

Motivation: Inequality in Labor Markets

Return to Schooling in US Rising

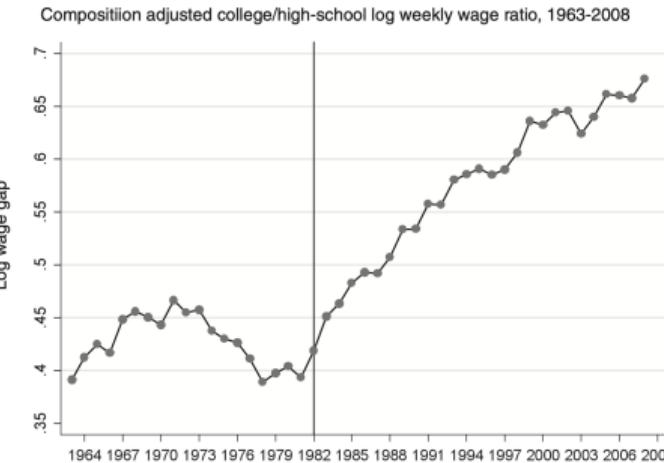


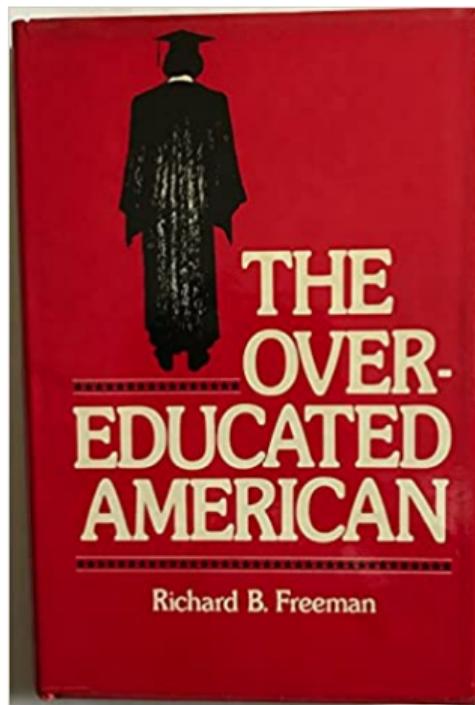
Figure 1 Source: March CPS data for earnings years 1963-2008. Log weekly wages for full-time, full-year workers are regressed separately by sex in each year on four education dummies (high school dropout, some college, college graduate, greater than college), a quartic in experience, interactions of the education dummies and experience quartic, two race categories (black, non-white other), and a full set of interactions between education, experience, and sex. The composition-adjusted mean log wage is the predicted log wage evaluated for whites at the relevant experience level (5, 15, 25, 35, 45 years) and relevant education level (high school dropout, high school graduate, some college, college graduate, greater than college). The mean log wage for college and high school is the weighted average of the relevant composition adjusted cells using a fixed set of weights equal to the average employment share of each sex by potential experience group. The ratio of mean log wages for college and high school graduates for each year is plotted. See the Data Appendix for more details on the treatment of March CPS data.

Overview

- Relates to the many labor economics story that we've been talking about
- Labor supply
- Labor demand
- Human capital

Back in 1970s

- How much more do you earn if you have a college degree?
- A decline in 1970s
- “The Over-Educated American”
(Richard Freeman, Harvard, 1976)
- But then 1980 came
- Log wage gap doubles!
- Very long-run and very early on (1980)
- The education premium is rising



