



Using Big Data to Solve Economic and Social Problems

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HARVARD
UNIVERSITY



The American Dream in Historical and International Perspective

Trends in Mobility Over Time

- Thus far, we have focused primarily on a snapshot of rates of upward mobility for children growing up in America today
- As we just discussed, a historical perspective is often useful in understanding determinants of current outcomes
- We cannot yet study trends in mobility by neighborhood, but we have made progress in understanding mobility over time at the national level

A Historical Perspective on the American Dream

- Historically, American Dream has been defined as the aspiration that children should have higher standards of living than their parents
 - When asked to assess economic progress, children frequently compare their earnings to their parents [Goldthorpe 1987]
 - Obama (2014): “People’s frustrations are partly rooted “in the fear that their kids won’t be better off than they were”
- What fraction of children earn more than their parents, and how has this changed over time?

Reference: Chetty, Grusky, Hell, Hendren, Manduca, Narang. “The Fading American Dream: Trends in Absolute Income Mobility Since 1940.” *Science* 2017.



SOCIAL MOBILITY MEMOS

How many people are better off than their parents? Depends on how you cut the data.

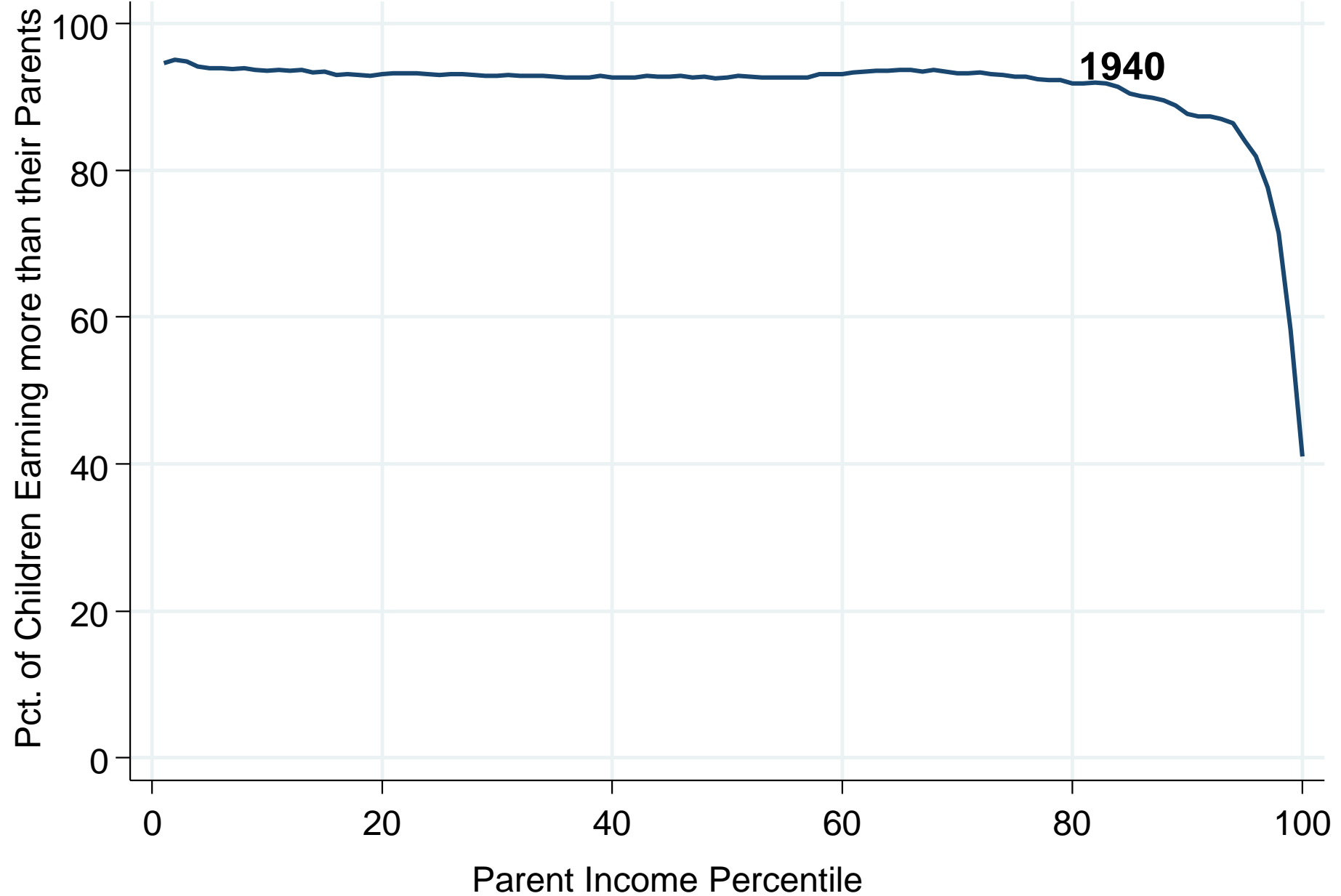
Dimitrios Halikias and **Richard V. Reeves** · Wednesday, August 10, 2016

