Projecting Long-Run Trends in Earnings Inequality

David Deming

Harvard University

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The plan

1. Trends in labor income inequality

2. Importance of rising returns to education for explaining the increase in top 5% labor income

3. Why education? “The race” – supply and demand
   - Recent growth in relative supply suggests education may be “catching up”

4. Reasons for optimism, and pessimism
   - College quality, graduate degrees
   - Possible policy changes

What drives earnings inequality

1. "Economic Fundamentals"
   - Technology, returns to skill, globalization

2. Institutions and Policy
   - Minimum wage, unions, market power, contract work and domestic outsourcing, public investments in education and training

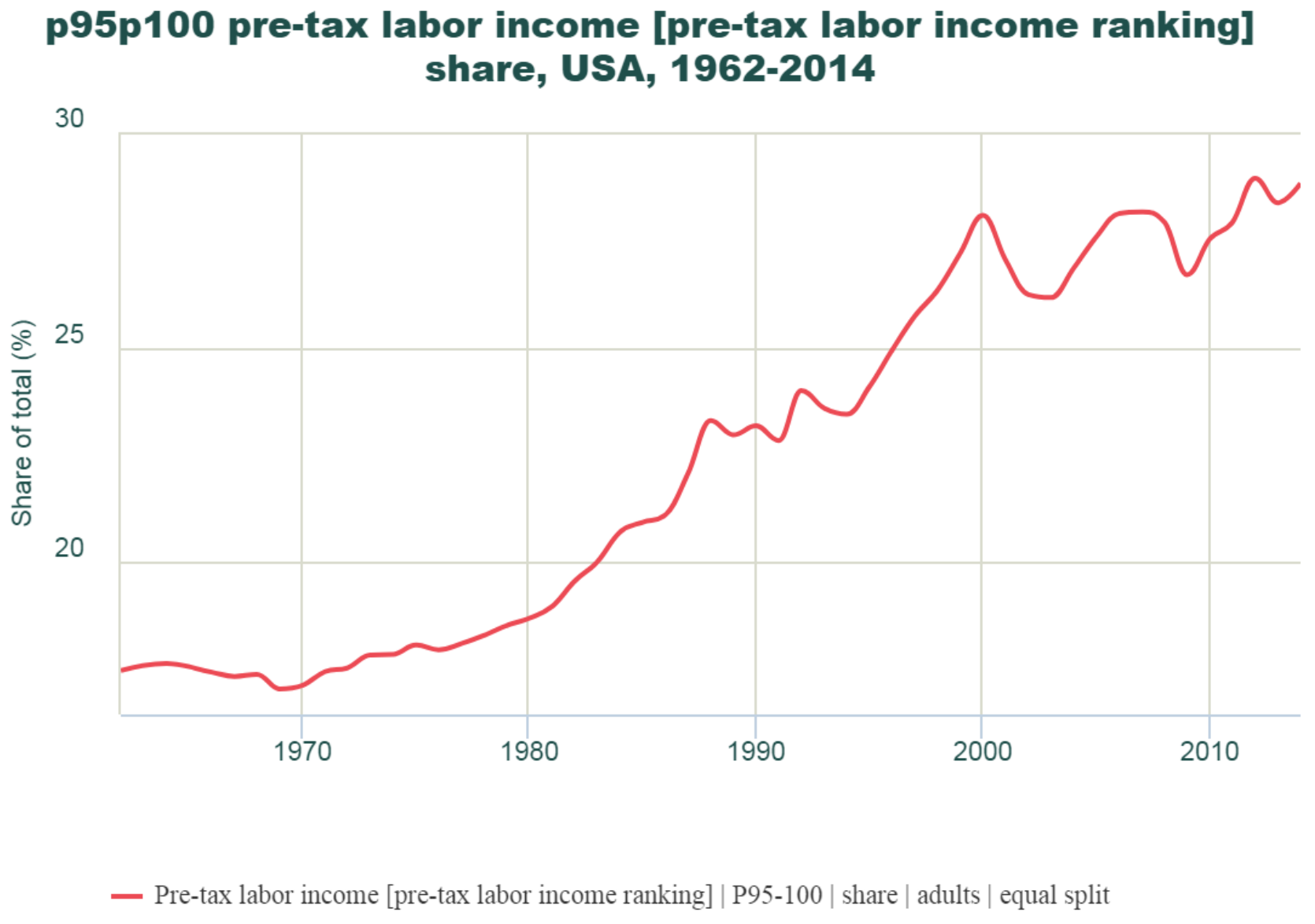
3. Politics and norms
   - Public support for redistribution, "greed is good", etc..

My quick (perhaps superficial) summary: upper tail (e.g. 95/50) inequality is mostly about #1. lower tail (e.g. 50/10) inequality is mostly about #2. Trends in top 1% and above are driven by the interaction between #1 and #3.

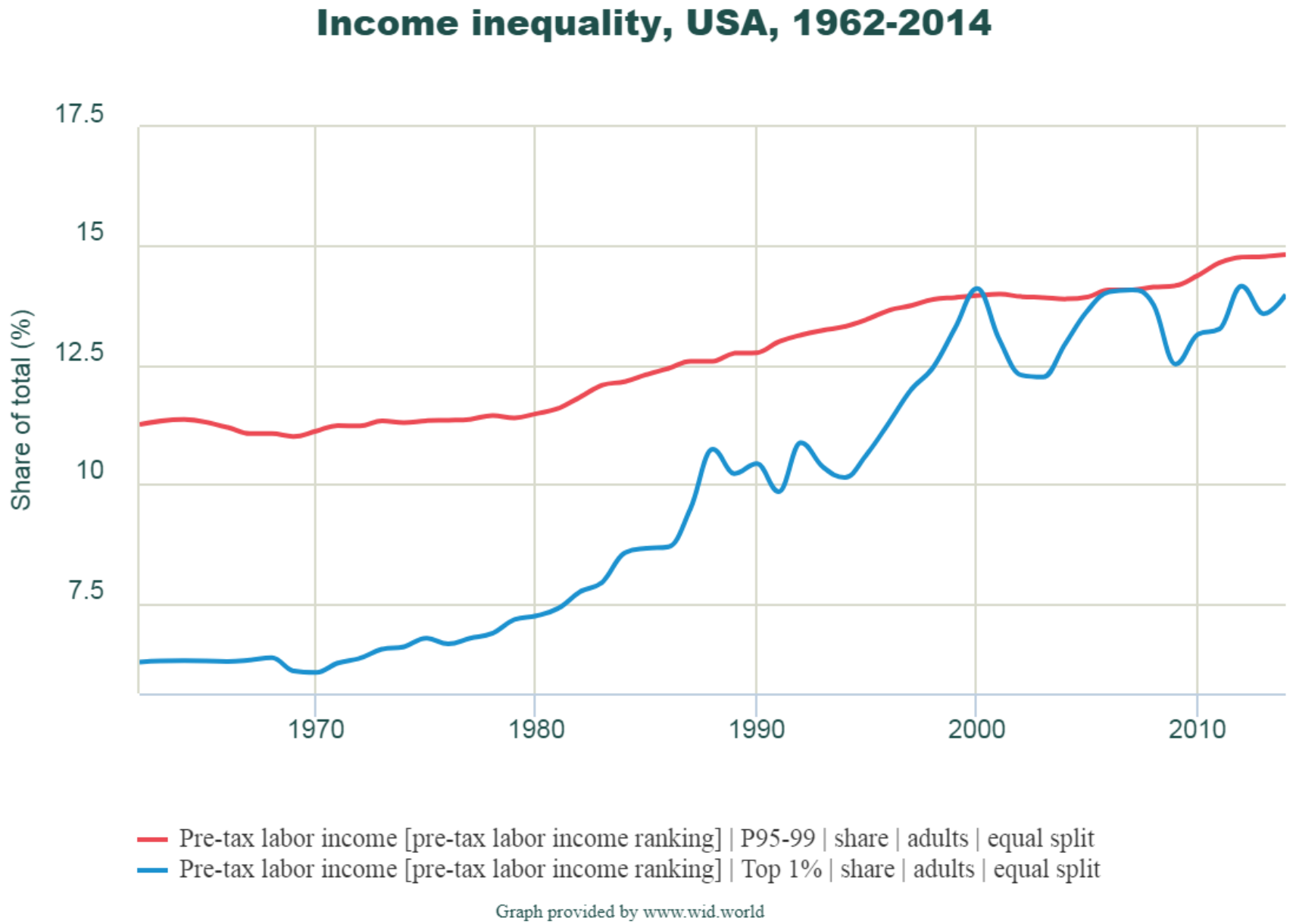
A word about the top 1%

- Globalization, scale, and the economics of “superstars”
- Evidence of rising top earnings inequality in a variety of settings with different compensation structures (e.g. CEOs, musicians, professional athletes)
- Suggests that “superstar” phenomenon is at least partly market-driven (Kaplan and Rauh 2011)
- No strong reason to think that markets will become *more* globalized
  - But ability to translate talent into income could change – mostly about policy (e.g. taxation)

