

# Lecture 22: Pay Transparency

Compensation in Organizations

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# What You Are Paid vs. Who Knows What You Are Paid?

- ▶ Most of this class focuses on what people are paid.
- ▶ In this last lecture, we think about how much people know about how others are paid.
- ▶ Why might this matter?

## Discussion

How much will you be paid in your first job?

# The Pay of Economics Graduates

## BACHELOR'S DEGREE SALARIES BY MAJOR

ACADEMIC MAJOR	MEAN	25 <sup>TH</sup> PERCENTILE	MEDIAN	75 <sup>TH</sup> PERCENTILE	RESPONSES
Computer Engineering	\$76,029	\$69,750	\$75,000	\$80,000	48
Electrical Engineering	\$75,558	\$69,500	\$72,000	\$77,500	55
Engineering Technology	\$72,933	\$68,000	\$72,000	\$79,000	17
Environmental Engineering	\$66,442	\$62,500	\$68,000	\$72,500	12
Industrial/Manufacturing Engineering	\$68,963	\$68,000	\$70,000	\$74,000	27
Materials Engineering/Science	\$71,382	\$69,500	\$72,000	\$75,000	23
Mechanical Engineering	\$72,825	\$68,500	\$71,000	\$75,000	53
Nuclear Engineering	\$72,000	\$69,500	\$71,500	\$75,000	3
Petroleum Engineering	\$85,260	\$69,500	\$80,000	\$105,000	5
Software Engineering	\$78,482	\$68,750	\$78,750	\$85,500	44
Systems Engineering	\$75,999	\$70,000	\$75,000	\$80,000	29
<b>HUMANITIES MAJORS</b>					
Area & Gender Studies	\$48,700	\$43,100	\$46,300	\$54,300	4
English Language & Literature	\$52,179	\$43,450	\$47,600	\$61,000	7
Foreign Language & Literature	\$48,700	\$43,100	\$46,300	\$54,300	4
History	\$49,332	\$45,000	\$47,600	\$51,860	5
Liberal Arts/General Studies	\$52,089	\$45,000	\$50,000	\$55,000	9
Philosophy	\$51,911	\$44,667	\$46,300	\$61,000	6
Visual & Performing Arts	\$48,700	\$43,100	\$46,300	\$54,300	4
<b>SOCIAL SCIENCES MAJORS</b>					
Economics	\$64,193	\$58,000	\$65,000	\$67,500	21
Political Science/International Relations	\$57,170	\$54,321	\$57,500	\$65,000	6

Source: NACE SALARY SURVEY (2022)

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Pay Transparency in the UNC System

Pay Transparency in General

## Discussion

The UNC System maintains a public salary database that is current to December 31, 2024.

# Pay Distribution by Job Class in Econ. Departments System-Wide

JOB CATEGORY	INSTITUTION NAME	count	Min Salary	Med Salary	Max Salary
Professor (Primary) and Department Chair/Head	UNC-CH	1	264313.0	264313.0	264313
Professor (Primary) and Department Chair/Head	UNCG	1	235289.0	235289.0	235289
Department Chair / Head AC	NCSU	2	221133.0	232522.5	243912
Dean, Business	UNCP	1	230308.0	230308.0	230308
Associate Professor (Primary) and Department Chair/Head	UNCW	1	229319.0	229319.0	229319
Professor	UNC-CH	17	120861.0	214479.0	469555
Professor (Primary) and Department Chair/Head	ASU	1	208276.0	208276.0	208276
Professor	NCSU	18	140319.0	197876.0	267056
Professor	UNCG	2	145346.0	181824.5	218303
Assoc./Asst Dean, Business	UNCP	1	176748.0	176748.0	176748
Professor (Primary) and Department Chair/Head	ECU	1	171668.0	171668.0	171668
Associate Professor	UNC-CH	8	104854.0	161234.5	186177
Professor	UNCW	6	94986.0	158320.0	183620
Assistant Professor	UNC-CH	11	97000.0	155324.0	164000
Associate Professor	UNCC	5	54596.5	154901.0	172291

The top 15 campus-job class pairs by median salary.

## Pay Distribution Econ Assistant Professors

JOB CATEGORY	INSTITUTION NAME	count	Min Salary	Med Salary	Max Salary
Assistant Professor	UNC-CH	11	97000	155324.0	164000
Assistant Professor	UNCC	5	84000	146520.0	149694
Assistant Professor	WSSU	1	136751	136751.0	136751
Assistant Professor	NCSU	14	88000	136369.0	149968
Assistant Professor	UNCG	3	110869	110869.0	110869
Assistant Professor	NCA&T	6	82000	110250.0	145400
Assistant Professor	UNCW	3	100000	107150.0	160760
Assistant Professor	ECU	2	98880	101840.5	104801
Assistant Professor	UNCA	2	95625	97448.5	99272
Assistant Professor	ASU	2	67000	88605.0	110210