Measuring the American Dream

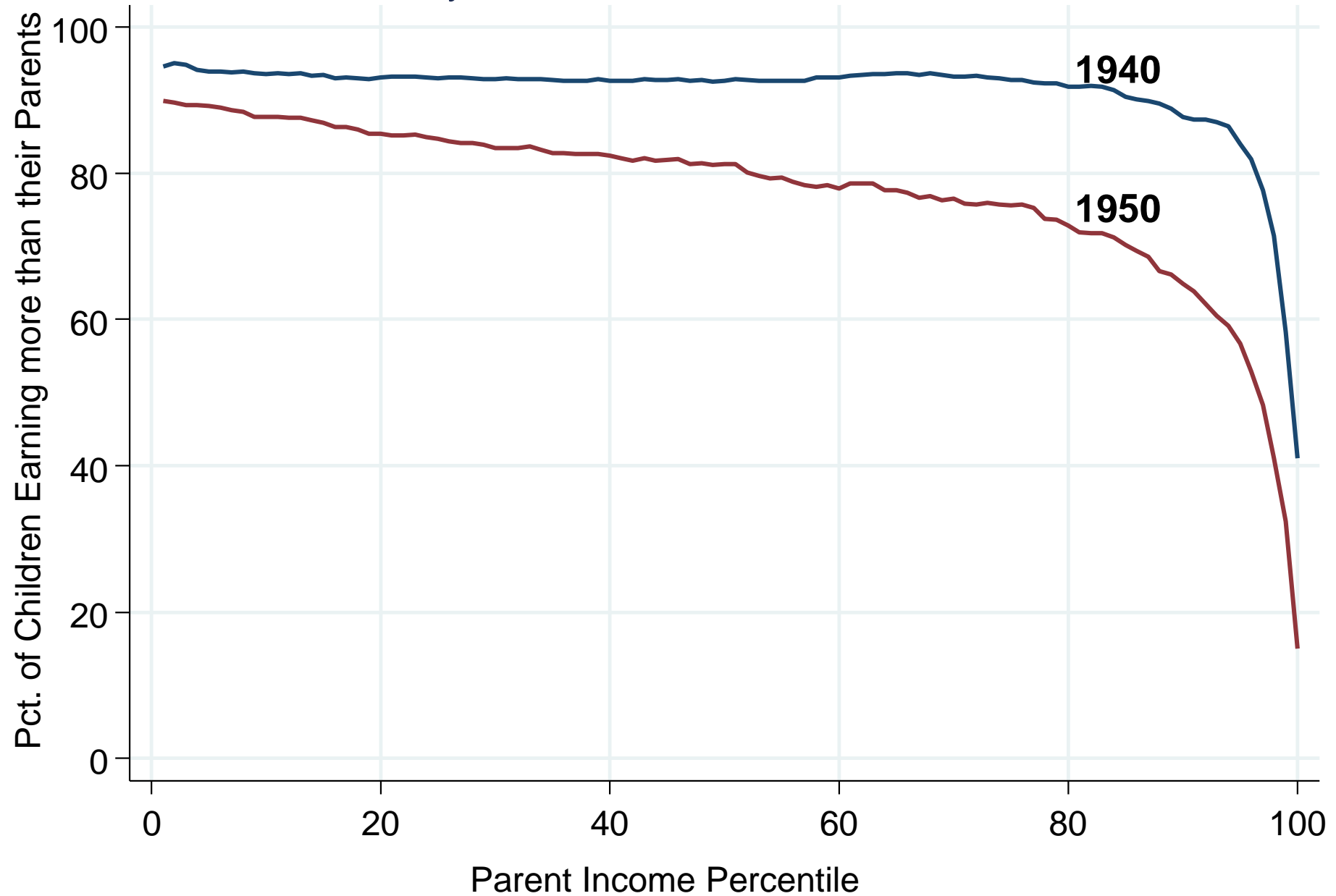
- Key challenge: don't have data linking parents to kids historically
- Chetty et al. (2017) develop a method of estimating historical rates of mobility even in the absence of parent-child links
- First describe basic results and then explain methodology

