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WOMEN IN MANAGEMENT

Female Managers' Representation, Characteristics, and Pay

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



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Chair Maloney and Members of the Committee:

I am pleased to be here today as you examine issues related to women in management. Although women's representation across the general workforce is growing, there remains a need for information about the challenges women face in advancing their careers. In 2001, using 1995 and 2000 data from the Current Population Survey, we found women were less represented in management than in the overall workforce in 4 of the 10 industries reviewed.¹ We also found differences in the characteristics and pay of male and female managers, which we explored using statistical modeling techniques. To respond to your request that we update this information to 2007, we addressed the following three questions: (1) What is the representation of women in management positions compared to their representation in nonmanagement positions by industry? (2) What are the key characteristics of women and men in management positions by industry? and (3) What is the difference in pay between women and men in full-time management positions by industry? My remarks today are based on our report, released at this hearing, *Women in Management: Analysis of Female Managers' Representation, Characteristics, and Pay*.²

To examine these questions, we analyzed data from the U.S. Census Bureau's American Community Survey (ACS) for the years 2000 through 2007.³ We selected ACS rather than the Current Population Survey due to the greater number of observations in ACS. We analyzed managers across all of the broad industry categories used in ACS, representing the entire workforce, except for the agriculture and mining sectors, individuals living in group quarters, and those who were not living in a U.S. state or the

¹GAO, *Women in Management: Analysis of Selected Data from the Current Population Survey*, [GAO-02-156](#) (Washington, D.C.: Oct. 23, 2001).

²GAO, *Women in Management: Analysis of Female Managers' Representation, Characteristics, and Pay*, [GAO-10-892R](#) (Washington, D.C.: Sept. 20, 2010).

³We reported on the years 2000 through 2007 to avoid concerns about the role of the recession that began in December, 2007 and to avoid any complications to the analysis due to the change of survey questions in the data set we used that were made in 2008. The ACS became nationally representative in 2000, and thus was not available for the analysis we did in the 2001 report on women in management.

District of Columbia.⁴ We defined “managers” as all individuals classified under the “manager occupation” category in ACS, which includes a wide range of more than 1,000 job titles. In our multivariate analysis of the differences in pay between male and female managers working full time and year round by industry,⁵ we used annual earnings as our dependent variable, adjusting for certain characteristics that were available in the dataset and are commonly used to estimate adjusted pay differences. These include age, hours worked beyond full time, race and ethnicity, state, veteran status, education level, citizenship, marital status, and presence of children in the household.⁶ We assessed the reliability of the ACS generally and of critical data elements and determined that they were sufficiently reliable for our analyses. We conducted our work from February 2010 to September 2010 in accordance with all sections of GAO’s Quality Assurance Framework that are relevant to our objectives. The framework requires that we plan and perform the engagement to obtain sufficient and appropriate evidence to meet our stated objectives and to discuss any limitations in our work. We believe that the information and data obtained, and the analysis conducted, provide a reasonable basis for any findings and conclusions in this product.

In summary, when looking across all industries combined from 2000 to 2007, female managers’ representation and differences between female and male managers’ characteristics remained largely similar. However, differences narrowed substantially in level of education and slightly in pay.

- In 2007, women comprised an estimated 40 percent of managers and 49 percent of nonmanagers on average for the 13 industry sectors we analyzed—industries that comprised almost all of the nation’s workforce—compared to 39 percent of managers and 49 percent of

