Graduating to a Pay Gap: good news and bad news for women in engineering

Thursday, February 21, 2013
1:00 p.m. EST
WEPAN 2012-2013 Webinar Series

- **Host:** Diane Matt, Executive Director, WEPAN, Women in Engineering ProActive Network

- **Co-Presenter:** Christianne Corbett, AAUW Senior Researcher & Co-Author “Graduating to a Pay Gap” Report (2012)

- **Co-Presenter:** Lisa Maatz, Director Public Policy & Government Relations

- **Moderator:** Shawna Fletcher, Interim Director, Women in Engineering Program, The Ohio State University
General Info and Q&A

• The webinar uses Voice Over Internet. If your sound quality is not good, a teleconference line is available:
  • Phone: +1 (646) 307-1716, Access Code: 335-412-900
  • Audio Pin: Check your screen once you dial in.
• Participant microphones are muted for quality.
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• Stay with us if we are temporarily disconnected.
• Download PowerPoint and link to recorded webinar at www.wepan.org > Webinars.
• Speakers will stay on the line for 15 minutes at the end of the webinar for open mic questions.
About WEPAN  [www.wepan.org](http://www.wepan.org)

- **Core Purpose:** To propel higher education to increase the number and advance the prominence of diverse communities of women in engineering.

- **Core Values:**
  - Knowledge, Collaboration, Inclusion and Leadership

- **700 members from 200 engineering schools, corporations, government and non-profits**

- **Support WEPAN’s work!** Become a member and make a donation at [www.wepan.org](http://www.wepan.org)
Goal: Increase the number, scope and effectiveness of initiatives to advance women in engineering.

- Catalogued and fully cited resources-1,300+
  Research, reports, data and statistics, agenda papers, bibliographies, best practices,
- Online Professional Community
  Network, collaborate, identify experts, share information
Co-Presenters

Christianne Corbett
AAUW Sr Researcher & Co-Author

Senior Researcher at the AAUW, Corbett’s focus is gender equity in education and the workplace. She holds a master's degree in cultural anthropology and bachelor's degrees in government and aerospace engineering. Prior to coming to AAUW, she worked on Capitol Hill as a legislative fellow and worked as a mechanical design engineer for eight years.

As AAUW's top policy adviser, Maatz works to advance AAUW's priority issues in our nation's capital. She is a sought-after speaker across the nation and in our nation's capital, and has a large and devoted following on Twitter. Maatz has a reputation for her strategic approach to legislation and advocacy.

Lisa Maatz
Director, Public Policy and Government Relations
Graduating to a Pay Gap

The Earnings of Women and Men
One Year after College Graduation
Methodology

Data Set: 2008-2009 Baccalaureate & Beyond Longitudinal Study

We analyzed earnings and student loan debt burden among a nationally representative sample of college students in 2009 — one year after their graduation.

Methodology

Apples-to-apples comparison:

| • Average age 23                      |
| • Single and childless                |
| • Same schools                        |
| • College selectivity                 |
| • Similar grades                      |
| • Regression controls for all factors |
One Year Out of College, Women Are Paid Less than Men

82% = Women’s earnings as a percentage of men’s earnings

Women: $35,296
Men: $42,918
<table>
<thead>
<tr>
<th>Field</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health care fields</td>
<td>88%</td>
<td>12%</td>
</tr>
<tr>
<td>Education</td>
<td>81%</td>
<td>19%</td>
</tr>
<tr>
<td>Social sciences</td>
<td>63%</td>
<td>37%</td>
</tr>
<tr>
<td>Other applied fields</td>
<td>61%</td>
<td>39%</td>
</tr>
<tr>
<td>Humanities</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Biological and physical sciences, science, technology, mathematics, and agricultural sciences</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Business</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Computer and information sciences</td>
<td>19%</td>
<td>81%</td>
</tr>
<tr>
<td>Engineering and engineering technology</td>
<td>18%</td>
<td>82%</td>
</tr>
</tbody>
</table>
Women Are Often Paid Less than Men with the Same College Major

- **Engineering and engineering technology**: $55,142
- **Health care fields**: $51,296
- **Computer and information sciences**: $45,143
- **Business**: $48,493
- **Biological and physical sciences, science technology, mathematics, and agricultural sciences**: $39,618
- **Education**: $38,034
- **Social sciences**: $38,634
- **Other applied fields**: $38,314
- **Humanities**: $36,208

Women's earnings as a percentage of men's earnings:
- **Engineering and engineering technology**: 88%
- **Health care fields**: 77%
- **Computer and information sciences**: 84%
- **Business**: 83%
- **Biological and physical sciences, science technology, mathematics, and agricultural sciences**: 87%

No significant gender difference in earnings.
Women Are Often Paid Less than Men in the Same Job

xx% = Women’s earnings as a percentage of men’s earning
□ = No significant gender difference in earnings
○ = Percentage of women in occupation

- Nurses
- Other Health care occupations
- PK–12 educators
- Social services professionals
- Business support/administrative assistance
- Life science professionals
- Sales occupations
- Other white-collar occupations
- Business/management
- Other occupations
- Math, computer, and physical science occupations
- Engineers

*No significant gender difference in earnings*
Female Engineering Majors are Less Likely to Work as Engineers after Graduation

**Occupations of Engineering Majors**

One Year After College Graduation, by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Engineers</th>
<th>Other white collar occupations</th>
<th>Blue collar occupations 1</th>
<th>Business/ management occupations</th>
<th>Business support/ administrative assistance</th>
<th>Life science occupations</th>
<th>Sales</th>
<th>Health care occupations</th>
<th>Math, computer and physical science occupations</th>
<th>Social services professionals</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>39%</td>
<td>12%</td>
<td>11%</td>
<td>6%</td>
<td>4%</td>
<td>3%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>57%</td>
<td>15%</td>
<td>9%</td>
<td>4%</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

1Includes education, training, and library occupations (except teachers); arts, design, entertainment, sports, and media occupations; and miscellaneous other white collar occupations

2Includes drafters; food preparation and service occupations; farming, fishing, and forestry occupations; construction and extraction occupations; installation, maintenance, and repair occupations; production occupations; transportation and material moving occupations; military specific occupations; and miscellaneous other blue collar occupations.

