

# Intro to Labor Economics with Claudia Goldin

## Baltimore Polytechnic Guest Lecture

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# Plan

- ① What is labor economics?
- ② Claudia Goldin and gender economics
- ③ Intro to data analysis
- ④ Navigating trade-offs at work

# Outline

- 1 What is labor economics?
- 2 Claudia Goldin
- 3 Data work
- 4 Tradeoffs at work

# Labor economics

- Micro-economists broadly study *how decisions are made* at the individual level
- This usually falls into two categories:
  - ① How do firms (companies) make decisions?
  - ② How do workers or households make decisions?
- Labor economists focus on the second of these, specifically focusing on decisions about:
  - ① Education
  - ② Work
  - ③ Career
  - ④ Marriage and family

# Labor economics

- Labor economists are also often interested in *how* and *why* different groups of people make different decisions and have different experiences
  - “Heterogeneity” — understanding differences!
- What tools do we use?
  - Theoretical models
  - Real world data
  - Statistical analysis
- Economics is a *social science* — we try and make statements about a very messy world using very messy data. This is not easy!

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# Claudia Goldin

- Labor economist at Harvard (and the first tenured female economics professor!)
- Groundbreaking work (largely) in gender economics, which uses the tools of economics to analyze and understand various differences and inequalities which fall along gender lines
  - Gender wage gap
  - Female labor force participation
  - Child penalty
  - Much, much more
- Innovative use of data, cutting-edge statistical techniques, and history
- And recently: **winner of the 2023 Nobel Prize in economics!**

# Gender wage gap

- Goldin's work on the gender wage gap points to:
  - Career interruptions
  - Occupational differences
- She shows that controlling for these things leads the wage gap to shrink, but *not disappear*
- Some natural questions:
  - Why might these factors lead to lower wages?
  - Why might these factors affect men and women differently?
  - What does it mean to “control” for things like career interruptions when understanding gender discrimination?



# Other themes

Other areas of work have been:

- Education decisions and “human capital”
  - Emphasizes the importance of college attainment and the role of increasing female college attendance in improved labor market outcomes
- Practical policies
  - Has highlighted actual government policies which could promote gender equality: flexible work, affordable childcare, etc.
- Historical perspective
  - Looks at the long run trajectory of female labor force participation
  - Will discuss this more at the end!

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# Introduction to data work

- Most of what the majority of economists do on a day-to-day basis involves writing computer code and analyzing data
- Let's get a gentle introduction to this using a Python notebook
- <http://tinyurl.com/polyecon>

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# Responding to an increased wage

- One of Goldin's contributions was to explain how female labor force participation has responded to growing wages
- Let's try and understand this in a very simple setting
- Suppose you have two choices to make:
  - ① How much to work
  - ② How much to consume
- You enjoy consumption, but you dislike working — which is the same as saying you enjoy *leisure*, or not working
- You need to make a decision about the best combination of work and consumption!

# Simple example

- Suppose you make \$20 an hour, work 40 hours per week, and consume \$800 worth of goods (your whole salary)
- Now let's say your wage increases to \$30 per hour. How would you respond?
  - What would happen if you worked the same amount?
  - What would happen if you worked 30 hours per week?
  - What would happen if you worked 50 hours per week?

# Simple example

- Say your wage increases to \$30 per hour. How would you respond?
  - **What would happen if you worked the same amount?** Consume  $40 \times \$30 = \$1200$
  - **What would happen if you worked 30 hours per week?** Consume  $30 \times \$30 = \$900$
  - **What would happen if you worked 50 hours per week?** Consume  $50 \times \$30 = \$1500$
- No matter what, we are happier to be consuming more!
- But, we may be more or less happy with hour of work.
- Which is best?