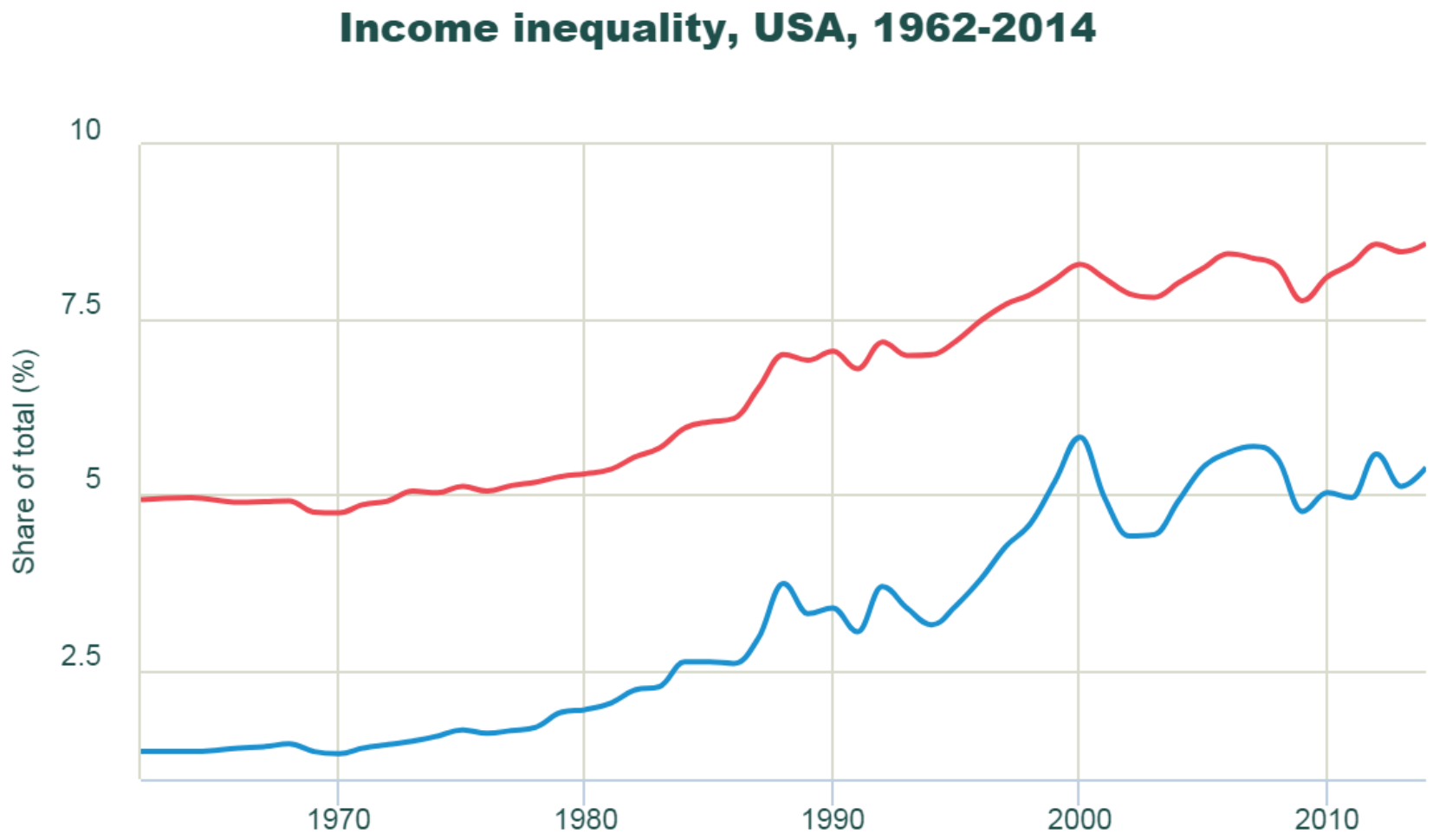
Steady growth in top 5% labor income



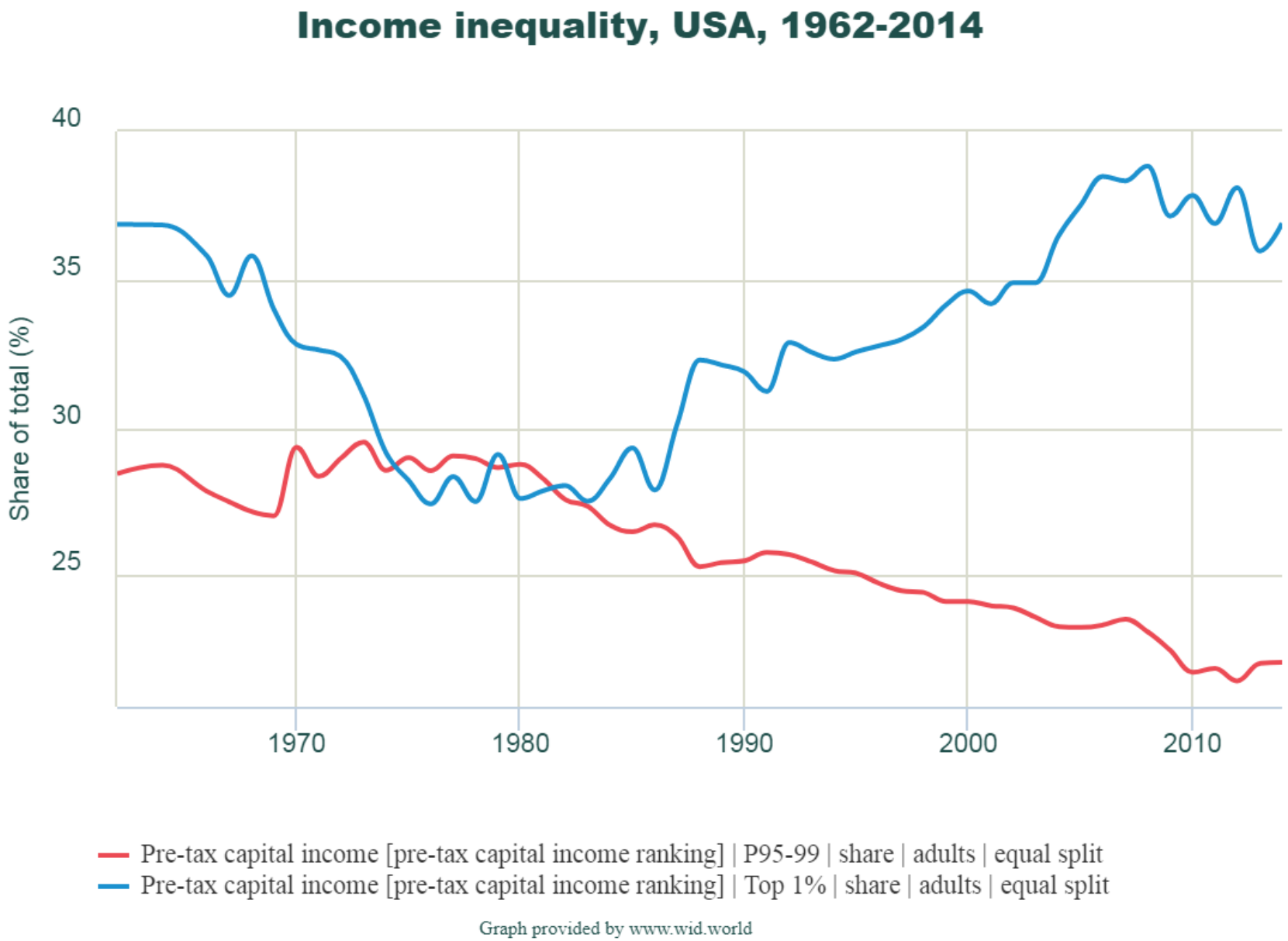
Comparing top 1% to 95-99th percentile…



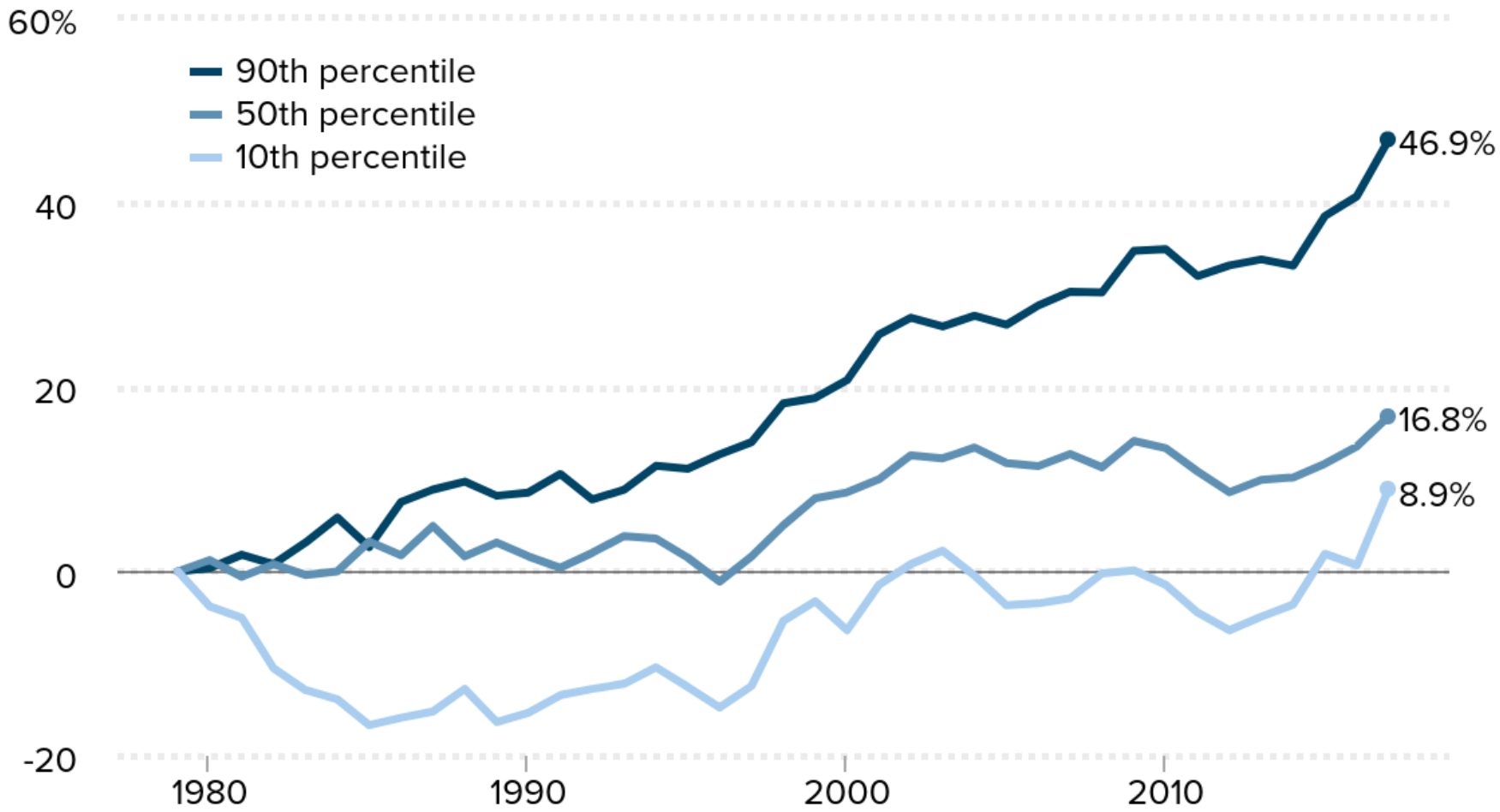
Unlike capital income, growth is not exponential at very top…



Very different picture for capital.....

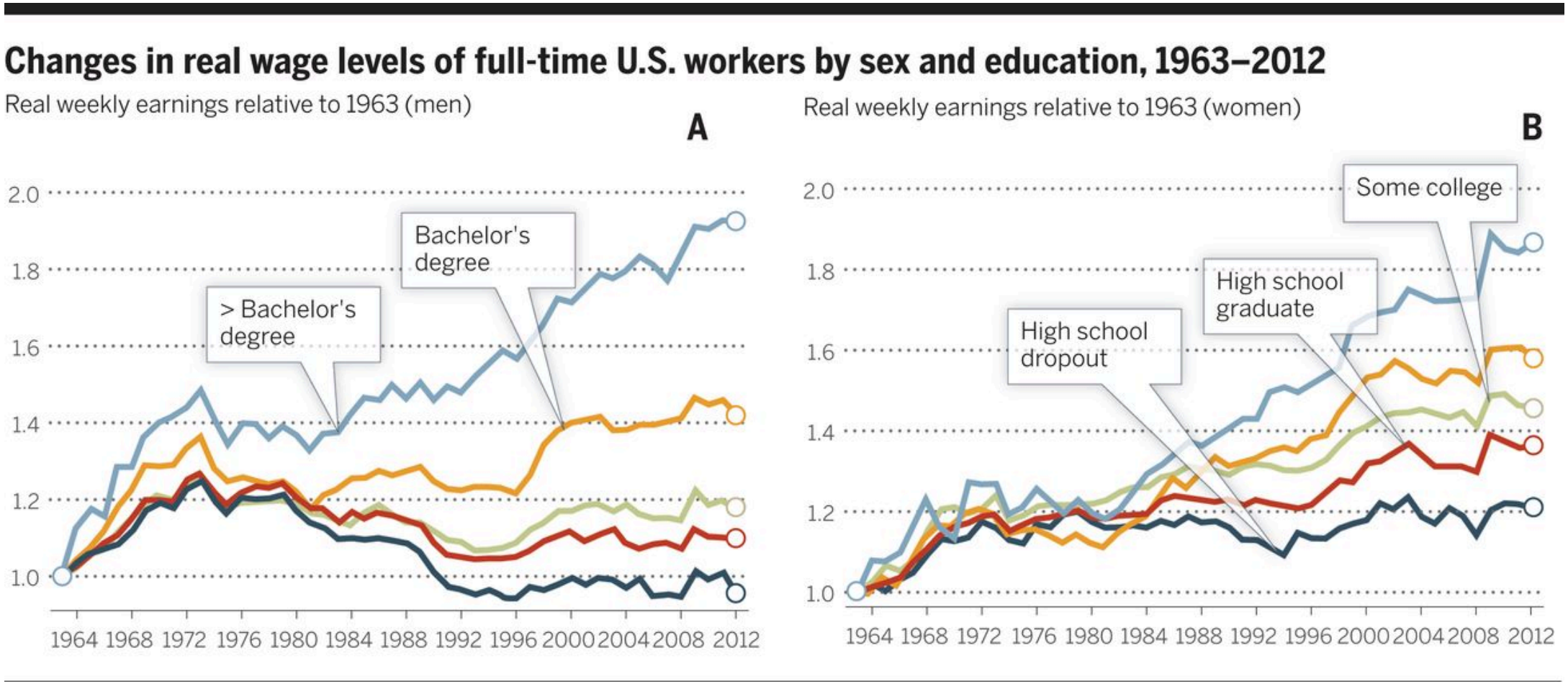


