

Rising Earnings Inequality

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Econ520

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The issues

Earnings inequality has been rising for the past 35 years.

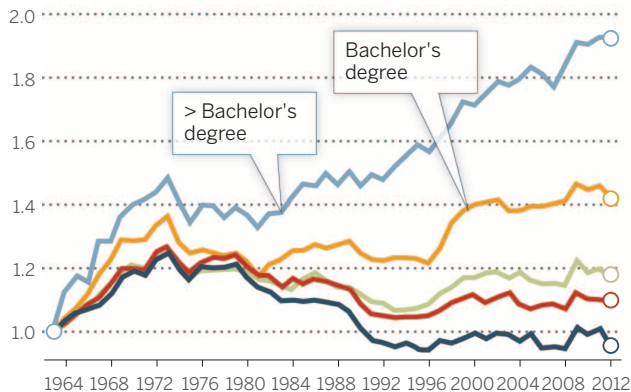
Why has this happened?

What could be done about it?

Rising return to schooling

Real weekly earnings relative to 1963 (men)

A

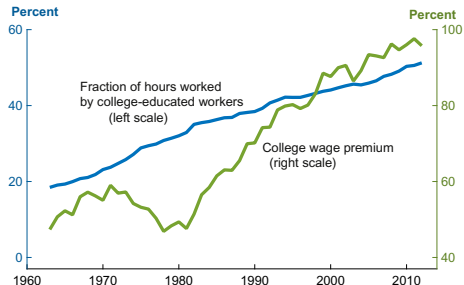


Source: Autor (2014)

Remarkable: No wage gains for high school grads since 1970

Why Did the College Premium Rise?

Surprise: The premium rose even as the relative supply of college grads rose.



Source: Jones (2016)

Skill biased technical change

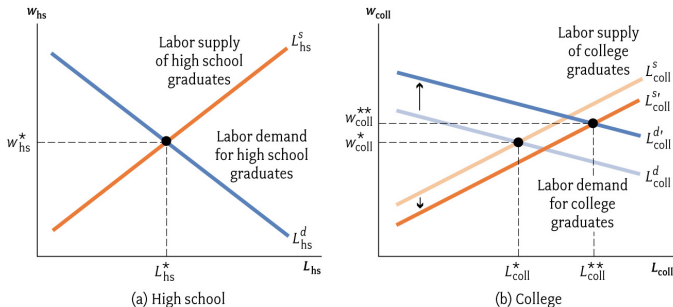


FIGURE 7.9 Understanding the Rising Return to Education

Macroeconomics, Charles I. Jones
Copyright © 2008 W. W. Norton & Company

Demand for college labor rises faster than supply

A Simple Model of SBTC

Aggregate production function:

$$Y_t = F(\mu_t H_t, L_t) \quad (1)$$

H : college grads, L : others

Wages = marginal products of labor

$$w_{H,t} = \mu_t \frac{\partial F}{\partial \mu H} \quad (2)$$

SBTC: μ grows at a constant rate over time

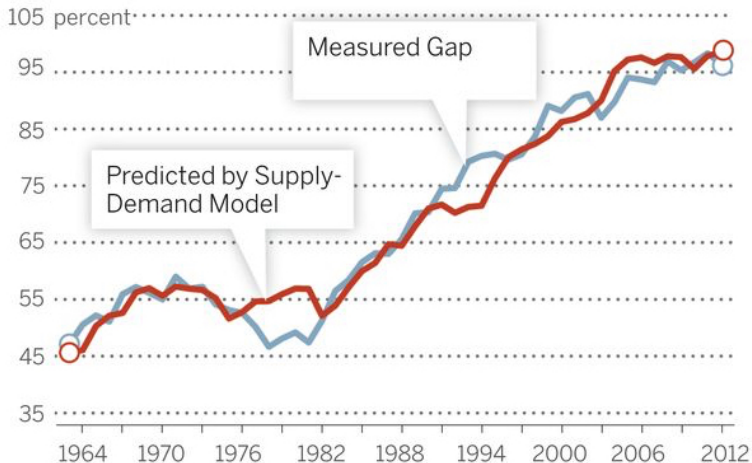
How well does this model fit the data?

