Women make up more than half of the professional and technical workforce\(^1\) in the United States. While the status for women in the workforce has improved over the last several decades, many women still struggle for equality in many occupations. Women are earning post-secondary degrees at a faster rate than men are, yet a wage gap persists. Some portion of the wage gap may result from decisions women make, personal job preference, or socio-economic circumstances; however, many still face overt or subtle employment discrimination, contributing to continued inequality.

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**Occupation and Industry Employment**

In December 2014, there were over 73 million working women in the U.S. While women were just under half of the general workforce (47 percent), they represented a majority of those in professional and technical occupations (51 percent).\(^1\) The proportion of women to men in the workforce changed dramatically from only a generation ago. In 1972, women represented just 38 percent of the workforce. After years of steady growth, the number leveled off in the mid-1990s and has remained close to the current percentage for the last two decades.\(^2\)

While a larger proportion of women are entering the workforce, uneven representation across occupations and industries persists. In 2013, women were less than 40 percent of those in management occupations. Within the numerous professional and technical occupations, women are disproportionately represented, with high concentrations in some occupations and far below average in others. While less than 10 percent of electrical and electronics engineers and computer network architects were women in 2013, more than 90 percent of speech and language pathologists and kindergarten teachers were women. In other occupations, such as biological scientists and artists, representation of men and women was closer to equal.\(^3\)

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\(^1\) Professional and technical workforce is defined to include all workers in occupations classified by the U.S. Bureau of Labor Statistics to be a management, professional, or related occupation as well as workers in non-professionally classified occupations where the person has earned an associate’s degree or higher. For example, a pharmaceutical sales representative with a master’s degree or an executive assistant with a bachelor’s degree.
Representation of women varies by industry as well. In December 2014, 75 percent of all those employed in the education and health services industry were women. While this is in part because women are over represented in occupations typically associated with this industry, such as teaching or nursing, women in other occupational groups are also clustered in this industry. For example, nearly 20 percent of women in management, business, and financial occupations worked in the education and health services industry in December 2014. In industries with low representation of women, female employees are often clustered in specific occupations. For example, women were less than 10 percent of those employed in the construction industry in December 2014, and of those, nearly half were in office or administrative support occupations.⁴
Women have a lower workforce participation rate than men at every level of education; however, the gap shrinks at higher levels of educational attainment. Approximately 32 percent of women over the age of 25 with less than a high school diploma were in the workforce in 2013, compared to close to 60 percent of men with less than a high school diploma. Those not in the workforce either chose not to work or were no longer seeking work due to labor market conditions. Among those with a bachelor’s degree or higher, 71 percent of women and 80 percent of men were in the workforce in 2013.5

Unemployment

The unemployment rate, those without a job but looking for work, was higher for women in 2013 at most levels of educational attainment; however, the differences were smaller for women with higher levels of education. Amongst those without a high school diploma, the unemployment rate for women was more than two points higher than that for men, compared to a difference of only .2 points for those with a bachelor’s degree or higher.6

Among those who were unemployed in 2013, the median duration of unemployment was, in general, shorter for women. However, the median duration for Asian women was slightly longer than for men of the same ethnicity. For both African American and Asian women as well as men, the median duration of unemployment was longer than that for White workers of the same gender.7

<table>
<thead>
<tr>
<th>Unemployment rates for professional and technical workers in selected occupation groups, December 2014</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare practitioner and technical</td>
<td>2.4%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Legal</td>
<td>1.2%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Architecture and engineering</td>
<td>4.1%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Community and social service</td>
<td>1.6%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Life, physical, and social service</td>
<td>4.7%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Computer and mathematical science</td>
<td>2.5%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Education, training, and library</td>
<td>4.2%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Arts, design, entertainment, sports, and media</td>
<td>8.3%</td>
<td>5%</td>
</tr>
<tr>
<td>Sales and related</td>
<td>3.1%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Office and administrative support</td>
<td>4.4%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Construction and extraction</td>
<td>6.1%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Production</td>
<td>2.7%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Transportation and material moving</td>
<td>3.7%</td>
<td>3.4%</td>
</tr>
</tbody>
</table>


Women were also less likely than men to work part-time for economic reasons (e.g., unable to find full-time work). In 2013, 29 percent of men working part-time were doing so for economic reasons, compared to 20 percent of women working part-time.8

In professional and technical occupations, the unemployment rates for women in December 2014 were often lower than those for men. In a number of occupations, the differences were relatively small.9

Women in education, training, and library, and arts, design, entertainment, sports, and media
occupations had unemployment rates close to those for the entire workforce in December 2014 (5.6 percent), but rates were generally lower for other professional occupations.10