Percent of Children Earning More than their Parents

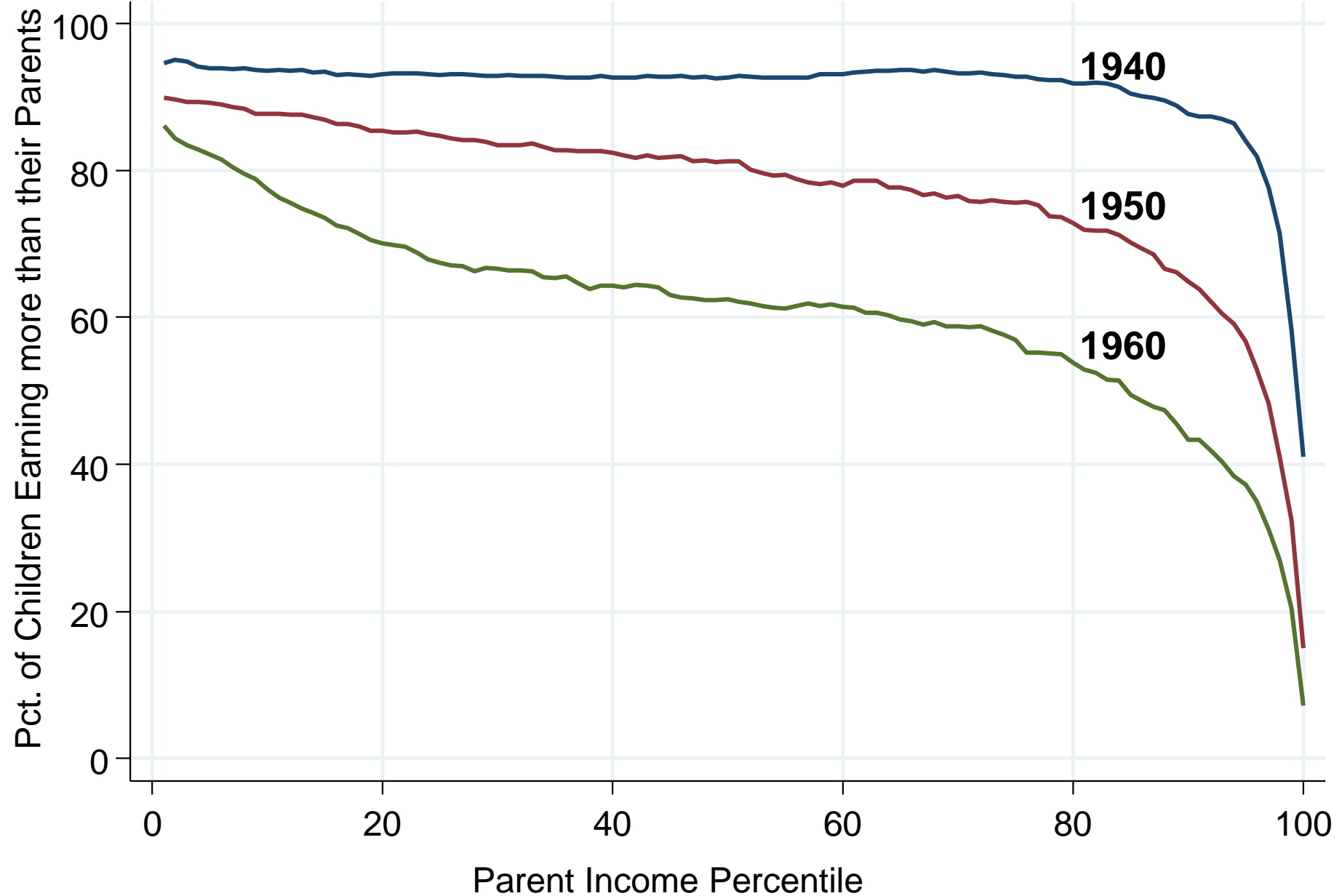
By Parent Income Percentile



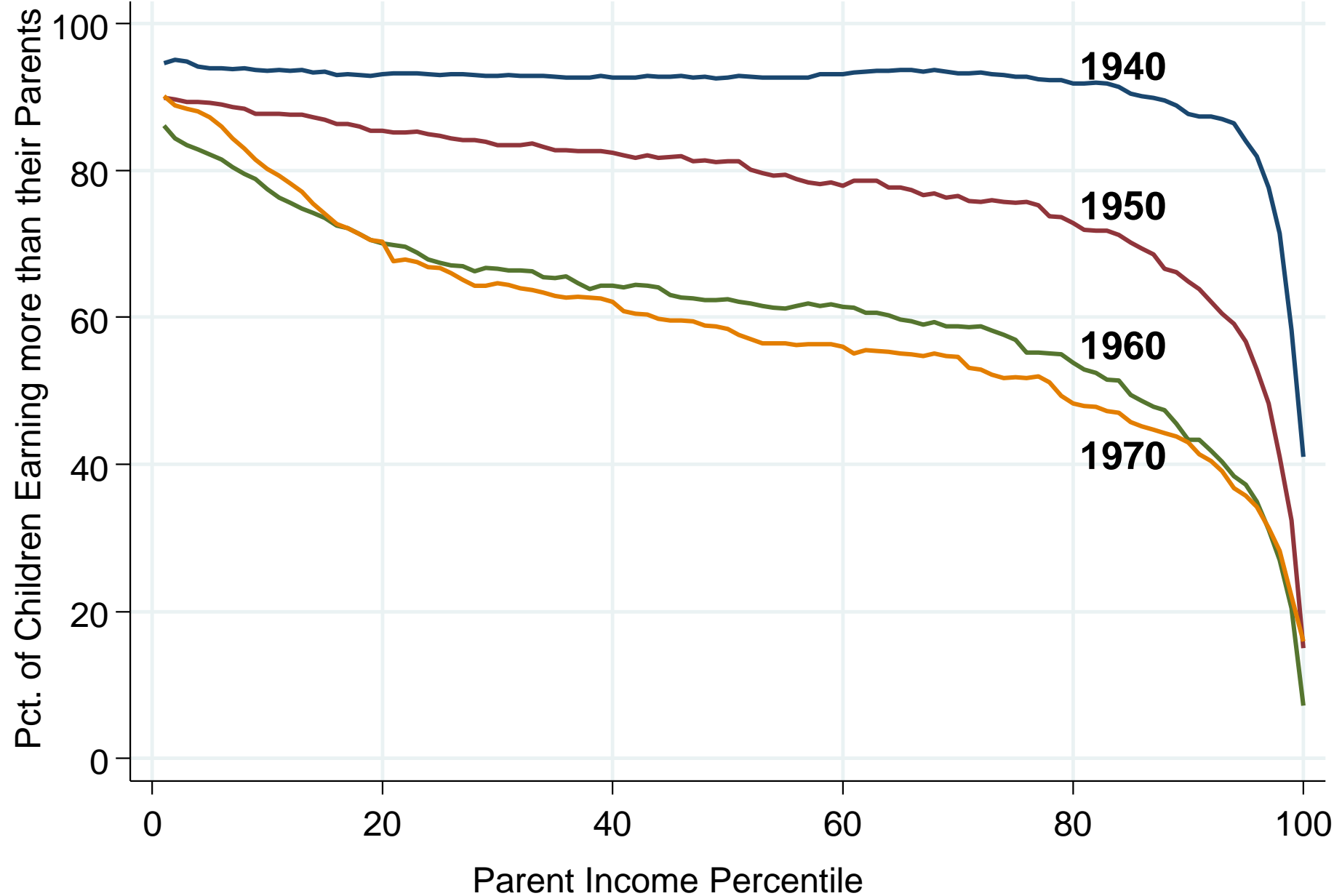