Cumulative percent change in inflation-adjusted hourly wages for all workers at the 10th, 50th, and 90th percentiles, 1979–2017



Source: Schmidt, Gould and Bivens (2018)

Fig. 6 Change in real wage levels of full-time workers by education, 1963–2012.

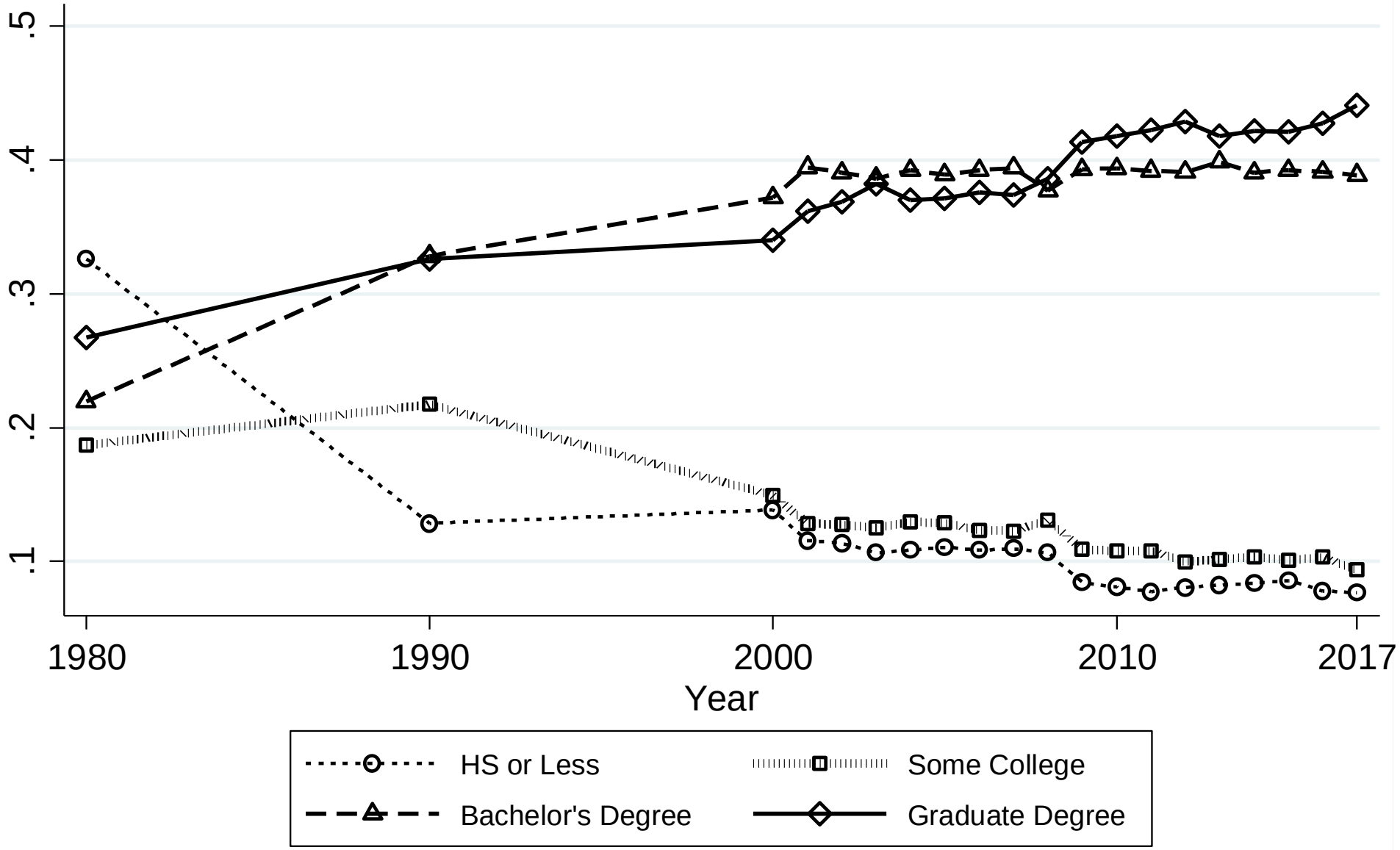


David H. Autor Science 2014;344:843-851

Source: Autor (2014)