Taiwanese Case

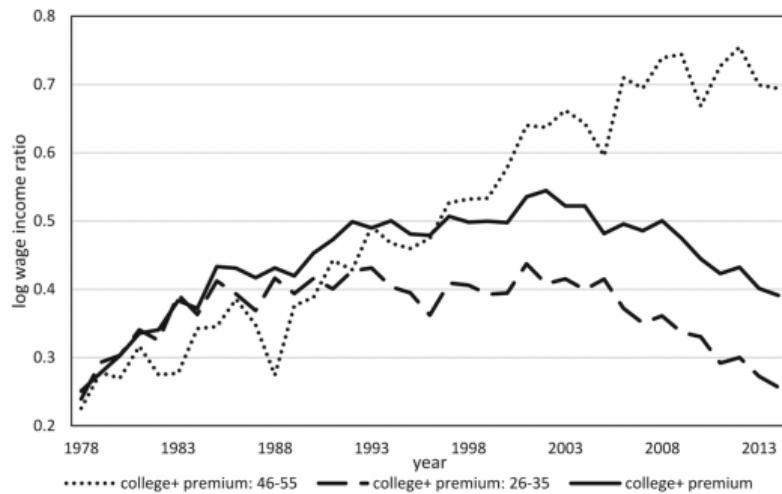


Figure 3.—Overall college-plus premium and college-plus premium by age groups, 1978–2014. The college premium is the difference in annual wage income, including bonuses, between college-plus and high school workers. Wage income is deflated by the consumer price index.

Figure 2: Source: Keng et al. (2017)

Overall Inequality also Rising

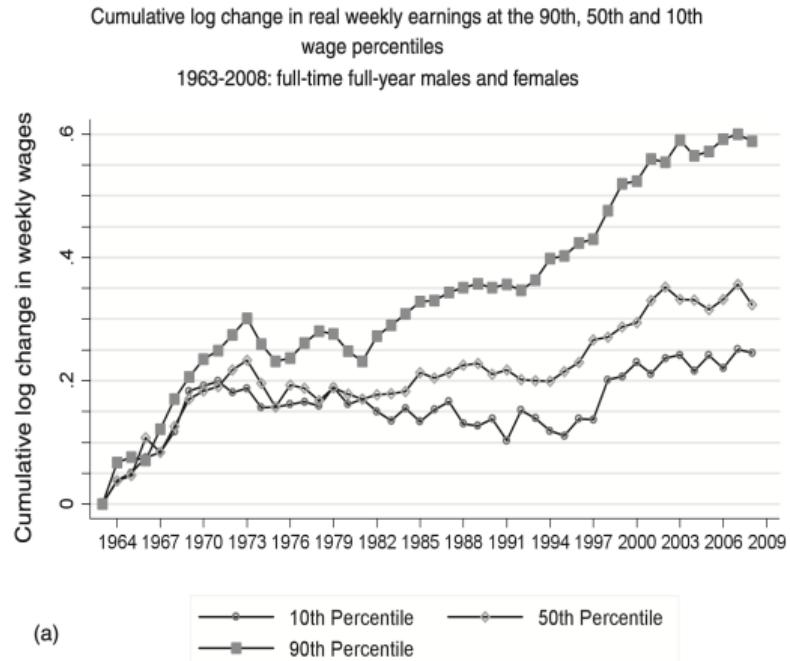


Figure 3: Source: Acemoglu and Autor (2011)

Overall Inequality

- Misleading public debates
- Not only the bottom that's driving
- Not only the top either
- But the very throughout across the distribution
- Explanation of super rich policies, decrease in welfare cannot explain
- If we cut by periods, the inequality actually decreases!

Economic Story

- Demand and Supply for high skill labor
- Demand goes faster than supply then price increases
- Supply goes faster than demand then price decreases
- Demand grows faster than supply in the past years

Sources of demand and supply

- Demand: technology progress, integrated markets, investment in physical capital
- Supply: investment in human capital

Model

CES Production Function:

$$Y = [(A_I L)^\rho + (A_h H)^\rho]^{1/\rho}$$

- $\sigma = 1/(1 - \rho)$ elasticity of substitution
- In a competitive market, $w_L = \frac{\partial Y}{\partial L}$, $w_H = \frac{\partial Y}{\partial H}$
-

$$\log \pi := \frac{w_H}{w_L} = \left(\frac{\sigma - 1}{\sigma}\right) \log\left(\frac{A_h}{A_I}\right) - \frac{1}{\sigma} \log\left(\frac{H}{L}\right)$$

