

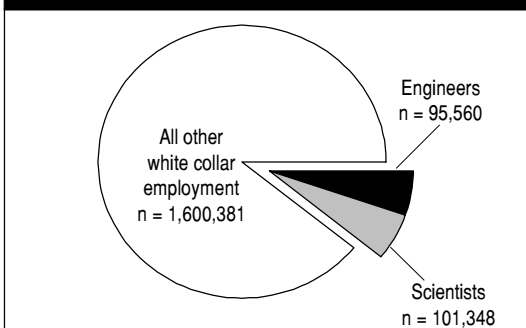
Federal Science and Engineering Jobs Increased Over the Last 5 Years

by John
Tsapogas

During the 1989-93 period the number of scientists employed by the Federal Government increased by 13.2 percent, while the number of engineers decreased by 0.5 percent.

Based on data provided to the National Science Foundation by the Office of Personnel Management, employment of Federal scientists and engineers increased by 6 percent from 1989 to 1993. Civilian white collar employment in the Federal Government during the same time increased 1.2 percent, and the U.S. labor force grew 3.1 percent. The total number of Federal civilian white collar employees was 1,797,289 in 1993. Federal scientists and engineers totaled 196,908, or 10.9 percent of the Federal civilian white collar workforce (chart 1).

Chart 1. Federal civilian white collar employment, by selected workforce categories: 1993



SOURCE: Compiled by NSF/SRS staff using data from the Office of Personnel Management

Agency Variation

Employment changes for scientists and engineers varied significantly by agency. Although some agencies—the U.S. Department of Agriculture, NASA, the Department of Interior, and the Department of Health and Human Services—increased their employment of scientists and engineers,

employment of such workers at the Department of Defense (DoD), the largest Federal employer of scientists and engineers, decreased by 2.2 percent. DoD was the only major Federal agency to experience a decrease. Within DoD science and engineering (S&E) employment decreased in the Army by 4.7 percent, in the Navy by 3.6 percent, and in the Air Force by 1.3 percent.

Occupational Variation

Within the overall increase of 6 percent, employment of Federal engineers declined by 0.5 percent from 1989 to 1993. The greatest decrease, 25 percent, was experienced by industrial engineers. Some engineering occupational groups countered the overall trend and posted gains in Federal employment during the 1989-93 period. These groups included electrical, electronics, and computer engineers; biomedical engineers; environmental engineers; ceramic engineers; nuclear engineers; and general engineers. Federal scientists increased by 13.2 percent during the 1989-93 period. All of the major scientific occupations experienced modest increases in Federal employment during 1989-93 (chart 2).

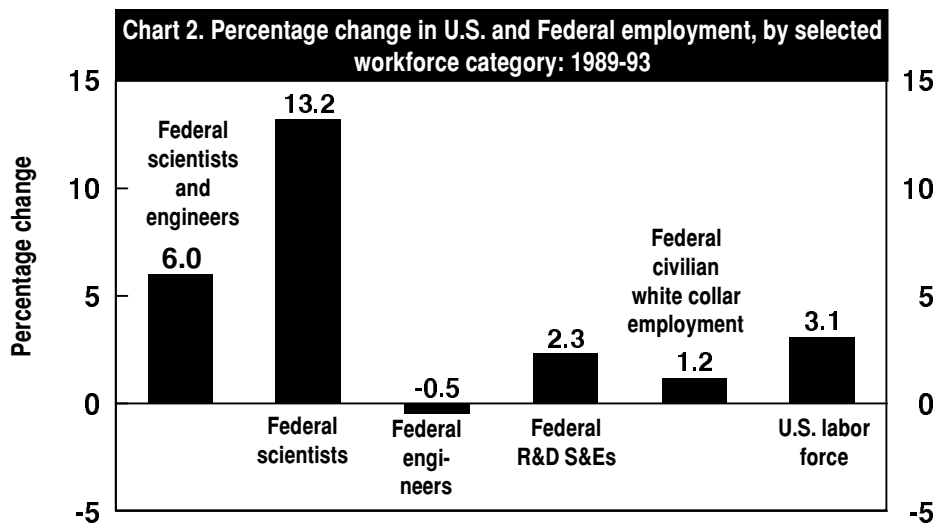
Variation in Regional Growth

The Mountain States experienced the largest growth of Federal S&E employment over the last 5 years. This region, which includes all of the States along the Rocky Mountains from New Mexico and Arizona to Idaho and Montana, increased its employment of Federal scientists and engineers by 12.7 percent. The South Atlantic States have traditionally accounted for more than one-third of all