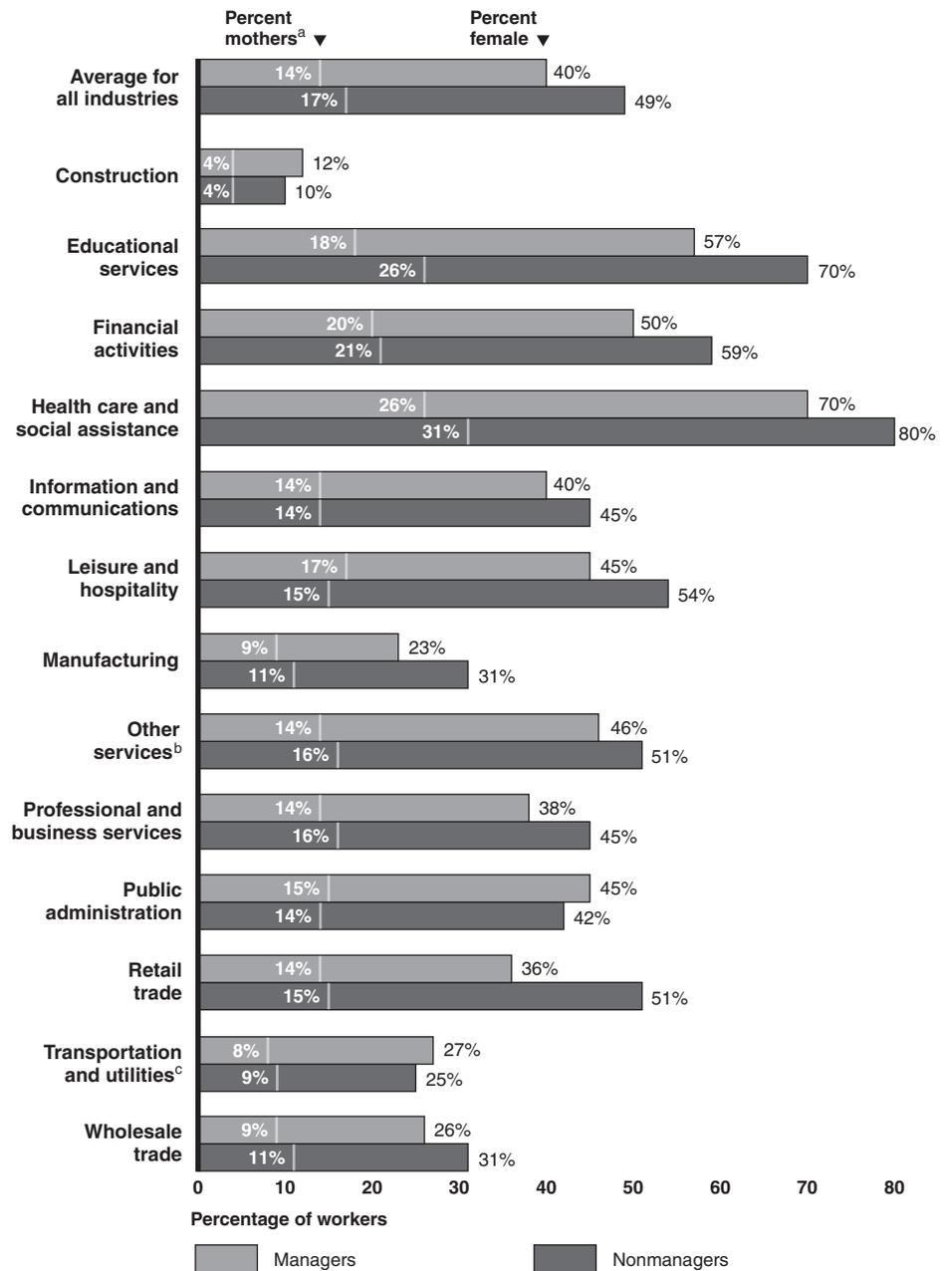
⁴We excluded agriculture because, according to the Bureau of Labor Statistics, farmers may have other sources of income, such as from federal subsidies, which may not be reported in ACS as income and would complicate our analysis on pay differentials. We excluded mining because we found a relatively limited number of observations in the mining industry. According to ACS, group quarters is a place where people live or stay, in a group living arrangement that is owned or managed by an entity or organization providing housing and/or services for the residents. Examples include college residence halls, nursing homes, group homes, military barracks, correctional facilities, and mental hospitals.

⁵Our definition of individuals working full time were those who, over the past 12 months, reported usually working greater than or equal to 35 hours per week and 50 weeks per year, and reported positive wages earned.