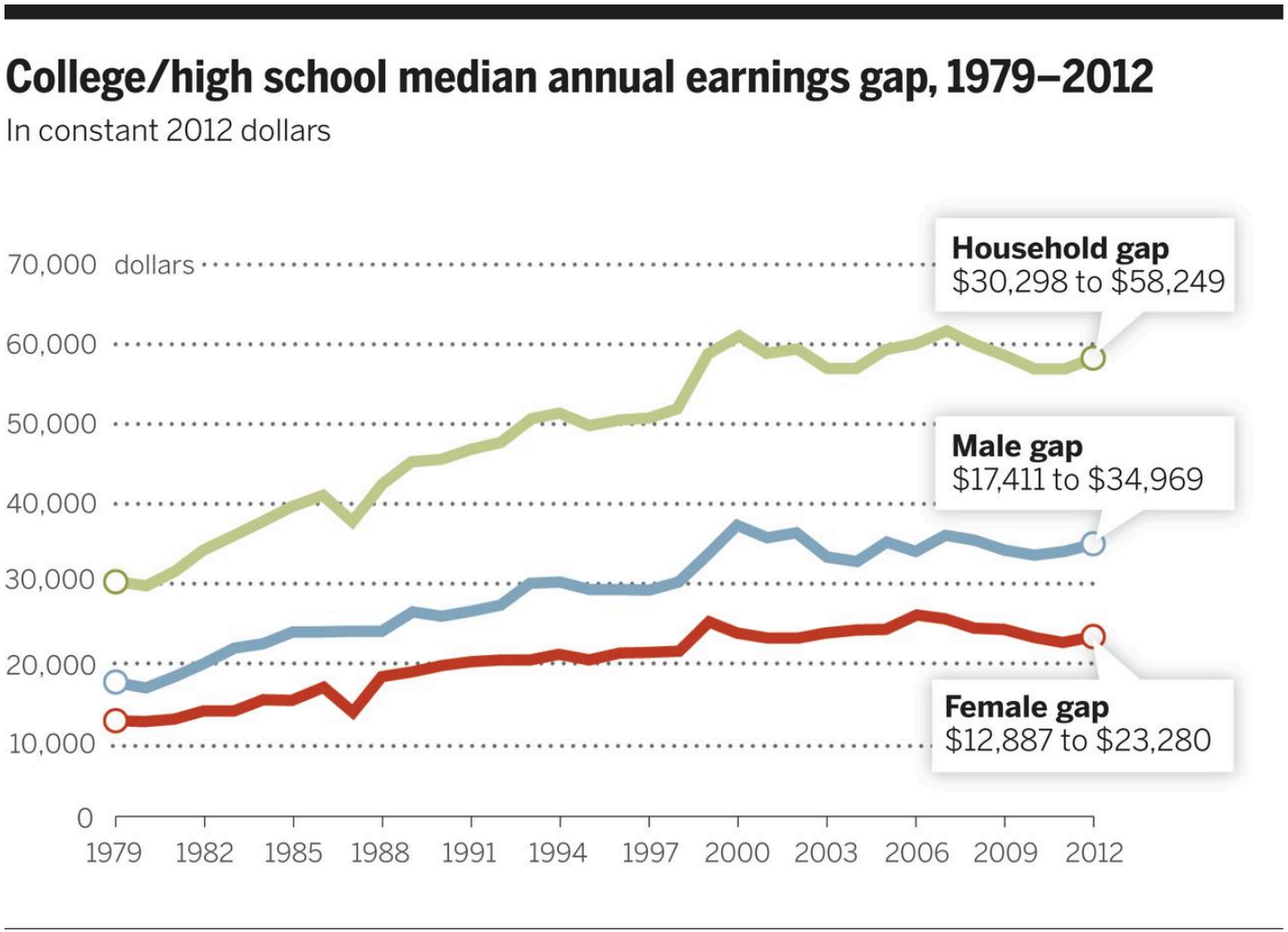
Educational Attainment Composition of High Earners

Share of Workers with Earnings over the SSA Taxable Maximum in each year



Source: Census and ACS, population age 25-54

Fig. 1 College/high school median annual earnings gap, 1979–2012.



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Source: Autor (2014)

Growing wage inequality strongly linked to educational attainment

- Rising share of earners above the SSA taxable maximum are highly educated
  - Particularly large growth among graduate degree holders
  - In 1980, less than half of prime-age workers above the SSA maximum had a BA or higher.
  - By 2017, this figure was nearly 85 percent.

- Between 1979 and 2012, the gap in household income between two-earner families where neither have a BA vs. both have a BA grew by about $28,000.
  - If you redistribute all the gain in income accruing to the top 1% over this period to the bottom 99%, you get about $7,000 per household.
  - Thus the earnings gaps generated by rising returns to education is *4 times larger* than the growth in top 1% income

The Race Between Education and Technology

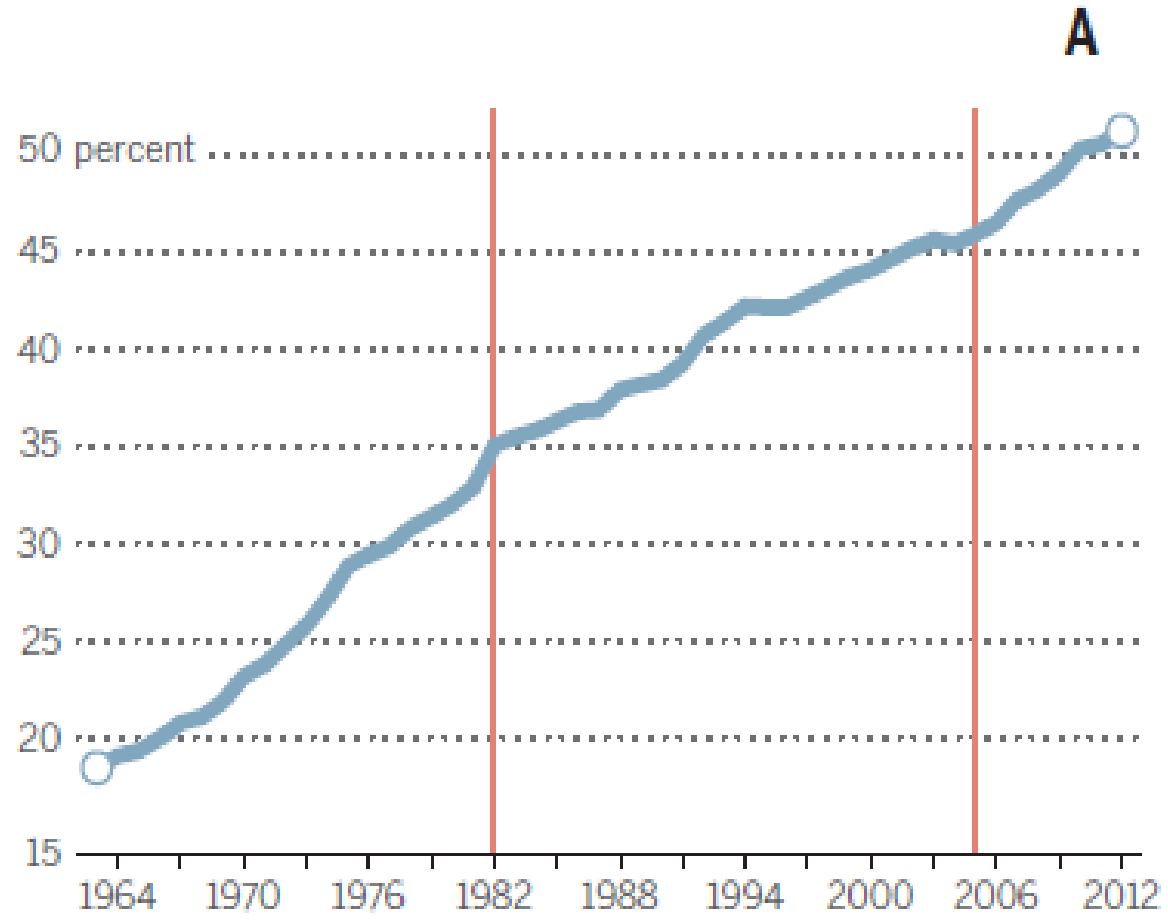
- SDI framework (Katz and Murphy 1992, Goldin and Katz 2009) predicts college premium using:
  1. Supply of skills – Ratio of college grads to high school grads
  2. Time trend (flexible)

- Ask whether changes in the (relative) frequency of college grads is strongly correlated with changes in the *economic return* to a college degree.

