Gender and Occupational Gaps in Science and Technology

A study published by the United State Department of Commerce sheds lights on both gender and occupational employment and wage gaps in the fields of science, technology, engineering, and mathematics (STEM).

There is a sizable gender employment gap in STEM occupations. Considering all jobs, men make up 52 percent of the labor force and women account for 48 percent. However, in the STEM labor force, 76 percent of workers are men and 24 percent women. Among workers with STEM degrees and STEM jobs, the employment gap is in favor of women in physical and life sciences (57 percent vs. 31 percent), but in favor of men in engineering (48 percent vs. 18 percent).

There is also a sizable gender wage gap in STEM occupations. Yet, the gap is smaller in STEM jobs than non-STEM jobs. Among full-time, year-round, and private-sector STEM workers, men earn $36.34 per hour and women make $31.11 per hour, thus creating a gap of $5.23 or 16.8 percent. In non-STEM jobs, men earn an average hourly wage of $24.47 and women make $19.26 per hour for a difference of $5.21 or 27.1 percent.

Researchers raise the question why such a smaller wage gap fails to draw more women in STEM jobs. They suggest that women are less inclined to work in STEM occupations for several reasons, including stereotyping, family demands, and scarcity of role models. Women with STEM degrees are more likely than comparable men to pursue careers in education and health-care.
In general, STEM workers earn significantly more than their non-STEM counterparts in the private sector. From the wage data, we calculate the occupational wage gaps. On average, men earn $36.34 per hour in STEM jobs and $24.47 per hour in non-STEM jobs, thus creating a wage gap of $11.87 or 48.5 percent. Likewise, women make an hourly wage of $31.11 in STEM jobs and $19.26 per hour in non-STEM jobs for a wage gap of $11.85 or 61.5 percent.

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<th>Gender Wage Gap</th>
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<th>Non-STEM Jobs</th>
<th>Occupational Wage Gap</th>
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Researchers find that the wage data overestimate the occupational wage gaps. In a follow-up study using regression analysis, they controlled for age, educational attainment, and region of residence. They estimated that, all being equal, women in STEM jobs earn 33 percent more than their female peers in non-STEM jobs, while mean in STEM jobs make 25 percent more than their counterparts in non-STEM jobs.

In summary, the major findings of the study are:

- Women are under-represented in STEM occupations.
- Women with STEM jobs earn less than their male counterparts.
- STEM workers earn more than their non-STEM peers.
- Women with STEM jobs earn more than women with non-STEM jobs.
- Universities need to attract more women to STEM degrees and employers need to hire more women in STEM jobs to close the gender employment and wage gaps.
Sources:

http://www.esa.doc.gov/Reports/women-stem-gender-gap-innovation