- ▶ Take labor supplies from the data (hours worked)
- ▶ Fit a constant growth trend for μ

Model Fit

College versus high school
wage gap (%)

B



Model Implications

For a long time, the demand for skilled labor has been rising

- ▶ in many countries
- ▶ at a constant rate

For a long time, the rising supply of skilled labor prevented the rise of the college premium.

Around 1980, the rise in U.S. college attendance slowed down.

Since then, demand outstrips supply and the college premium rises.

Skill biased technical change

SBTC is widely viewed as a main contributor to rising wage inequality.

Demand for skilled / managerial occupations rose over time.

Potential causes:

- ▶ computers, automation
- ▶ international trade

Automation

How does automation (computers, AI) affect the demand for labor?

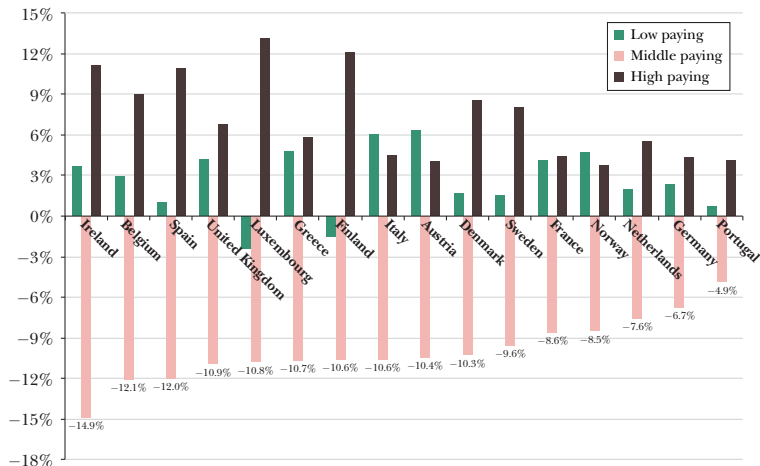
Types of jobs:

- ▶ highly skilled: usually hard to automate (abstract decision making)
- ▶ skilled blue collar: easy to automate (assembly lines, bank tellers)
- ▶ unskilled: hard to automate “soft tasks” (retail sales)

Result: automation pushed workers from middle income to low income jobs.

Labor Market Polarization

Change in Occupational Employment Shares in Low, Middle, and High-Wage Occupations in 16 EU Countries, 1993–2010



Source: Autor (2015)

Will Jobs Disappear?

Will automation make most jobs obsolete?

Should we expect that workers without college degrees will become unemployable?

Policy Implications

What could governments do to reduce wage inequality?
(A good topic for your term paper!)

Reading

- ▶ Autor (2014) on the race between education and technology.

Advanced Reading

- ▶ Gordon, Robert J.; Dew-Becker, Ian (2007). "Selected Issues in the Rise of Income Inequality. Brookings Papers on Economic Activity, 2007, 2, pp. 169-190. DOI: 10.1353/eca.2008.0011
- ▶ Dew-Becker, Ian. Gordon, Robert J. (2005). "Where Did the Productivity Growth Go? Inflation Dynamics and the Distribution of Income." Brookings Papers on Economic Activity, 2005, 2, pp. 67-150. DOI: 10.1353/eca.2006.0004

References I

- Autor, D. H. (2014): "Skills, education, and the rise of earnings inequality among the" other 99 percent", *Science*, 344, 843–851.
- (2015): "Why are there still so many jobs? The history and future of workplace automation," *The Journal of Economic Perspectives*, 29, 3–30.
- Jones, C. I. (2016): "Chapter 1 - The Facts of Economic Growth," in *Handbook of Macroeconomics*, ed. by J. B. Taylor and H. Uhlig, Elsevier, vol. 2, 3–69.