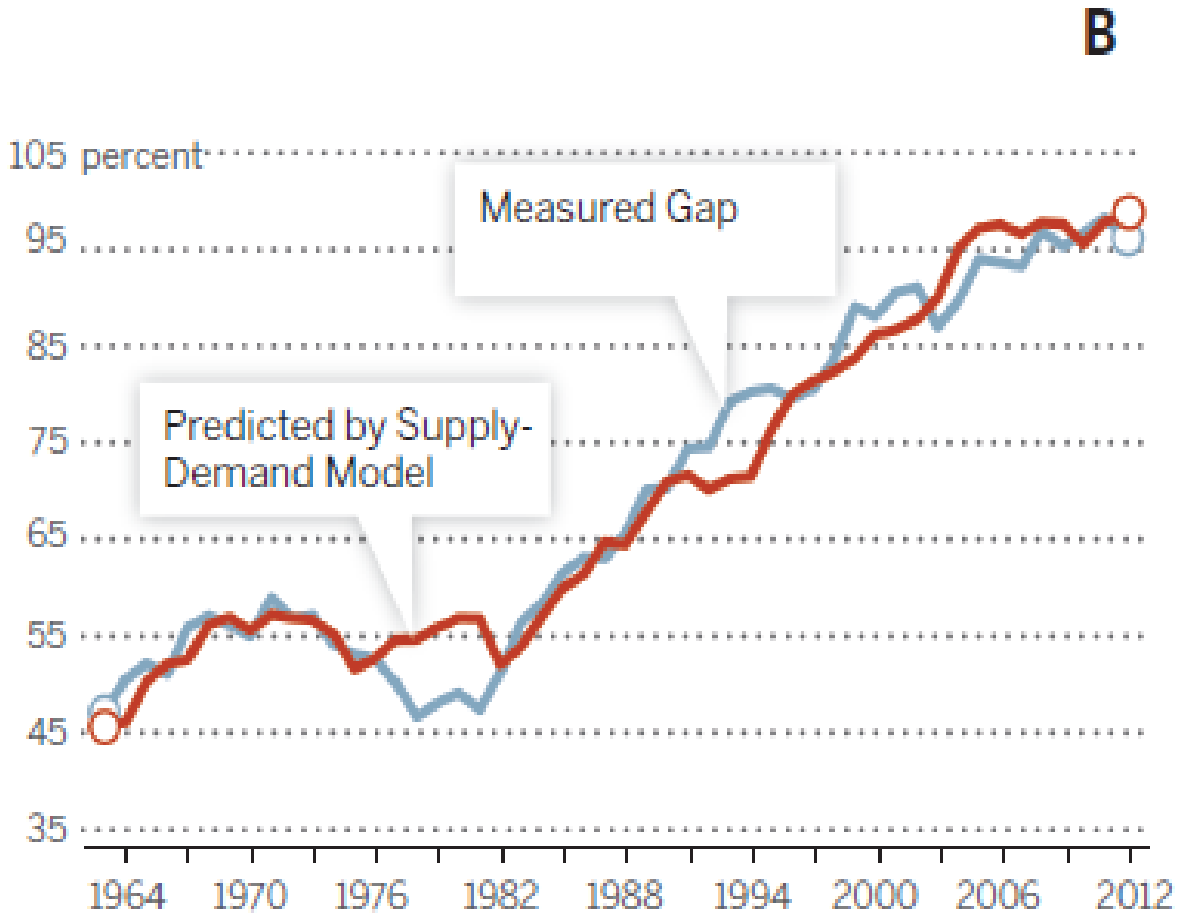
- If supply is growing, and college premium still rising, demand must have grown *faster*

The supply of college graduates and the U.S. college/high school premium, 1963–2012

College share of hours worked (%), 1963–2012:
All working-age adults



College versus high school
wage gap (%)

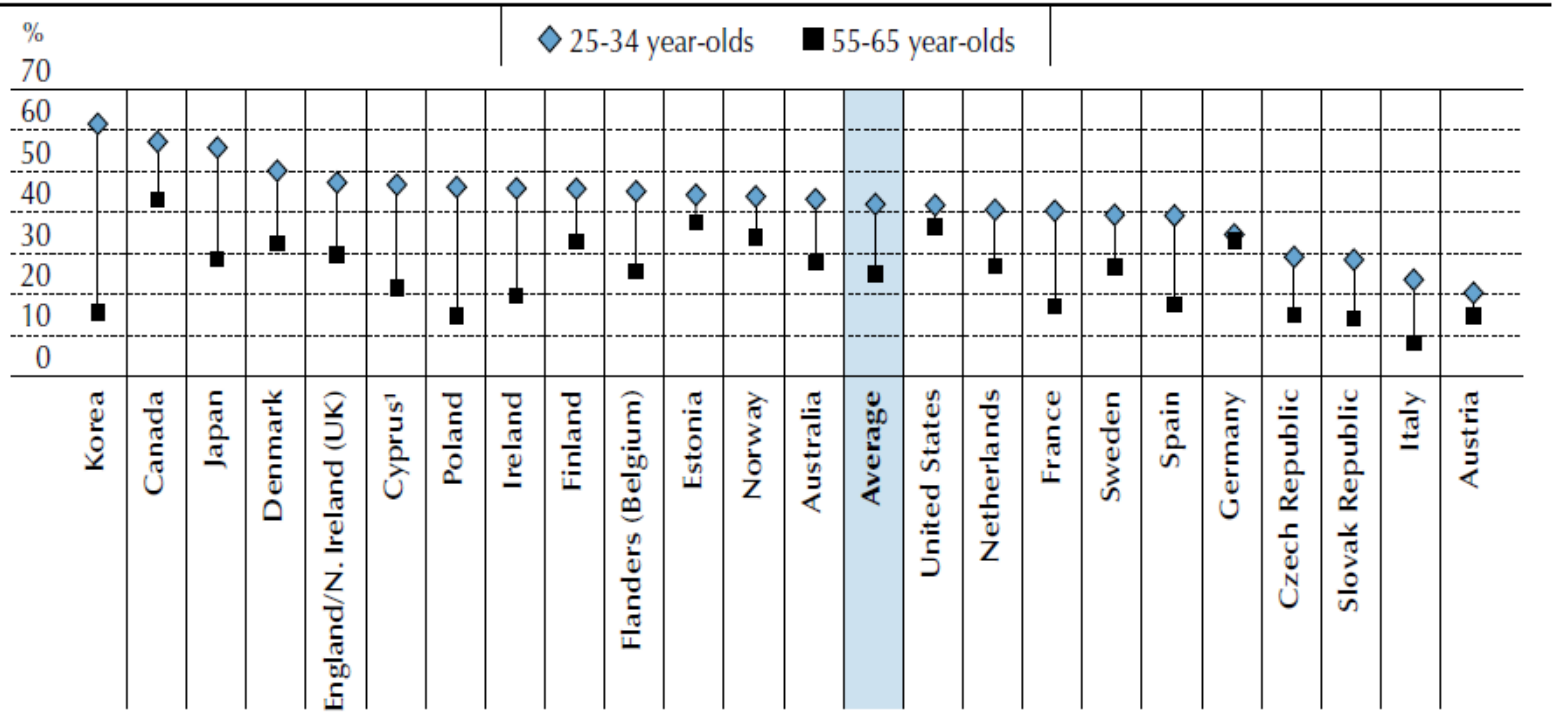


Source: Autor (2014)

Tertiary Education Completion in OECD Countries as of 2012 by Age Groups, 25 – 34 and 55 – 65