⁶When we looked at all industries together, we also adjusted for industry sector.

nonmanagers in 2000. In all but three industry sectors women were less than proportionately represented in management positions than in nonmanagement positions in 2007. Women were more than proportionately represented in management positions in construction and public administration, and there was no statistically significant difference between women's representation in management and nonmanagement positions for the transportation and utilities sector (see figure 1). On average for the 13 industry sectors, an estimated 14 percent of managers in 2007 were mothers—with their own children under age 18 living in the household—compared to 17 percent of nonmanagers.

Figure 1: Estimated Female Representation by Industry, 2007



Source: GAO analysis of American Community Survey data.

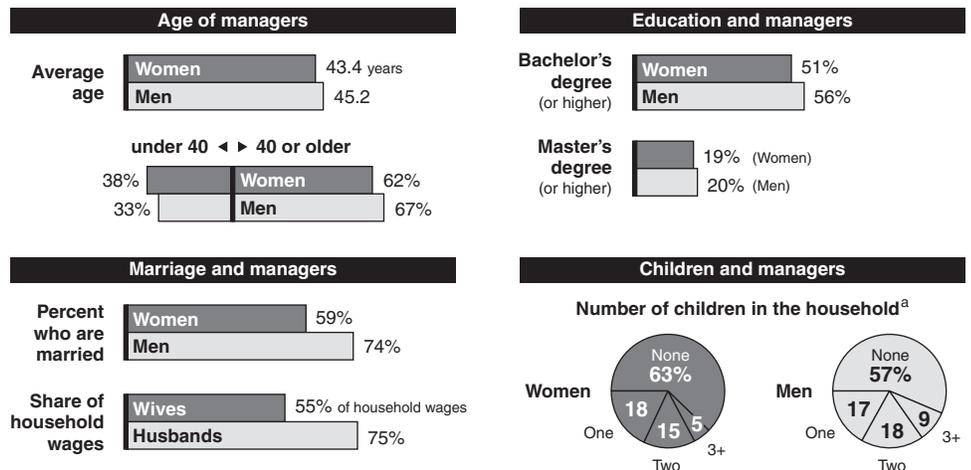
^aMothers refers to women with their own children under age 18 living in the household.

^bPositions included, for example, auto repair shop managers and parking lot managers.

^cThe difference in proportions of female managers and nonmanagers was not statistically significant.

- According to our estimates, female managers in 2007 had less education, were younger on average, were more likely to work part-time,⁷ and were less likely to be married or have children, than male managers (see figure 2). While the average female married manager earned the majority of her own household's wages, her share of household wages was smaller than the share contributed by the average male married manager to his household's wages. These findings were generally similar to findings for 2000. While both male and female managers experienced increases in attainment of bachelor's degrees or higher, women's gains surpassed men's. According to our estimates, male managers with a bachelor's degree or higher increased three percentage points from 53 percent in 2000 to 56 percent in 2007, while female managers with a bachelor's degree or higher increased 6 percentage points from 45 percent in 2000 to 51 percent in 2007. Similarly, while the share of male managers with a master's degree or higher went up less than 1 percentage point from 2000 to 2007, the share of female managers with a master's degree or higher rose nearly 4 percentage points.