Percent of Children Earning More than their Parents
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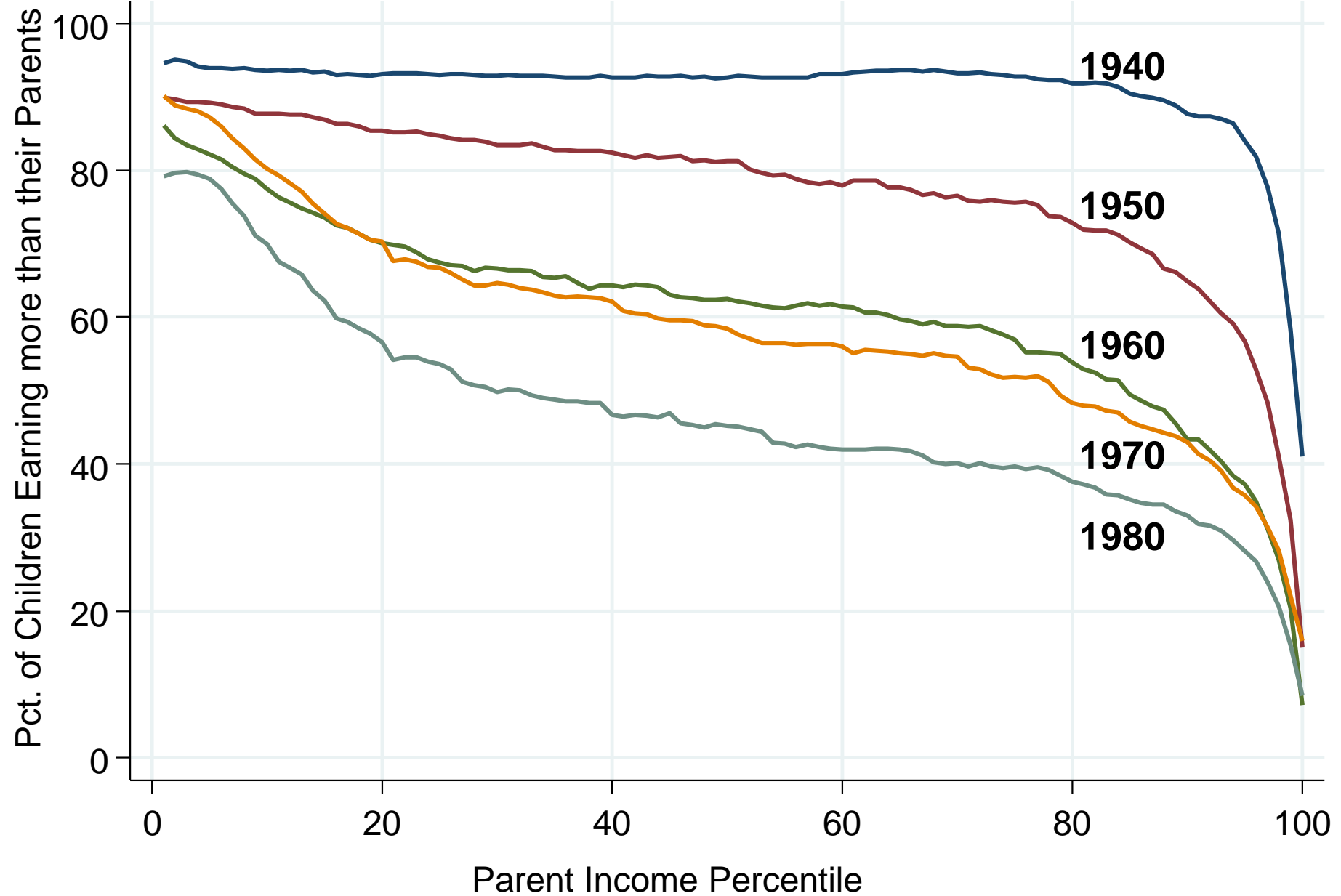