Population with tertiary education

Percentage, by age group

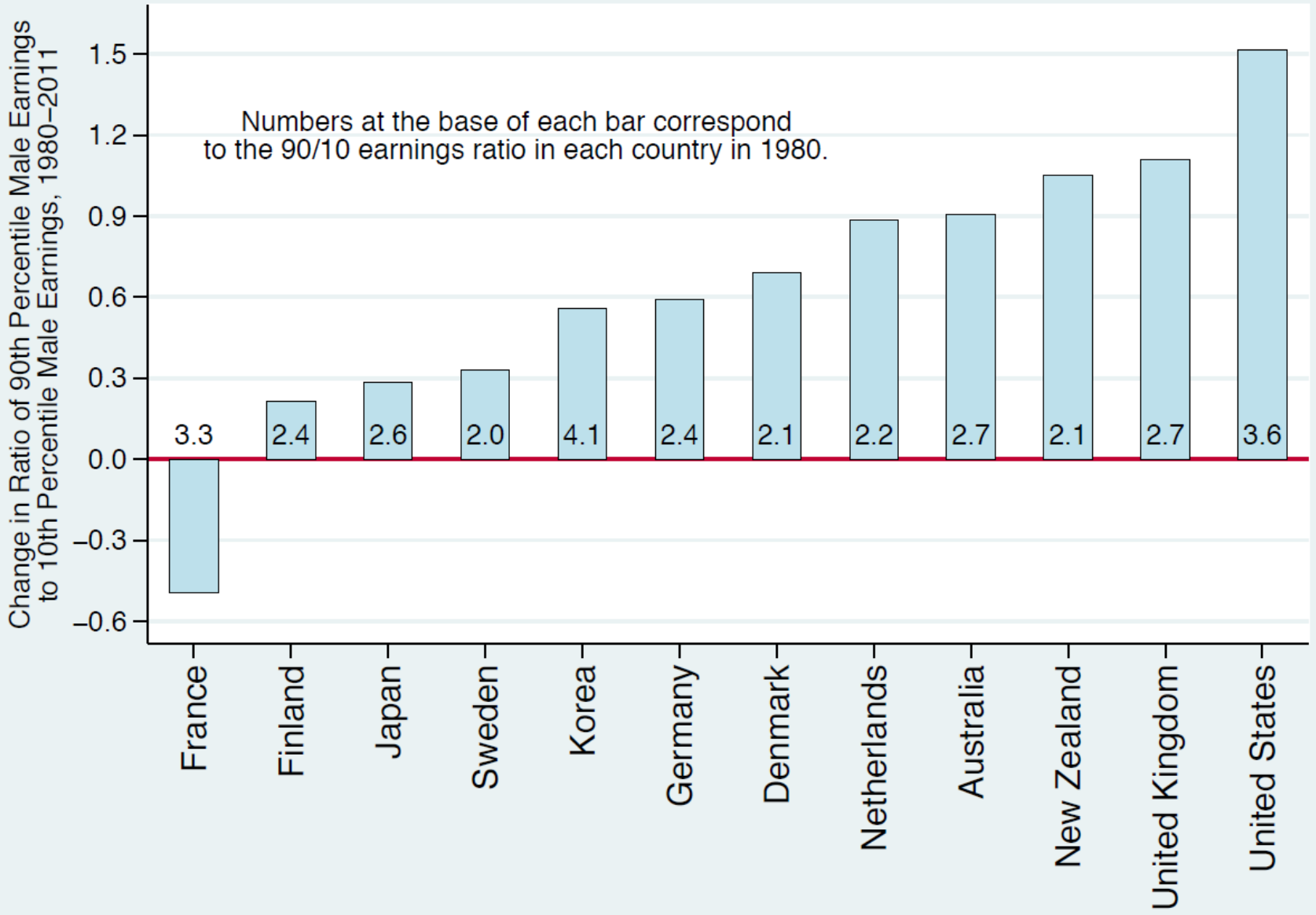


1. See notes at the end of this chapter.

Countries are ranked in descending order of the percentage of 25-34 year-olds with tertiary education.

Source: Survey of Adult Skills (PIAAC) (2012), Table B2.2 in Annex B.

Changes in the 90/10 Ratio of Full-Time Male Earnings Across Twelve OECD Countries, 1980-2011

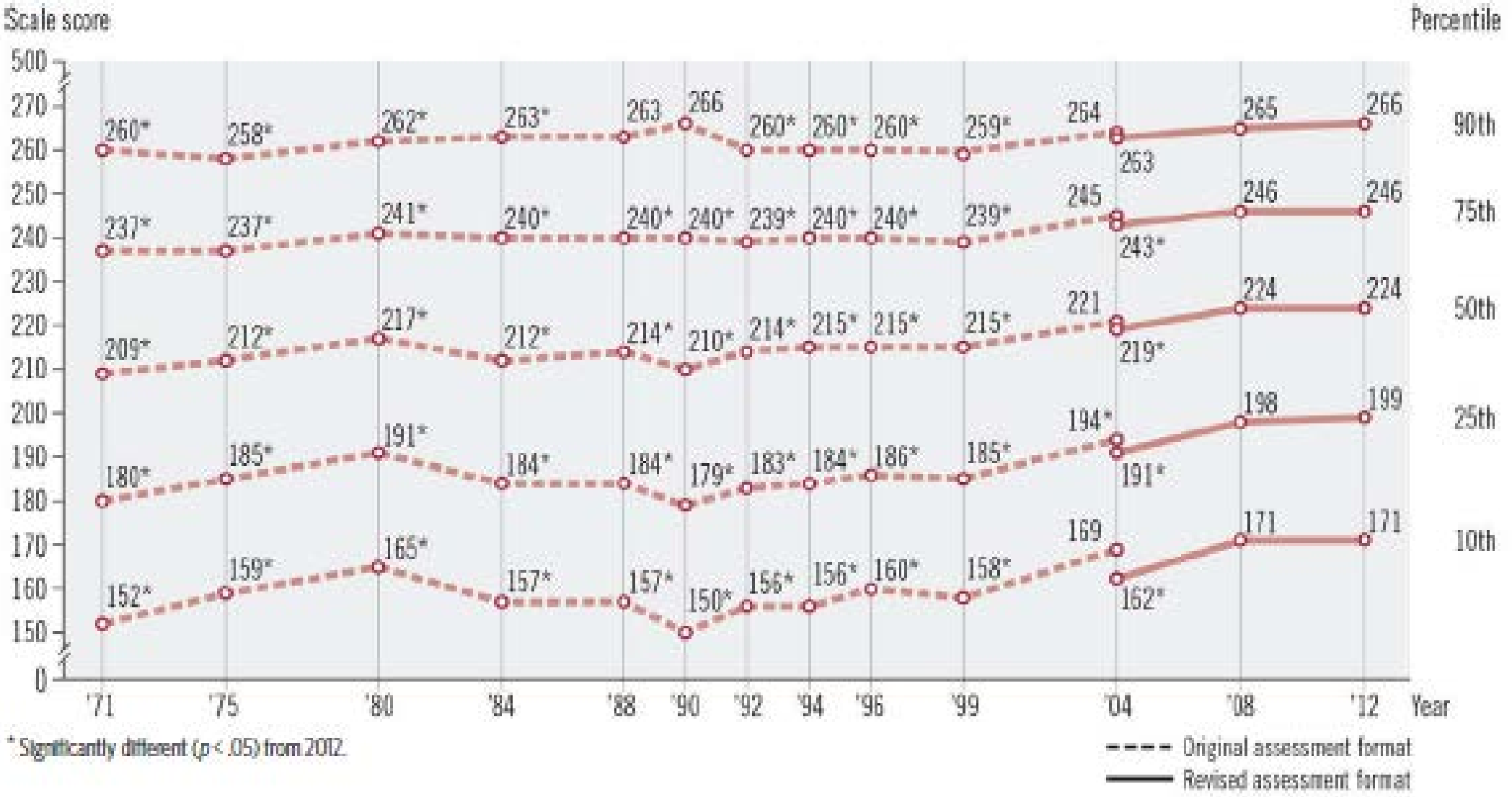


What can we expect to see in the future?

- Reasons to expect slower growth (or reduction) in inequality
  - Evidence of reduced inequality in achievement among younger cohorts
  - Driven by gains at the bottom

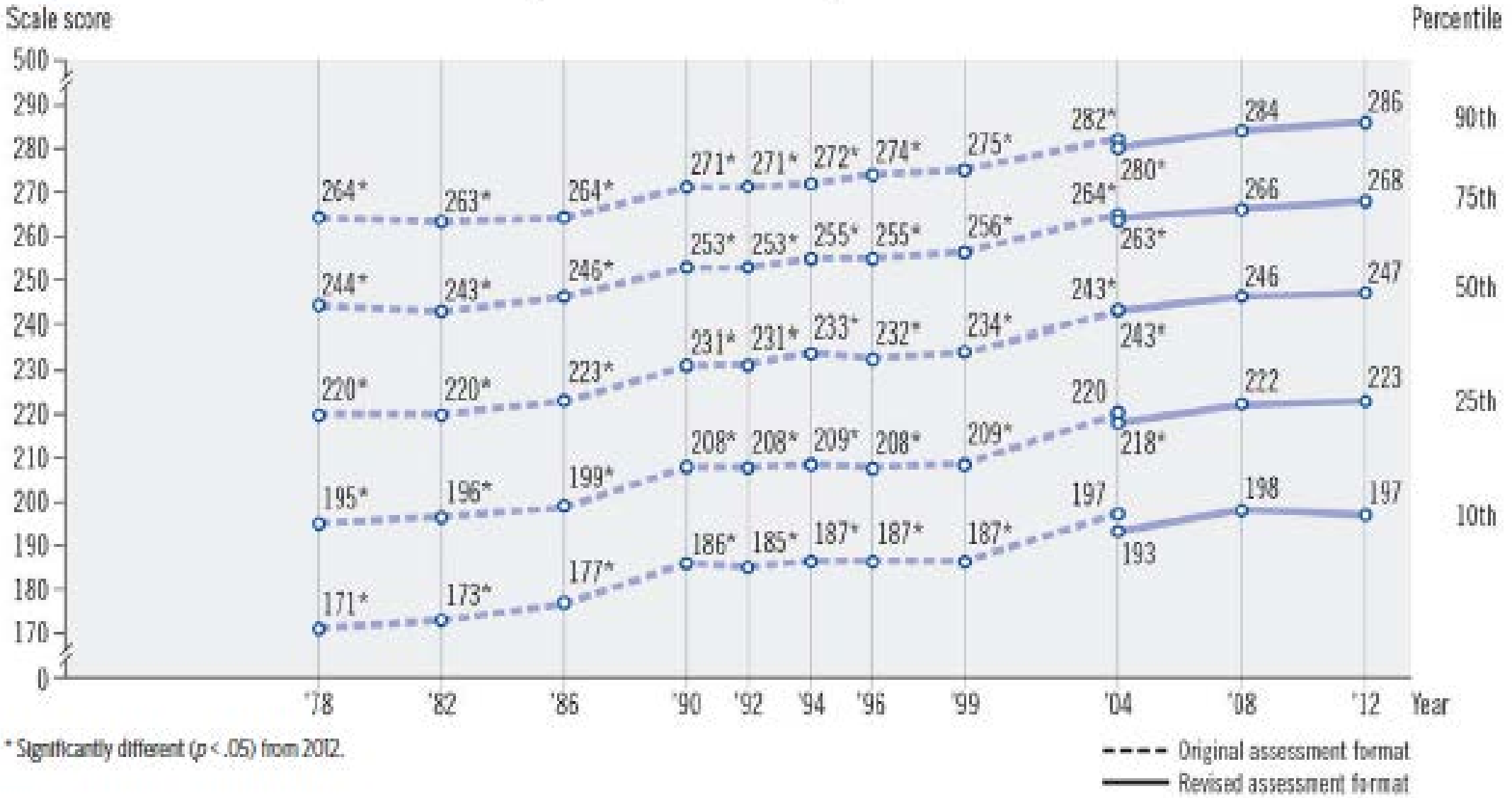
- Rising college completion in recent years, including graduate degree attainment

