Income Inequality, Human Capital and Growth

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Returns to Schooling Have Been Rising

Education Premiums

- Col/HS
- Grad/HS

Overall Inequality has Been Rising
Growth in Men's and Women's Log Weekly Wages by Percentiles of the Wage Distribution, 1970-72 through 2010-12
Wage Growth by Percentile by Decade (men)

Changes in Log Wage by Percentile 1972-1982

Changes in Log Wage by Percentile 1982-1992

Changes in Log Wage by Percentile 1992-2002

Changes in Log Wage by Percentile 2002-2012
Changes in Log Wage by Percentile 1972-2012 (men)
What about the 1% vs the 99%?
Premium For Top 0.1%
Increase in Premium For Top 0.1% (Base=1979)
Q. What generates the growth in demand for more skilled labor?

A. The same basic forces that generate economic progress
A Picture of Progress
U.S. Real Per Capita GDP 1889-2012
Where Does Growth Come From?

• There are three primary sources of growth
  • Improvements in technology (knowledge)
  • Investment in physical capital
  • Investment in human capital

• Growth in markets is also a factor
<table>
<thead>
<tr>
<th>Driver</th>
<th>Effect on Output</th>
<th>Effect on Skill Premium</th>
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<tbody>
<tr>
<td>Technical Progress</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Investment in Physical Capital</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Improved/Integrated Markets</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Investments in Human Capital</td>
<td>+</td>
<td>-</td>
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The Growth-Education Interaction

• Growth in technology and capital fuels growth in the demand for educated labor
• Over the 20\textsuperscript{th} century education levels grew to meet this growing demand
• The price/return to education is determined by the supply/demand balance
• Changes in supply and demand help explain historical movements in skill premiums
What about the supply side?
Grade Point Averages of Graduating High School Seniors
1990-2009

High School Grade Point Average

Year
Female
2.77  2.90  3.00  3.05  3.09  3.10
Male
2.59  2.68  2.79  2.83  2.86  2.90
DISTRIBUTION OF FIRST-YEAR UNDERGRADUATE GPA, BEGINNING POSTSECONDARY STUDENTS LONGITUDINAL STUDY
The Human Capital Challenge

• Growth in human capital has been and continues to be a critical component of growth
• Labor market outcomes demonstrate growing demand for skill that is outstripping supply
• The preparation of individuals (particularly young men) seems to be a limiting factor
• High returns signal an opportunity and a challenge
• Human Capital investment is a long-term effort
What happens when the supply of new graduates fails to keep pace?

- Prices rise (we saw that above)
- Supply responds on other dimensions
- These other responses exacerbate the growth in inequality:
  - High wage workers work harder and work more
  - Low wage workers work less
Average Weekly Hours Worked, by Percentile of Wage Distribution
Men, 1970-72 & 2010-12

- 1970-72: Red line
- 2010-12: Blue line

Percentile of Weekly Wage Distribution
Average Hours Per Week

0 20 40 60 80 100
40 42 44 46 48 50 52
Key Takeaways

• Relative wages are relative prices
• Supply and demand matter
• Forces driving wage inequality and economic growth are closely linked
• Individuals respond to incentives
  • Extensive margin reduces inequality
  • Intensive margin increases inequality
• Less response on one margin implies more response the other
• Inequality represents a challenge but also an opportunity