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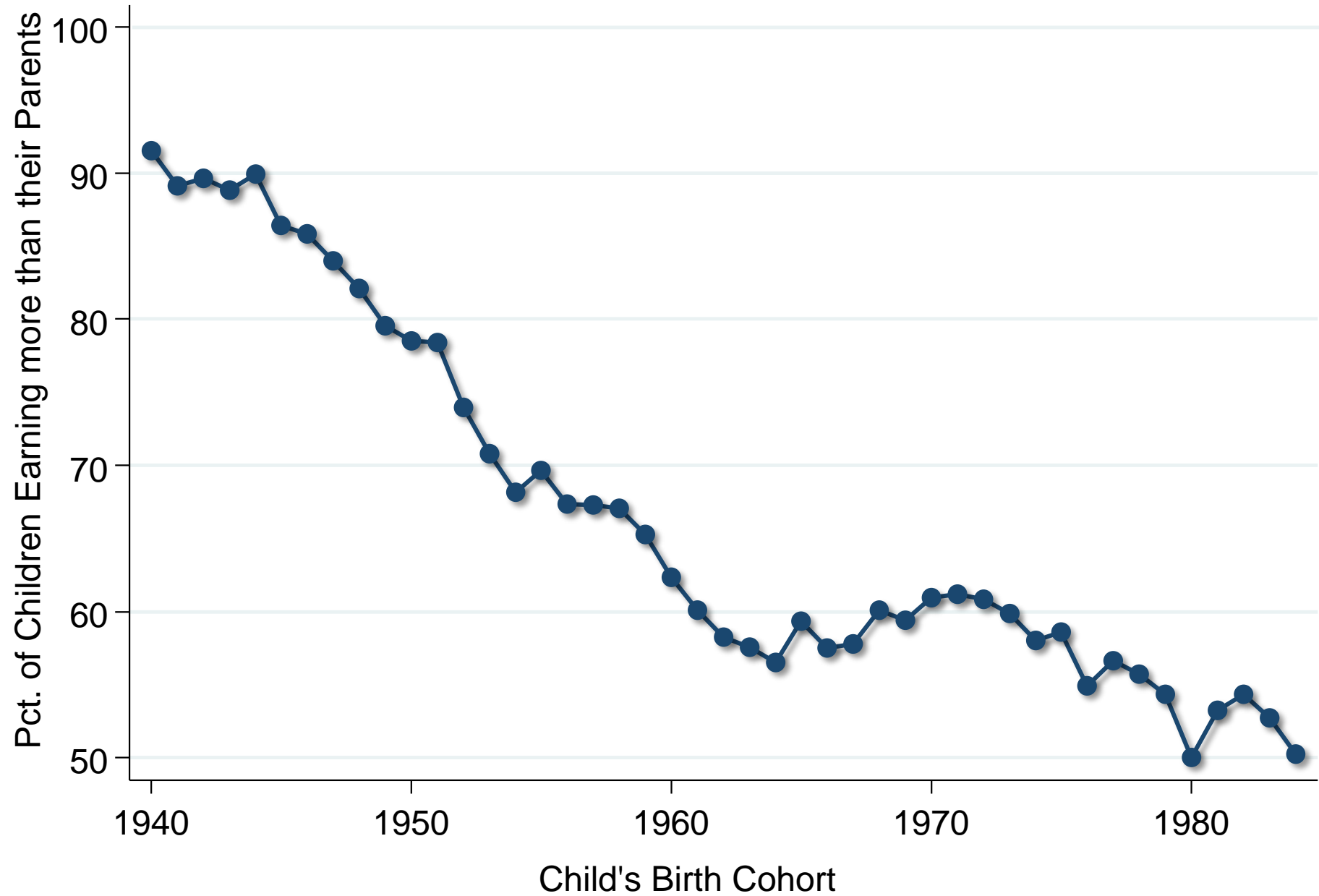
Percent of Children Earning More than their Parents
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Percent of Children Earning More than their Parents
By Parent Income Percentile