Figure 3. Trend in NAEP reading percentile scores for 9-year-old students

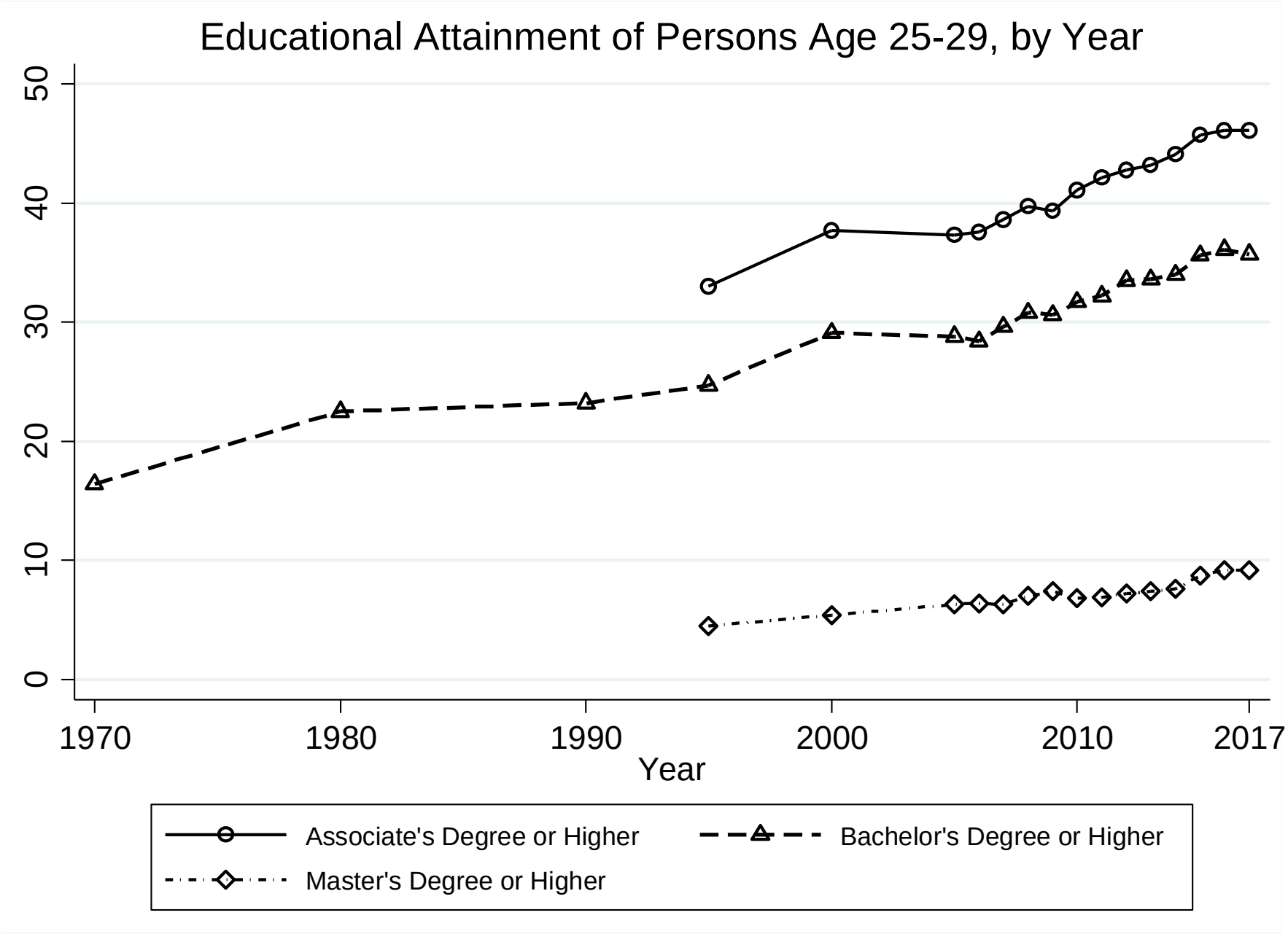


Source: NAEP Long Term Trend

Figure 19. Trend in NAEP mathematics percentile scores for 9-year-old students



Source: NAEP Long Term Trend



Source: Digest of Education Statistics, Table 104.20

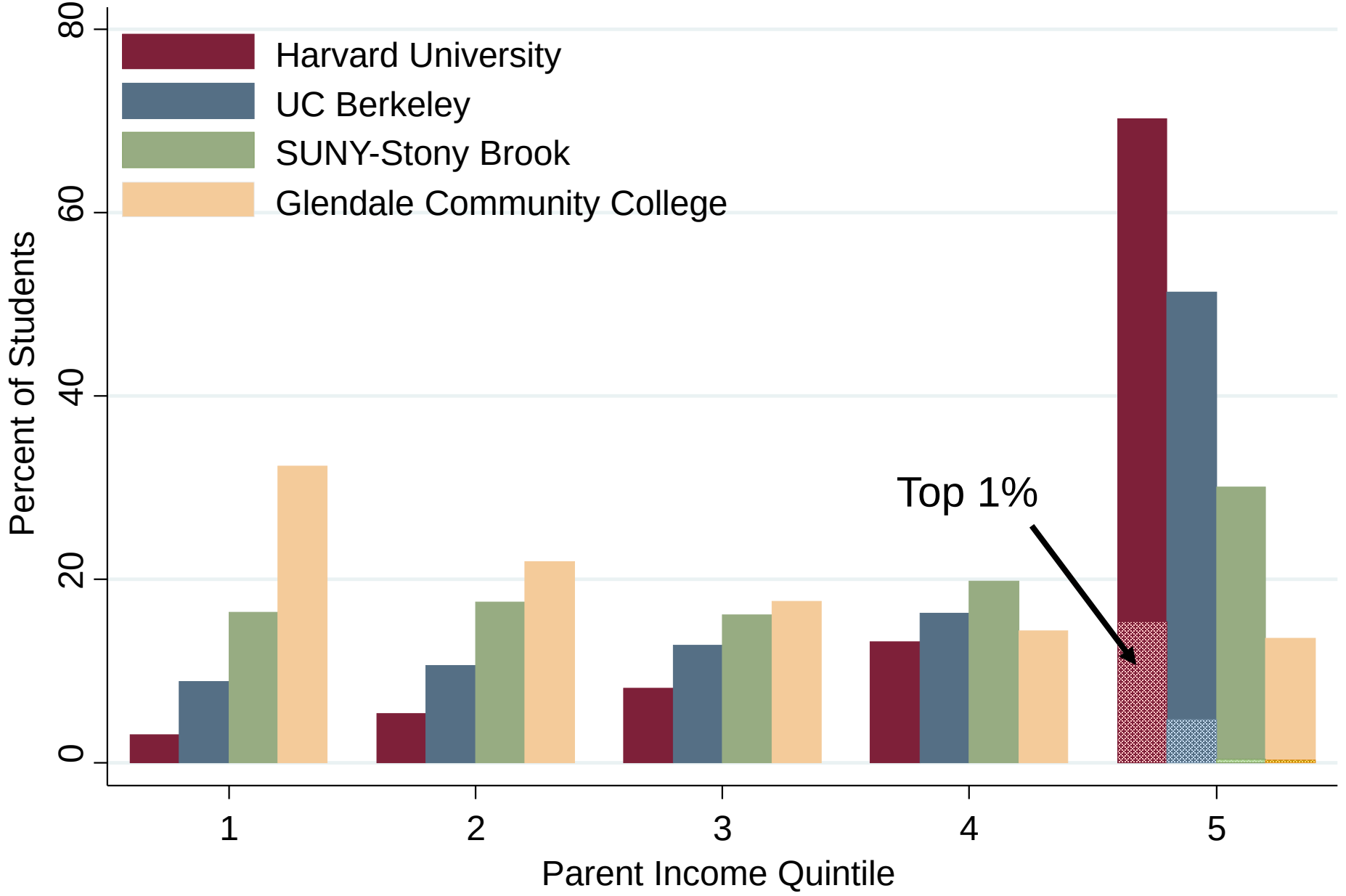
What can we expect to see in the future?