Among those who served in the armed forces, the unemployment rate has historically been higher for women than men. In 2014, the annual unemployment rate for women who were veterans was 8.4 percent compared to 7.1 percent for men.11 While small numbers of observation may result in some sampling bias, the unemployment rate for women who served in the Gulf War II-era (since September 11, 2001) has often outpaced that for male veterans serving in the same era. While the unemployment rate for all veterans is higher than that for the general workforce, some reports suggest that, for a number of reasons, including prejudicial assumptions about female veterans, women returning from service often face a more difficult labor market than men.12

**Education Attainment**

In the 2012-13 school year, the majority of post-secondary degrees conferred went to women. Women far outnumbered men at all levels of degree, except doctoral, where women represented slightly more than half of recipients that year.13 The U.S. Department of Education predicts this

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**Monthly unemployment rate for Gulf War II-era veterans, 2008-2015**


**Post-secondary degrees conferred in 2012-13**

trend to continue, with women representing a growing proportion of annual post-secondary degree recipients.\textsuperscript{14}

\section*{Issues and Concerns}

Despite high levels of education, and strong representation in professional and technical occupations, women still face a persistent wage and earnings gap. While there are a number of factors that may influence the differences in earnings between men and women in the aggregate, (such as higher proportions of women in lower paying occupations) the wage gap continues even within individual occupations. While women are more likely than men to leave and then re-enter the workforce if they have children, which may affect accrued seniority or promotions,\textsuperscript{15} even this is insufficient to explain the entire persistent gap. A study by the American Association of University Women found that even when controlling for factors, including years of experience, marital, status, and even GPA, there was still an observable difference in earnings for men and women in the same job.\textsuperscript{16}

Amongst professional and technical workers, the wage gap persists in almost all occupational groups. In 2014, the difference was smallest in community and social service occupations, where there was a 12 percent gap in median weekly earnings between men and women. The difference was most pronounced in the legal occupations where women’s median weekly earnings were only 57 percent of those for men in the same occupational group.\textsuperscript{17} Data are not available on all individual occupations; however, there is evidence that this gap persists both because of a gap within occupations and because women are disproportionately clustered into lower paying occupations in each group.\textsuperscript{18}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{median_weekly_earnings_by_gender_and_occupation_group_2014.png}
\caption{Median weekly earnings by gender and occupation group, 2014}
\end{figure}

\begin{table}
\centering
\begin{tabular}{lcc}
\hline
\textbf{Occupation Group} & \textbf{Men} & \textbf{Women} \\
\hline
Healthcare practitioner and technical & & \\
Arts, design, entertainment, sports, and media & & \\
Education, training, and library & & \\
Legal & & \\
Community and social service & & \\
Life, physical, and social science & & \\
Architecture and engineering & & \\
Computer and mathematical & & \\
Business and financial operations & & \\
Management & & \\
Total, full-time wage and salary workers & & \\
\hline
\end{tabular}
\end{table}

This inequity in pay translates to large lifetime earning differences. Estimates indicate that a women could earn as much as a half million dollars less over her working life because she is paid less than a man for the same job. Further, women have the same debt burden as men upon completing their education. Early differences in pay, even modest ones, may lengthen the time required to pay off education loans. As interest compounds women risk paying more in total. Further, this disparity translates to lower returns on social security and other retirement investments, possibly requiring women to stay in the workforce longer to make up the differences in earnings.

There is evidence to suggest this pay gap has an impact on children and families as well. A 2013 study found that in 40 percent of American households with children, the primary or sole earners was a woman. Further, both men and women have to contend with difficult economic and personal choices when having children, given that few employers offer paid parental leave.

The Union Difference

Union membership is one way women in the workforce are achieving wage parity with men. The pay gap, in 2014, between union men and women was 11 percent, compared to an 18 percent pay gap between non-union men and women.

Median weekly earnings for both men and women were higher for union members compared to non-union members in 2014. This premium was particularly pronounced for women. Women who were union members earned 24 percent more than their non-union female counterparts in 2014.

In 2014, 10.5 percent of women and 11.7 percent of men in the workforce were union members.
For more information about professional and technical workers, including professional women, visit the DPE website, www.dpeaflcio.org.

The Department for Professional Employees, AFL-CIO (DPE) comprises 22 AFL-CIO unions representing over four million people working in professional, technical and administrative support occupations. DPE-affiliated unions represent: teachers, college professors, and school administrators; library workers; nurses, doctors, and other health care professionals; engineers, scientists, and IT workers; journalists and writers, broadcast technicians and communications specialists; performing and visual artists; professional athletes; professional firefighters; psychologists, social workers, and many others. DPE was chartered by the AFL-CIO in 1977 in recognition of the rapidly growing professional and technical occupations.

Source: DPE Research Department
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6 Ibid.
10 Ibid.
12 Bill Briggs, “Veteran unemployment rate dips, but crisis deepens for ex-military women,” NBC News, October 5,
13 U.S. Department of Education, National Center for Education Statistics, Digest of Education Statistics, Tables 321.10; 322.20; 323.20; and 324.20. 2014.
14 Ibid.
18 Ibid.
22 Ibid.
23 Ibid.