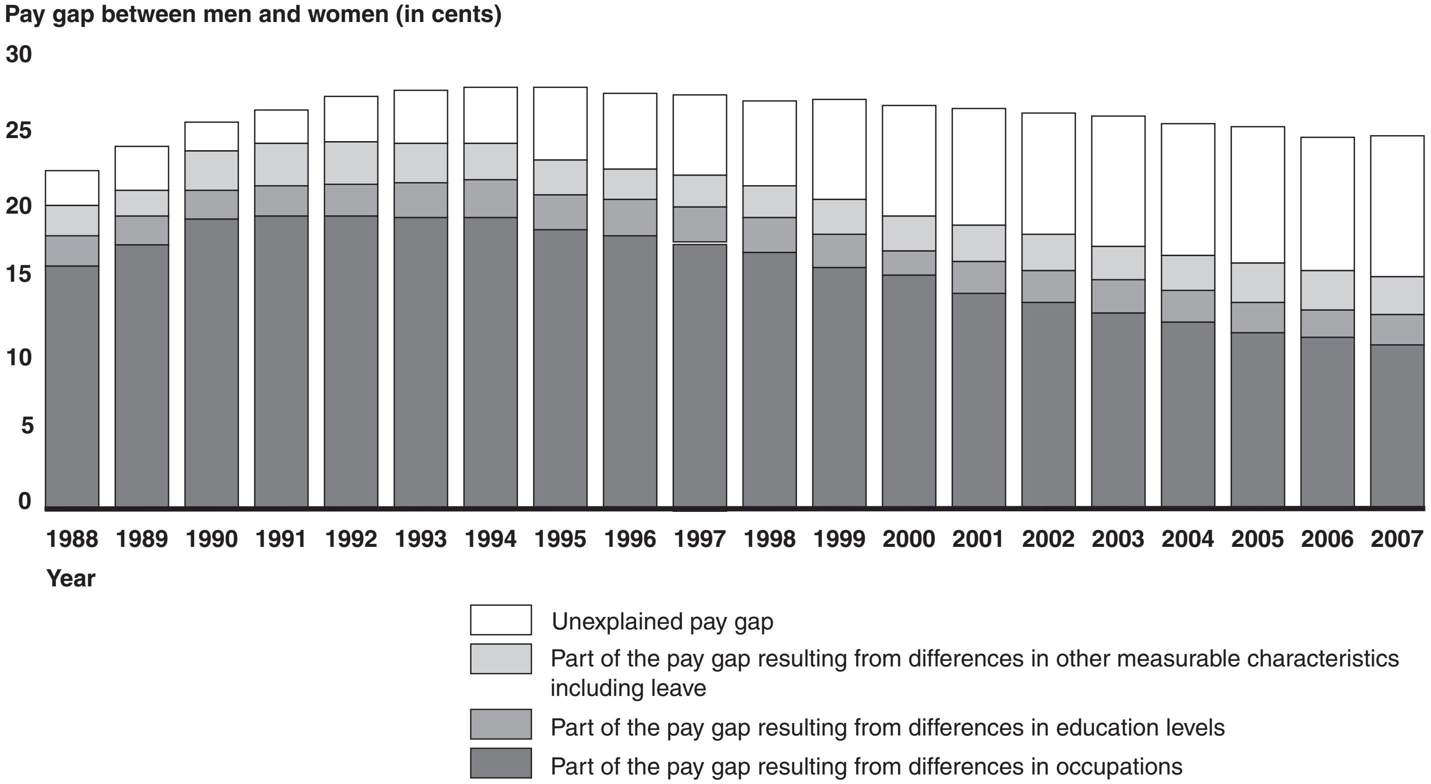
- Education: The pay gap also decreased as men and women in the federal workforce became increasingly similar in their levels of education. In 1988, only 23 percent of women held a bachelor's degree or higher compared with 40 percent of men. By 2007, 41 percent of women held a bachelor's degree or higher, compared with 47 percent of men.
- Federal experience: Finally, men and women in the federal government became increasingly similar in their levels of experience. On average, men in 1988 had 14.4 years of federal experience, compared with 10.8 for women—nearly a 4-year difference. By 2007, women had slightly more experience on average with 15.5 years of federal experience compared with 15.2 for men.