- Fix σ , could estimate $\frac{A_h}{A_I}$
- Assume labor demand increases linearly over time

Fit of the data

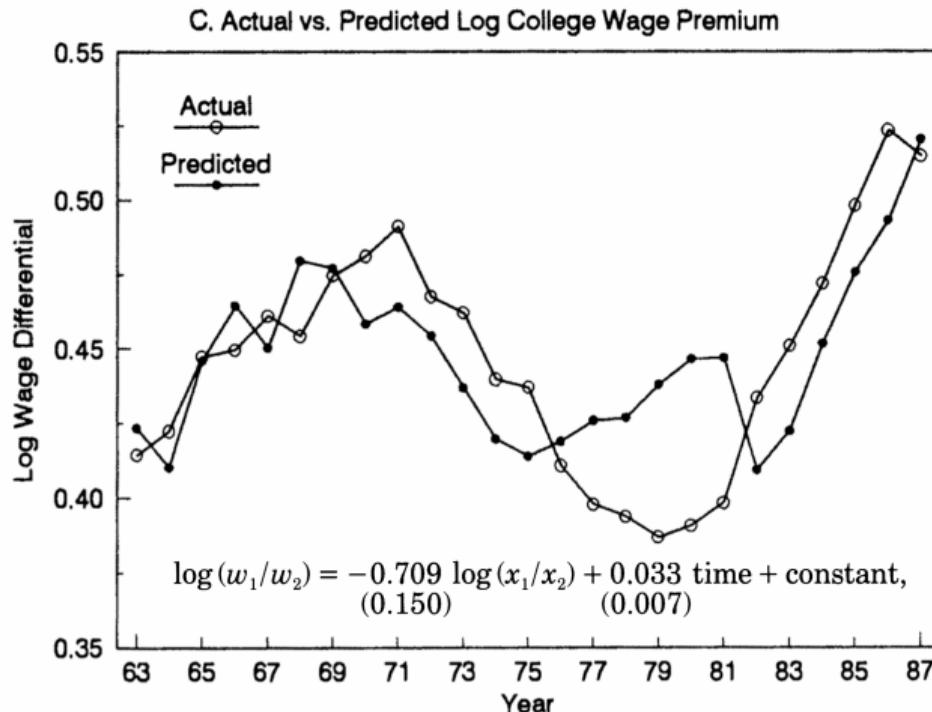


Figure 4: Katz and Murphy (1992)