# Simple example

- Which is best? **We don't know!**
- To decide whether to increase our work hours, we need to know if the *decrease* in happiness from the extra 10 hours of work is outweighed by the *increase* in happiness from the extra \$300 of consumption
- This depends on individual *preferences*



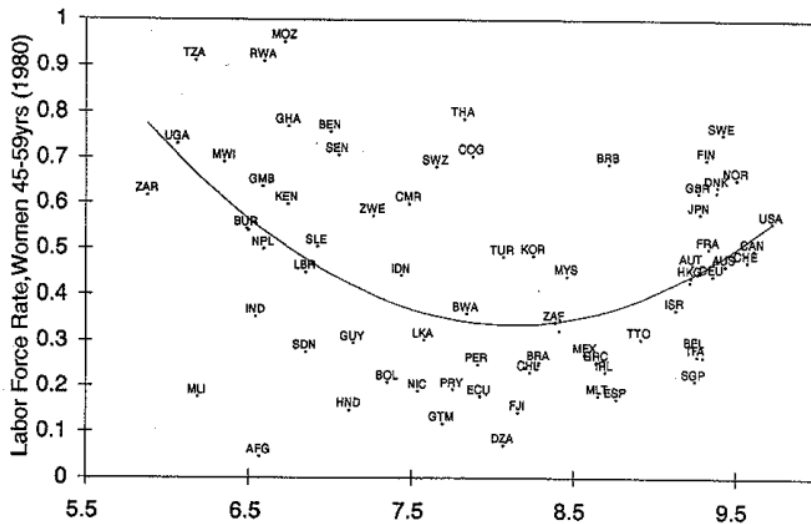
# Income and substitution effects

- There are two different channels at play here:
  - ① **Income effect** is the direct effect of the wage increase: we are wealthier, and so we want to increase our consumption **and** our leisure
  - ② **Substitution effect** is the indirect effect: because our wage is higher, “purchasing” free time (the *opportunity cost*) is relatively more expensive, and so we may want to work more hours and consume more
- Which of these two channels is stronger?
  - We don't know! Need to try and measure from the data

# Income and substitution effects

- This was one of the main contributions for which Goldin won the Nobel Prize
- She analyzed the trajectory of women's labor force participation over time to show how the two effects balanced out as wages grew
  - Also highlighted the importance of occupational shifts, emergence of white-collar work, etc.
- Famous "u-shaped labor supply curve"

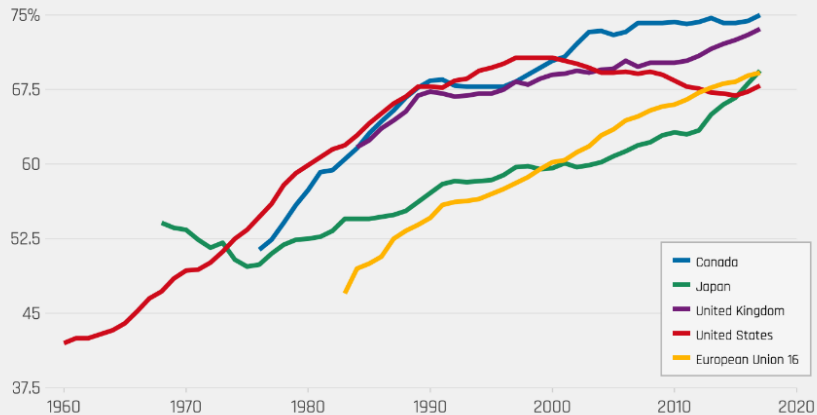
# U-shaped supply curve



# U-shaped supply curve

## Since 2000, U.S. women's labor force participation has declined

Women's labor force participation rate in selected OECD countries, 1960-2017



Source: Organisation for Economic Co-operation and Development, "OECD Stat" [2019].

# Income and substitution effects

- Flattening LFPR in recent years suggests these two effects are relatively balanced — and the income effect may be stronger in the US
- Important lesson: economics often involves multiple channels working at the same time, with an *ambiguous* net effect
  - In this case, that a wage increase could increase *or* decrease work hours
- Important to measure and distinguish between these channels to fully understand what is driving a trend

# Conclusion

Key takeaways from today:

- Labor economics is a great field and you all should go study it
- Claudia Goldin is an incredible scholar
- Economics has interesting things to say about the world!

Thank you!