## Salary Inversion Across Institutions

JOB CATEGORY	INSTITUTION NAME	count	Min Salary	Med Salary	Max Salary
Associate Professor	UNC-CH	8	104854.0	161234.5	186177
Assistant Professor	UNC-CH	11	97000.0	155324.0	164000
Associate Professor	UNCC	5	54596.5	154901.0	172291
Associate Professor	WSSU	1	151185.0	151185.0	151185
Associate Professor	NCSU	6	116875.0	147917.0	168244
Assistant Professor	UNCC	5	84000.0	146520.0	149694
Associate Professor	UNCW	7	126391.0	139053.0	169196
Assistant Professor	WSSU	1	136751.0	136751.0	136751
Assistant Professor	NCSU	14	88000.0	136369.0	149968
Associate Professor	NCA&T	5	118000.0	121800.0	130000

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Cullen (2024)

## Partial Equilibrium vs. General Equilibrium

- ▶ **Decision Problems:** Given everything is fixed, what happens if I do  $x$  vs.  $y$ ?
  - ▶ Most everyday decisions.
  - ▶ Many people (including policymakers) consider.
  - ▶ Intuition/common sense works well here.
- ▶ **Games/Partial Equilibrium:** Given you respond to me, what happens if I do  $x$  vs.  $y$  if we fix most other things?
  - ▶ Most of this class (employer designs contract understanding worker will react)
  - ▶ Some people think this way for big decisions (college, job offers, etc.)
  - ▶ Some government policy consider this (Ledbetter case)
  - ▶ Intuition/common sense sometimes works well here.
- ▶ **General Equilibrium:** Given you respond to me and everything around us also responds, what happens if I do  $x$  vs.  $y$ ?
  - ▶ This class largely ignored this.
  - ▶ People almost never think this way (and this is largely rational).
  - ▶ With the exception of macroeconomists, many economists abstract from this.
  - ▶ Intuition/common sense are often wrong here.
  - ▶ But this matters for pay transparency, because we change the info. everyone has.

## The Ledbetter Case and “Decision Problem” Thinking

- ▶ Ledbetter learns the salary of a coworker doing similar work.
- ▶ It turns out this was true of the other (male) coworkers.
- ▶ Ledbetter presses charges against her company.
- ▶ Decision problem thinking works here, because this is a single company and one employee.
- ▶ This is also “horizontal” pay transparency.

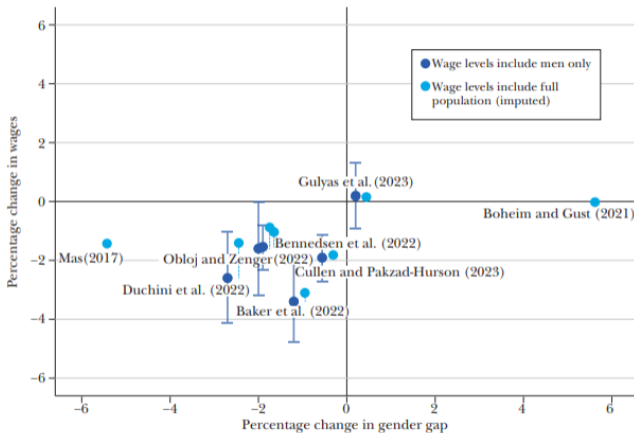
# The 2009 Lilly Ledbetter Fair Pay Act

- ▶ People have tried to use Ledbetter as an example for larger reforms.
- ▶ But scaling the logic from one case can be dangerous.
- ▶ There can be partial and general equilibrium effects.
- ▶ Question: What does this mean?

# Horizontal Pay Transparency Has Unintended Consequences

Figure 1

Effect of Pay Transparency on Wages, Existing Studies



Source: Each observation is a study of a pay transparency policy, with study details and results describe further in Table 2.

Note: The y-axis is the percentage change in wages, and the x-axis represents the percentage change in the gender wage gap. Dark blue dots represent the percentage change in wages for men only, with standard error bars, while light blue dots represent the percentage change in wages for all workers.

## Unintended Consequence 1: A Partial Equilibrium Effect

- ▶ One explanation relates directly to this class.
- ▶ When a worker sees they are paid less than peers, they become discouraged.
- ▶ They then exert less effort and are less productive.
- ▶ The firm then pays even lower wages.
- ▶ In what ways is this similar to the logic of relational contracts?
- ▶ How is it not?

## Unintended Consequence 2: A General Equilibrium Effect

- ▶ Consider an organization with 100 workers with wage  $x$  before pay transparency.
- ▶ If one of the workers asks for a raise of  $x + 1$ , the firm can grant the raise at cost of 1.
- ▶ After pay transparency, if the worker asks for a raise of 1 the cost is now 100!
- ▶ The firm will now negotiate more aggressively against requests for raises.
- ▶ And importantly, the firm can credibly say “If I give it to you, I must give it to everyone.”
- ▶ Finally, workers will not negotiate aggressively because they could be fired, and the benefit of a raise is shared.

## Discussion

What is the first-year total compensation of an economics PhD at a consulting firm?

## Vertical Pay Transparency (Cullen and Perez-Truglia (2022))

- ▶ Employees underestimated the average salary of their manager's position by 14%
- ▶ This inflates future expectations about their own earnings.
- ▶ Employees responded by increasing sales by 1.1%, emails by 1.3%, and hours by 1.5% for each 10% increase in the perceived manager's pay.
- ▶ This is a productivity improving, career-concerns-like-effect.