Fit of the data

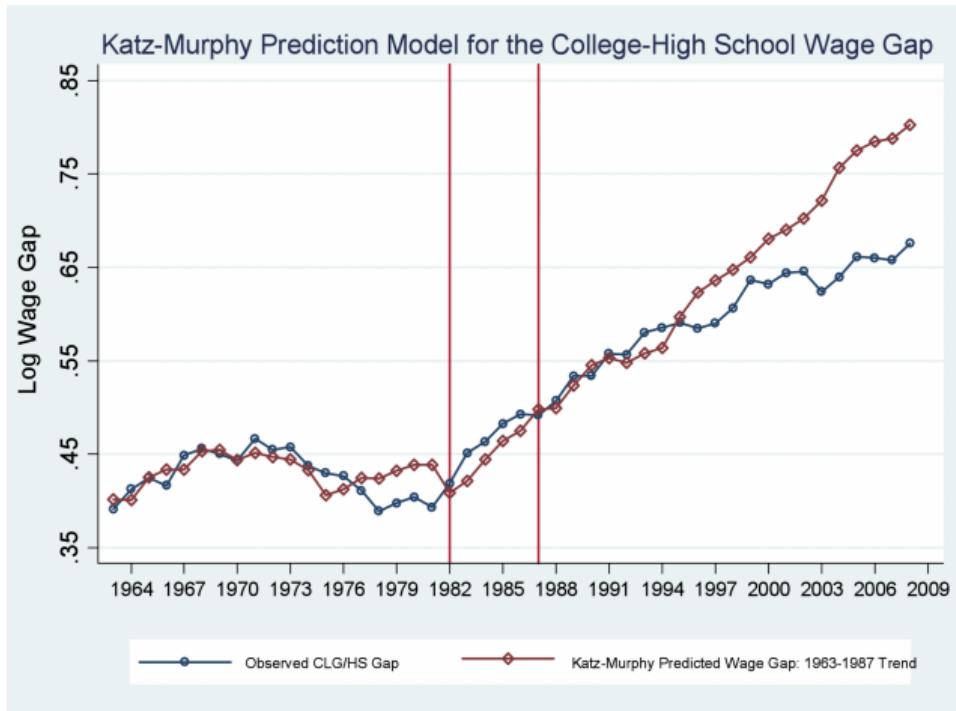


Figure 5: Acemoglu and Autor (2011)

Do People Not Respond?

Returns and College Attendance

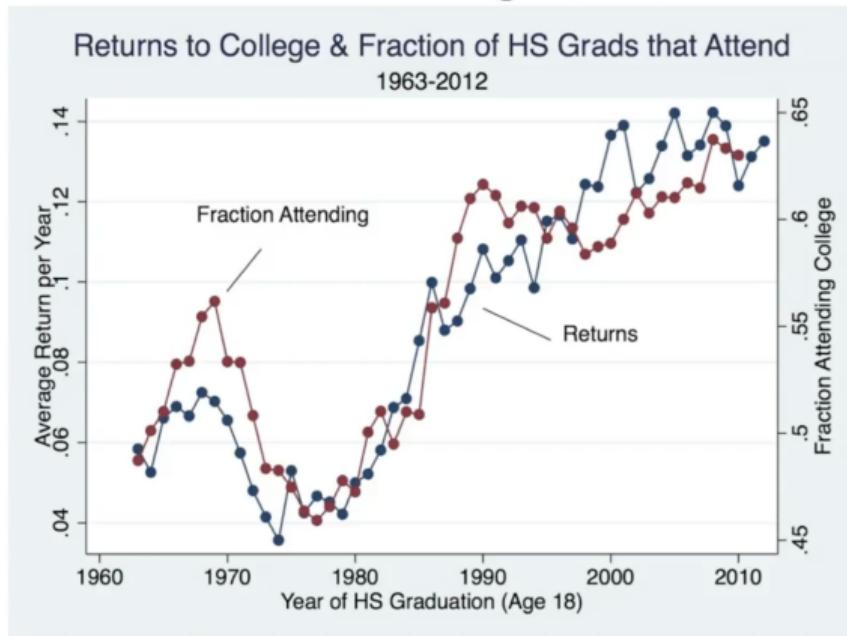


Figure 6: Source: Murphy (2015)

Do People Not Respond?



Figure 7: Source: Murphy (2015)

Do People Not Respond?