**Bold** numbers indicate a significant gender difference.

Source: Author's analysis of U.S. Department of Education, National Center for Education Statistics, 2008-2009 Baccalaureate and Beyond Longitudinal Study data
Total Bachelor's Degrees Awarded by Engineering Discipline, by Gender, 2010-2011

Women Are Paid Less than Men Who Work the Same Number of Hours

- Women earn $34,109 for 40 hours, representing 84% of men's earnings ($40,474).
- Women earn $37,617 for 45 hours, representing 82% of men's earnings ($46,127).
- Women earn $39,839 for 50 hours, representing 82% of men's earnings ($48,445).

**xx% = Women’s earnings as a percentage of men’s earnings**
A 7 Percent Unexplained Pay Gap Remains

Women’s average earnings as a percentage of men’s earnings

Pay gap overall among college graduates: 82%

Pay gap among college graduates after controlling for factors found to affect earnings: 93%
Women Have Higher Student Loan Debt Burden

Share of earnings devoted to student loan payments

- More than 15%
- 9-15%
- 1-8%
- 0%

2001

- Men: 8% (8%) + 23% (23%) = 31%
- Women: 11% (11%) + 28% (28%) = 39%

2009

- Men: 15% (15%) + 24% (24%) = 39%
- Women: 20% (20%) + 27% (27%) = 47%

Women have a higher share of earnings devoted to student loan payments compared to men in both 2001 and 2009.
Share of Women and Men with High Student Loan Debt Burden

- **2001**
  - Women: 27%
  - Men: 38%

- **2009**
  - Women: 53%
  - Men: 39%
Recommendations

Employers

Policy makers

Individuals
- Transparency in pay systems
- Pass the Paycheck Fairness Act
- Join AAUW

For more information, go to www.aauw.org.
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Working Towards Pay Equity

• Federal and state legislative efforts
  – Lilly Ledbetter Fair Pay Act
  – Paycheck Fairness Act (S. 84/ H.R. 377)
  – Fair Pay Act (S. 168/H.R. 438)

• Equal Pay Day
  – 2013: April 9
  – Public education strategies
  – AAUW Pay Equity Resource Kit
Ledbetter Fair Pay Act

• Clarifies each paycheck tainted by discrimination is another act of discrimination (the old standard)
  – each paycheck restarts statute of limitations

• The bill is simply a time warp: Restores the law to how it was previously applied

• Also restores fair remedies to discrimination in compensation based on sex, race, color, religion, age, disability and national origin

• First bill signed by President Obama
Paycheck Fairness Act

- Allows individuals to sue for fair wages / receive punitive and compensatory damages
- Clarifies acceptable reasons/defenses for differences in pay / closes loopholes in Equal Pay Act
- Strengthens penalties courts may impose for equal pay violations
- Prohibits retaliation against workers who inquire about or disclose information about employers' wage practices
- Has provisions for negotiation training for women
- Requires Department of Labor to reinstate equal pay activities and investigatory enforcement tools and data collection that have been withdrawn
Fair Pay Act

- Bans retaliation and requires employers to file wage information annually with the EEOC
- Requires employers to provide equal pay for jobs that are comparable but not identical
  - same or comparable education, skills, responsibilities and working conditions
- Prohibits employers from reducing any employee's wages in order to comply with pay equity requirements
- Requires the EEOC to issue more specific guidelines and forces more accurate record keeping
If Only Women Had a Coupon Like This

The Wage Gap... it's not just about women anymore!

If only women had a coupon like this...

23% off All Goods and Services for Any Female Bearer

Valid for all purchases in the USA only. No exclusions. Expires 2050.

...they wouldn't suffer from the wage gap.

For more information on pay equity, visit www.aauw.org today!
Next Steps

- Bring a Start Smart Salary Negotiation workshop to your campus - http://www.aauw.org/what-we-do/campus-programs/start-smart-salary-negotiation-workshop/
- Encourage women who graduate with engineering degrees to get engineering jobs
- Engineering employers can intentionally recruit women
Asking Questions and Discussion

- Participant microphones are muted for webinar quality
- Undock and expand the “Questions” pane in the webinar control panel
- Type in your Question – please make question general to the webinar topic and not specific to your program or situation
- Stay on the line at the end of the webinar if you would like to ask the presenters questions directly – we will unmute microphones
Upcoming WEPAN Webinar: March 7th 1:00p.m. EST

Active Learning: A Key to Retention for Women in Engineering

Richard Felder, PhD & Rebecca Brent

"People learn best by doing things and reflecting on what they have done, not by watching and listening to someone else telling them what to do"
Thank You for Attending
We Hope You Enjoyed the Webinar!

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• Pay a personal tribute to someone who has made a difference in your life or the lives of others.