In each of the 3 years we examined, our model could not account for about 7 cents of the pay gap. While we cannot be sure what accounts for this portion of the gap, it is possible that other factors for which we lacked data or are difficult to measure, such as work experience outside the federal government, could account for some of the unexplained gap. In addition, it is important to note that this analysis neither confirms nor refutes the presence of discriminatory practices.

The Pay Gap for Employees Who Joined the Federal Workforce in 1988 Grew Overall, but Breaks in Service and Unpaid Leave Contributed Little to the Gap

The gender pay gap for workers who entered the federal workforce in 1988 grew between 1988 and 2007. Specifically, it grew from 22 cents in 1988 to a maximum of 28 cents in 1993 through 1996 and then declined to 25 cents in 2007. As with our analysis of the workforce, differences in measurable factors—especially in occupation—explained much of the pay gap in each year. For example, occupational differences explained between 11 and 19 cents of the gap over this period, due in part to more women than men holding clerical jobs, which were among the lowest paid in the federal workforce. The unexplained portion of the pay gap also grew over time, increasing from 2 cents in 1988 to 9 cents in 2007, as shown in figure 2. However, other factors not captured by our data could account for some of the unexplained pay gap.

Figure 2: 1988 Entering Cohort: Proportion of the Pay Gap Explained by Differences in Measurable Factors between Men and Women and Remaining Unexplained Gap



Source: GAO analysis of CPDF data.

We also found that differences in the use of unpaid leave or breaks in service did not contribute significantly to the pay gap. As shown in table 1, women in this cohort were more likely to take unpaid leave or have a break in service than men. Nonetheless, differences in the use of unpaid leave and breaks in service consistently explained less than 1 cent of the pay gap for this cohort over our study period. However, our analysis of unpaid leave was limited by the fact that we could not accurately measure the duration of the unpaid leave or determine why it was taken.

Table 1: Use of unpaid leave and breaks in service by employees in the 1988 cohort

	Women	Men
Took unpaid leave at least once between 1988 and 2007	18%	11%
Had a break in service at least once between 1988 and 2007	17%	15%

Source: GAO analysis of CPDF data

Finally, it is important to note that this group is different from those in our analysis of the entire federal workforce in two important ways. First, this cohort includes only employees who started working for the government in 1988, so by definition, new workers did not enter this group. Therefore, any changes in the relative characteristics of men and women in the overall federal workforce resulting from an influx of new workers would not have occurred in the cohort. Additionally, because we examined only this cohort, we cannot say with any certainty whether this group is representative of other cohorts, so the findings pertaining to the cohort are not generalizable.

OPM and the Equal Employment Opportunity Commission (EEOC) reviewed our work and generally agreed with our methods and findings. OPM reviewed our methodology and found our use of the CPDF data to be appropriate. EEOC stated that our study has a solid research design and modeling analysis and will serve as an important source of information to the federal sector. They provided suggestions for clarification of our analyses and technical comments, which we incorporated as appropriate.

Madam Chair, this concludes my remarks. I would be happy to answer any questions you or other members of the committee may have.

GAO Contact and Acknowledgments

For further information, please contact Andrew Sherrill at (202) 512-7215 or Sherrilla@gao.gov. Contacts for our Offices of Congressional Relations and Public Affairs can be found on the last page of this statement. Also contributing to this statement were Michele Grgich, Assistant Director; Erin Godtland; and Daniel R. Concepcion, Education, Workforce, and Income Security; Benjamin Bolitzer, Douglas Sloane, Shana Wallace, and Gregory H. Wilmoth, Applied Research and Methods; Ronald Fecso, Chief Statistician; Belva Martin, George Stalcup, and Tamara Stenzel, Strategic Issues; and Jim Rebbe, General Counsel.

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