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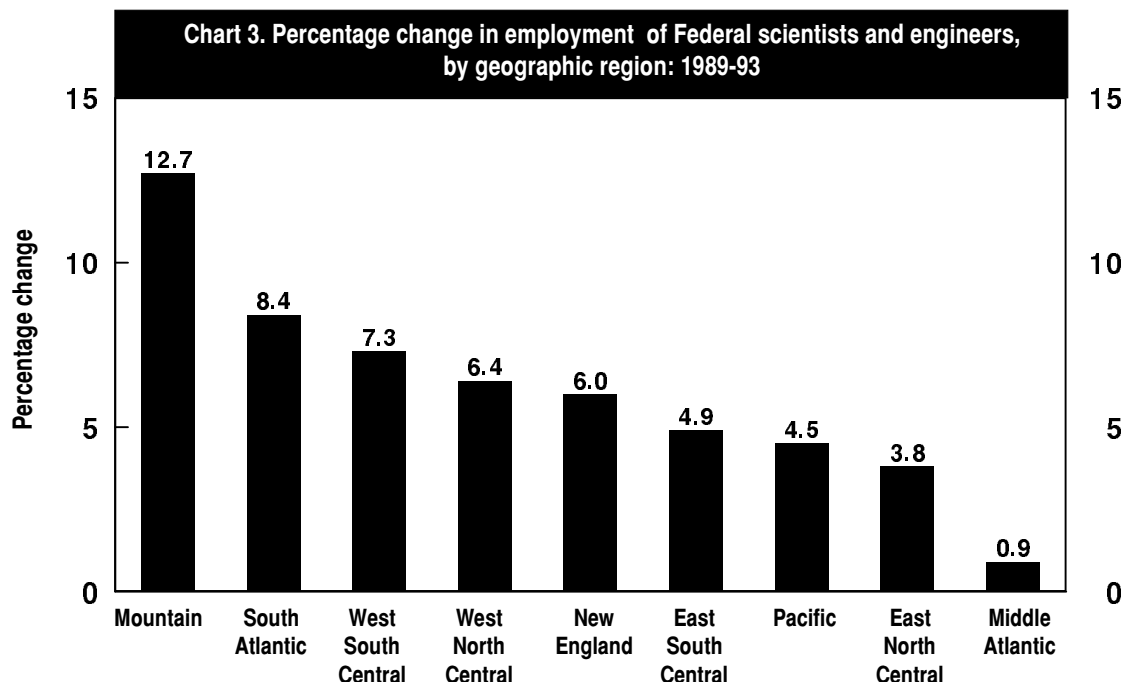
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SOURCE: Compiled by NSF/SRS staff using data from the Office of Personnel Management

Federal S&E employment, and this has held true over the last 5 years. The region, which includes Delaware, Maryland, the District of Columbia, Virginia, West Virginia, North and South Carolina, Georgia, and Florida, increased its Federal S&E employment by 8.4 percent, thereby increasing its share from

35 percent in 1989 to 36 percent in 1993. In fact, the South Atlantic States accounted for almost 50 percent of the net increase in the number of Federal scientists and engineers during 1989-93. All other regions showed very modest increases (chart 3).



SOURCE: Compiled by NSF/SRS staff using data from the Office of Personnel Management

The Aging of the Federal Workforce

The Federal S&E workforce has been getting older. In 1989, 51 percent of Federal scientists and engineers were 40 years of age or older. By 1993 the share of Federal S&E employees in this age group had increased to 54 percent. The share of Federal scientists and engineers 50 years of age or older also increased, from 22 percent to 24 percent during the same period (chart 4). This trend is in part caused by the decrease in the number of new entrants into the Federal S&E workforce.