Percent of Children Earning More than Their Parents, by Birth Cohort

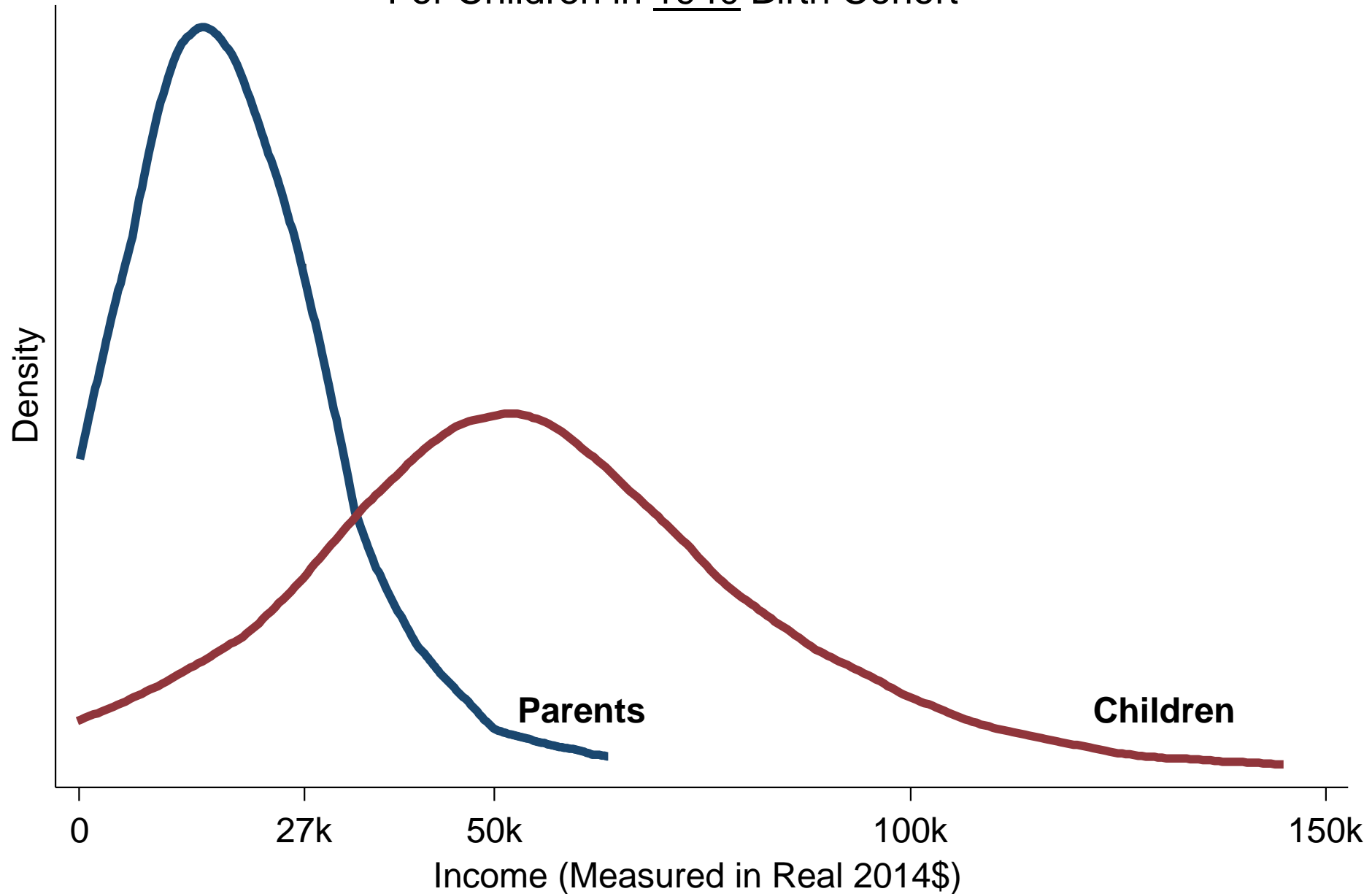


Methodology: Constructing Historical Estimates of Mobility

- We are able to get reliable estimates of mobility even though we do not have historical data linking kids to parents
- Fundamental reason: almost **all** kids born in 1940 earned more than **all** parents → does not matter which kids are born to which parents

