Introduction to Econometrics

ECON-UN3412 - Recitation 4

Matthew Alampay Davis

October 12, 2021

The econometrics of discriminatory wage gaps

- Department of Labor investigation:
  "...systemic compensation disparities against women pretty much across the entire workforce... The government's analysis at this point indicates that discrimination against women in Google is quite extreme, even in this industry."
- Google: wage gap non-existent:
  *"...one large job category, what Googlers call Level 4 Software Engineer, in which women were paid **more** than men. Men in this category were given extra compensation to make reparations for the gender bias against them."*

Women at Google miss out on thousands of dollars as a result of pay discrimination, lawsuit alleges

An ongoing 2017 case found that discriminatory practices may be pushing women into lower-paying career tracks

▲ A lawsuit alleges that women employed by Google lose out on thousands of dollars each year compared to their male counterparts. Photograph: Noah Berger/AP

Women at Google lose out on thousands of dollars each year compared with men as a result of discriminatory practices including pushing female employees into lower-paying career tracks, a lawsuit has alleged.

How we run our pay equity analysis at Google

To ensure we can produce results that translate to meaningful action, we run our analyses at the job code level, adjusting for job function and level. Here's how it works:

- At the end of our annual compensation planning process (for salary, bonus, and equity) we ran rigorous statistical analyses to check the outcomes before any amounts were final. We conducted separate ordinary least squares (OLS) regressions to check for pay equity in each job group—a job group is made up of job family (like Software Engineer) and level (like Level 4).
- The OLS method allows us to account for factors that should influence pay (e.g., tenure, location, performance ratings) and look for unexplained differences in total compensation (salary, bonus, and equity) across demographic groups. Specifically, we looked for pay differences based on gender (for which we have information worldwide) and, in the U.S., by race/ethnicity.
- Our analyses covered every job group with at least 30 Googlers total and at least five Googlers per demographic group for which we have data (e.g., at least five men and at least five women). These n-count minimums ensure statistical rigor (e.g., higher statistical power, narrower confidence intervals)

The econometrics of discriminatory wage gaps

- Bad controls and conditioning on outcomes
  - If you only compare groups conditional on attributes, you are ignoring the systematic biases that work against attaining those attributes
- Not directly relevant to course, but recommended reads:
  - Lily Hu: Causal inference for racial discrimination (**Link**)
  - Marshall Burke: Bad controls in climate economics (**Link**)