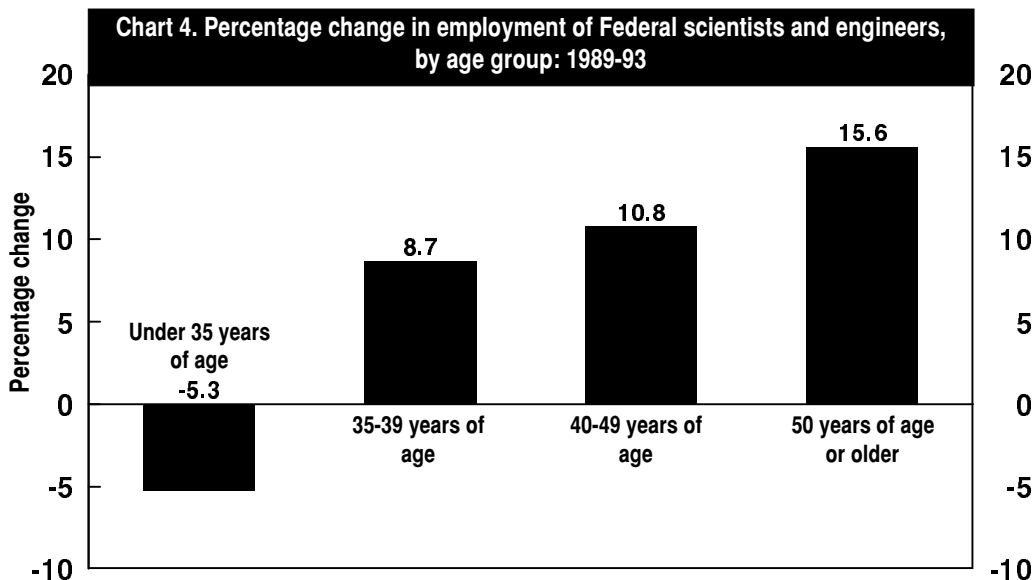
The Growth of Women and Minorities

Although the number of women or minorities in the Federal S&E workforce is low compared with the number of men or whites, employment growth for women or minorities in S&E jobs was much faster than that for men or whites.

The growth of women and minorities in Federal S&E jobs outpaced the rise of women and minorities in the Federal civilian white collar workforce.

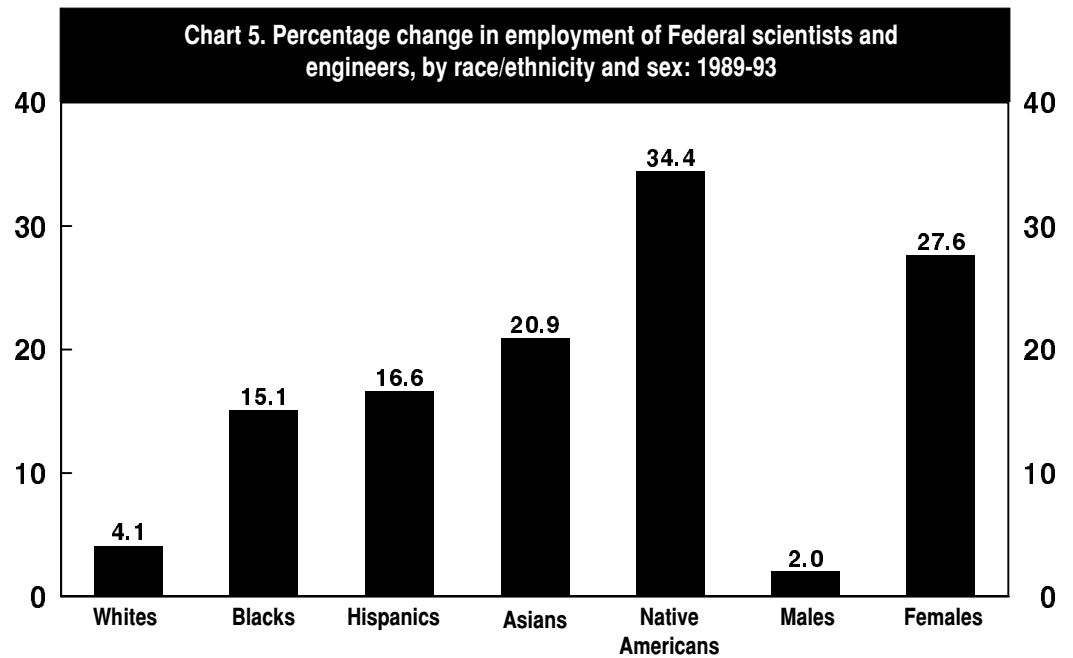
During the 1989-93 period the number of men in S&E jobs increased by 2 percent and the number of whites increased by 4.1 percent. However, the 5-year growth for women in Federal S&E jobs was 27.6 percent. For blacks the number was 15.1 percent; for Hispanics the growth rate was 16.6 percent; for Asians, 20.9 percent; and for Native Americans, 34.4 percent. Women increased their share of Federal S&E employment from 15.7 percent in 1989 to 19 percent in 1993. Collectively, the minorities' share of the Federal S&E workforce increased from 14 percent in 1989 to 16 percent in 1993 (chart 5).

The data presented in this Data Brief are being released in advance of the Special Report, Federal Scientists and Engineers: 1989-93.



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