Figure 2: Estimates for Characteristics of Managers by Gender, 2007



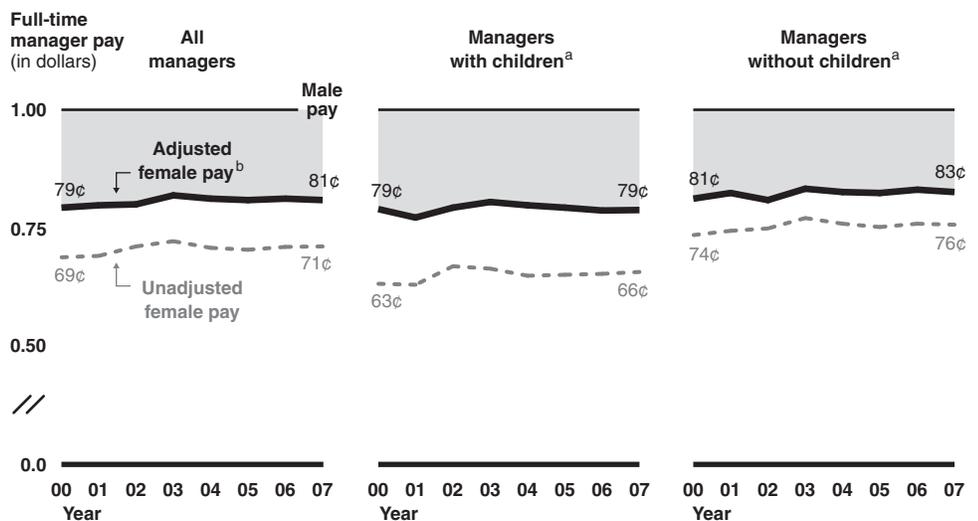
Source: GAO analysis of American Community Survey data.

^aThis refers to the number of children under age 18 living in a household with a manager.

⁷Our definition of individuals working part-time included those who were not working full time, but reported usually working some hours per week, weeks worked, and wages earned, all over the past 12 months.

- The estimated difference in pay between female managers working full time and male managers working full time narrowed slightly between 2000 and 2007 after adjusting for selected factors that were available and are commonly used in examining salary levels, such as age, hours worked beyond full time, and education (see figure 3). When looking at all industry sectors together and adjusting for these factors, we estimated that female managers earned 81 cents for every dollar earned by male managers in 2007, compared to 79 cents in 2000. The estimated adjusted pay difference varied by industry sector, with female managers' earnings ranging from 78 cents to 87 cents for every dollar earned by male managers in 2007, depending on the industry sector.

Figure 3: Estimated Pay Differences for Full-Time Managers, 2000-2007



Source: GAO analysis of American Community Survey data.

Note: The narrowing of the gap between 2000 and 2007 for all managers and managers without children in the household was statistically significant at the 95 percent confidence level. For 2001-2007, the margins of error for pay gaps differed for any single year by no greater than plus or minus 2 cents.

^aChildren refer to children under age 18 living in a household with a manager.

^bFor this analysis, we adjusted for age, hours worked beyond full time, race and ethnicity, state, veteran status, education, industry sector, citizenship, marital status, and presence of children in the household. We adjusted for industry sector to control for the possibility that pay differences could occur because female managers tended to be employed in industries that had lower rates of pay. However, we acknowledge that the distribution of female managers by industry sector itself might reflect some level of discrimination associated with hiring, promotion, or other employer practices. For the subsequent industry-specific analyses, we adjusted for the same variables, except we excluded industry sector.

Our analysis is descriptive in nature and neither confirms nor refutes the presence of discriminatory practices. Some of the unexplained differences in pay seen here could be explained by factors for which we lacked data or are difficult to measure, such as level of managerial responsibility, field of study, years of experience, or discriminatory practices, all of which are cited in the research literature as affecting earnings. More detailed information on the characteristics of women in management in specific industries could help policymakers to identify possible actions to help women advance to management positions. For example, starting in 2009, the ACS included a question on field of study, a variable recognized as important in examining differences in pay and advancement. Improvements to the type of data available, such as this one, could help researchers to better understand the determinants of salary and advancement.

The Departments of Commerce and Labor provided technical comments on a draft of our report, which we incorporated as appropriate.

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

For further information on this testimony, please contact Andrew Sherrill at (202) 512-7215 or sherrilla@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Individuals making key contributions to this testimony include Gretta Goodwin (Assistant Director), Kate Blumenreich, Lindsay Read, James Bennett, Susan Bernstein, Ben Bolitzer, Russ Burnett, Heather Hahn, Anna Maria Ortiz, and Shana Wallace. Also contributing to this work were Ron Fecso, James Rebbe, and Patrina Clark.



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