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Gender Wage Gaps and Coworker Wages

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Latest version and replication files

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AI Disclaimer

AI tools (specifically ChatGPT) were used solely to assist with minor troubleshooting and formatting tasks, including resolving LaTeX and Python issues, and drafting descriptive tables for improved readability. All analysis, model specifications, interpretations, and the final written narrative are our own.

Contents

Data

In this section, we describe the dataset used in our analysis and provide descriptive statistics that summarize the main characteristics of workers in our sample. The data come from administrative records from Country X, a labor market that closely resembles the United States (**?**). Each observation corresponds to a single individual who is observed for multiple consecutive years across two distinct jobs. All individuals in the dataset are observed for at least three years on their first job (periods -3, -2, -1) and three years on their second job (periods 0, 1, 2).

Sample Size and Structure

The dataset contains a total of 16,969 individuals, of whom 10,575 are men and 6,394 are women. Thus, approximately 38% of the sample consists of women. Each individual record includes demographic characteristics, education, experience, and a sequence of wage observations around a job transition.

The timing convention follows the project instructions: period 0 is the first year on the second job, periods 1 and 2 are the subsequent years, and periods -1 through -3 correspond to the final three years on the first job. For each job spell, the dataset also includes a measure of the mean log wage of coworkers, which is central to our later analysis of coworker wage effects.

Variables

The main variables used in our analysis are:

- **Demographics:** age, years of education (educ), and potential experience (exp). Education takes one of four values: 6, 9, 12, and 16 years.
- **Gender:** a binary indicator variable `female` equal to 1 for women and 0 for men.
- **Wages:** log hourly wages measured in different periods:
  - y: wage in period 0 (first year on the second job),
  - $yp1$ and $yp2$: wages in periods 1 and 2,
  - $yl1$, $yl2$, $yl3$: wages in periods -1, -2, and -3 on the first job.
- **Coworker Wages:** mean log wages of coworkers at:
  - the first job ($owage1$), averaged over periods -1 and -2,

- the second job (*owage*2), averaged over periods 0, 1, and 2.

Descriptive Statistics

Table 1 reports descriptive statistics for the main variables in the dataset. Women in the sample tend to have slightly lower wages, both on their first and second jobs, and the distribution of education levels differs meaningfully between men and women. Consistent with the project instructions, experience ranges between 5 and 30 years.

Gender Differences in the Sample

Women represent 38% of the sample and differ systematically from men in several observable characteristics. Women have slightly lower wages on average and are distributed differently across the four education categories. These patterns, visible in the value counts and summary statistics from our data, motivate our analysis of the gender wage gap in the sections that follow.

In Figure 1, we plot the distribution of log wages by gender. Consistent with our summary statistics, women have a lower wage distribution than men. This motivates the subsequent regression and decomposition analyses.

Section 1: Overview: Female vs. Male Workers

Section 2: Gender Wage Gaps

2.1 Wage Regressions and Oaxaca Decomposition

2.2 Gender Difference in Experience Profiles

Section 3: Gender Wage Gaps Conditional on Coworker Wages

Section 4: Event Study - Wage Changes around Moves

Section 5 (Bonus): Shrinkage

Conclusion

Table 1: Summary Statistics

Variable	Mean	Std. Dev.	Min	Max
y (log wage, period 0)	1.79	0.65	0.60	4.34
age	33.56	5.69	22	52
educ (years)	10.48	3.59	6	16
female	0.38	0.49	0	1
exp	17.07	6.45	5	30
yl1	1.74	0.61	0.60	4.24
owage2	(fill from code)			

Figure 1: Distribution of Log Wages by Gender