- Increasing academic skills at the bottom of the distribution
  - Starts among cohorts who would be completing college around 2005
  - Coincides with rising college attainment
  - If trend holds, we will see more growth in college supply for the next 10-12 years

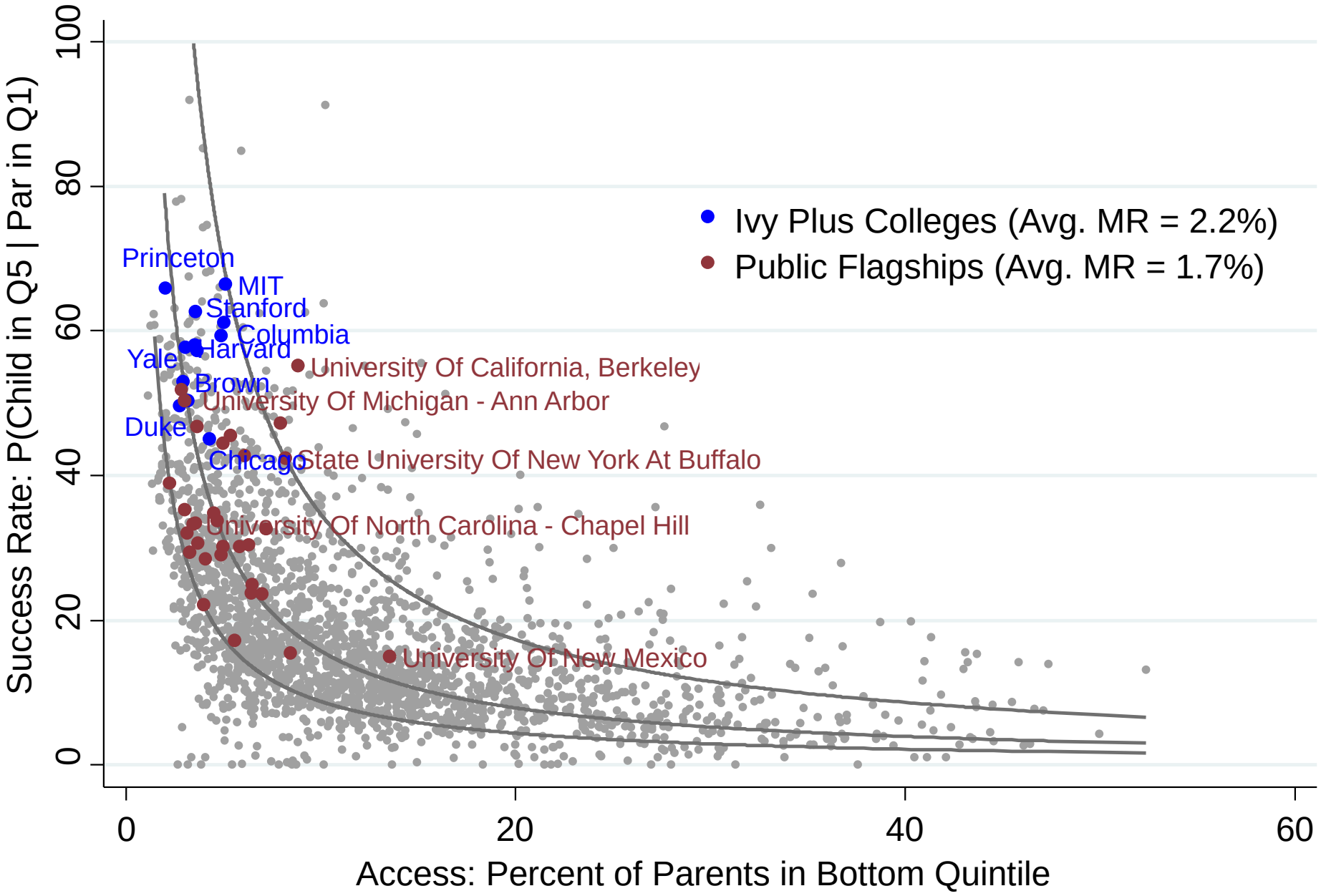
- Reasons to expect continued growth in earnings inequality
  - Selective colleges aren't expanding
  - Most of the growth in less-selective, open enrollment institutions
  - For-profit, online degrees
  - Will these marginal graduates be high earners?

Parent Income Distributions by Quintile for 1980-82 Birth Cohorts

At Selected Colleges



Mobility Rates: Success Rate vs. Access by College



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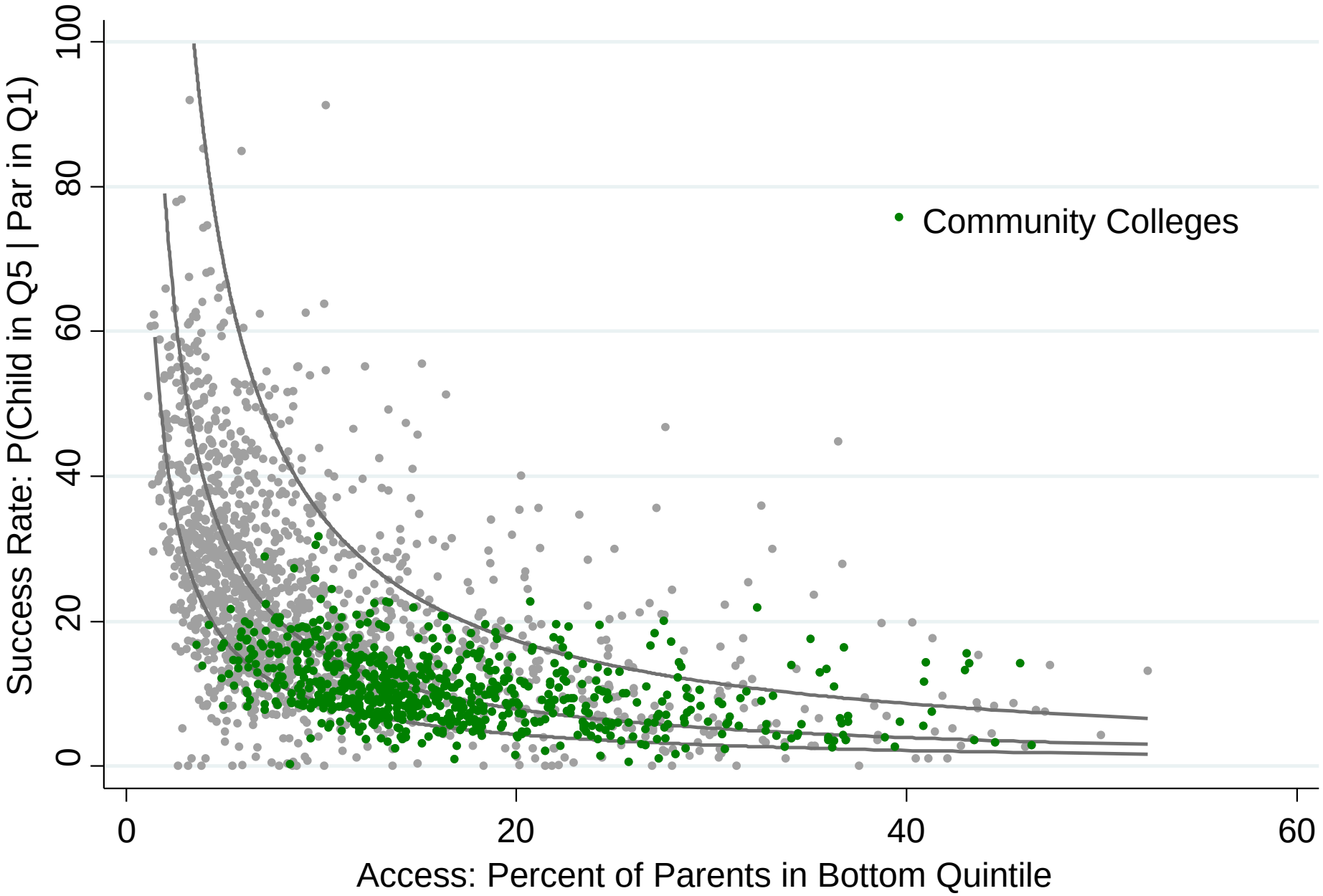

Summing up

1. Rising returns to college education are a first-order contributor to labor earnings inequality.
   - Changes in college premium can plausibly have large impacts on the share of GDP going to wages below/above the social security maximum

2. The supply-demand (SDI) framework is a simple, powerful predictor of changes over time in the return to a college degree.

3. Applying the framework to most recent cohorts has predicted a slowdown (not reversal) in the college premium.

4. Based on trends in achievement, supply growth may continue for at least the next 10-15 years.
   - Will the demand for education continue to grow? Will it accelerate?

Other Issues

- Earnings volatility
  - Some evidence that education reduces individual earnings volatility (e.g. Delaney and Devereux 2019)
  - But also evidence of rising overall earnings volatility (Carr and Wiemers 2017)

- Education as an indicator
  - Schooling decisions made early in life, and have long-lasting impacts
  - To forecast *farther* out, use trends in attainment

- Educational upgrading
  - Returns to a HS degree are now very small (among FT workers)
  - The “some college” group is starting to look more like HS degree holders
  - Returns to BA only have flatlined, rising returns to grad degrees
  - Is high school the new college?

Source: Marsh and Tuzemen (2018)