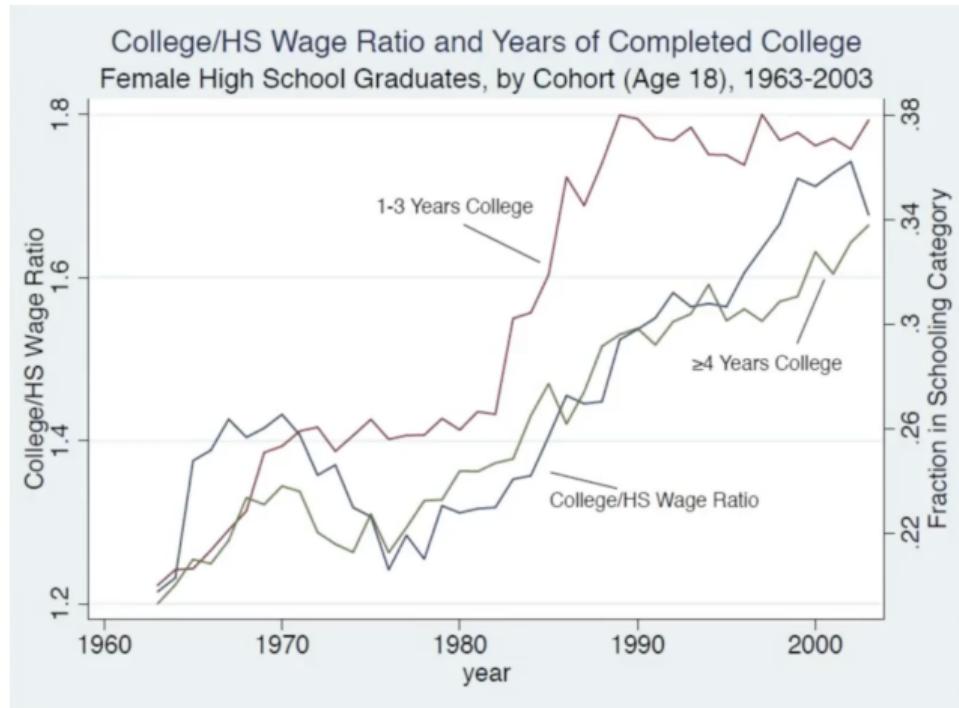


Figure 8: Source: Murphy (2015)

Do People Not Respond?

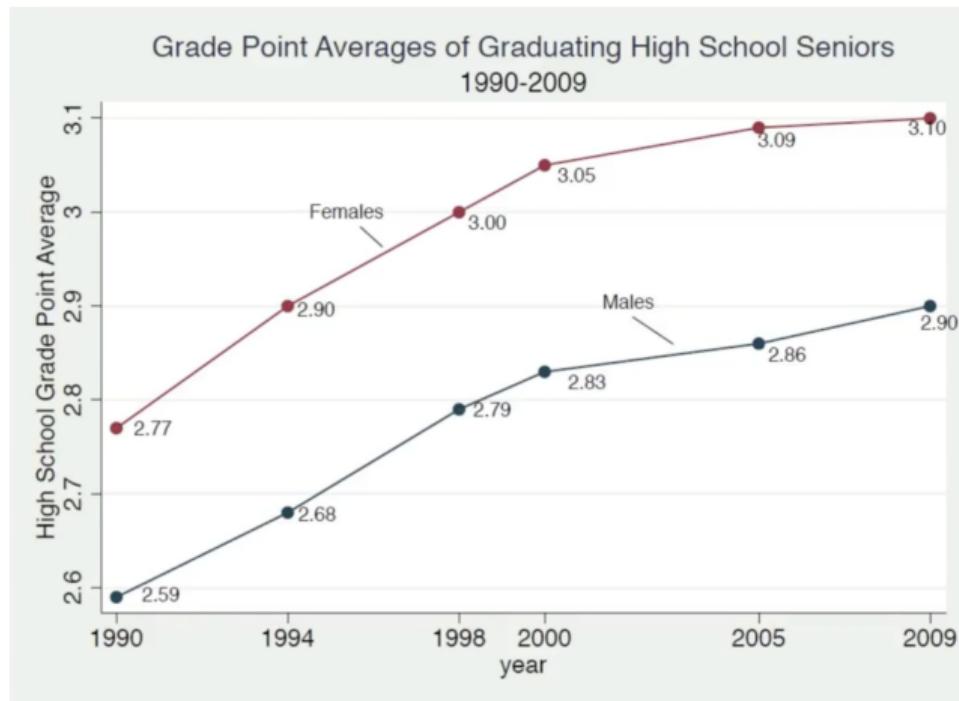


Figure 9: Source: Murphy (2015)

Other Margins



- Other margins of increases
 - High skill worker works more time
 - Low skill worker works less

Two Approaches

- Reduce demand
 - Bad approach, this also reduces production
- Increase supply
 - Education, training,
 - Don't have to make everyone increase:
 - Increase high skill labor, decrease low skill supply, price goes up.