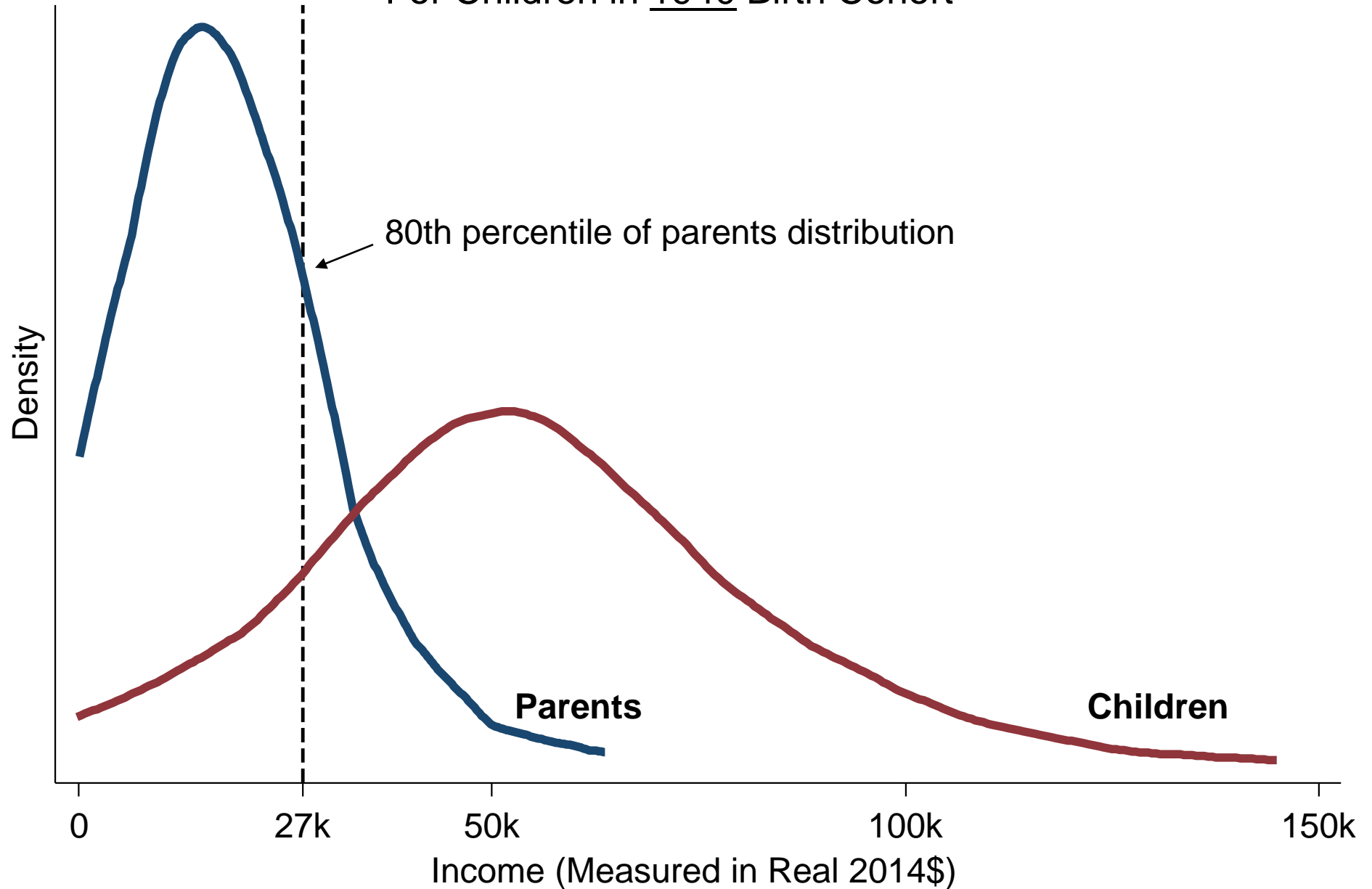
Household Income Distributions of Parents and Children at Age 30

For Children in 1940 Birth Cohort



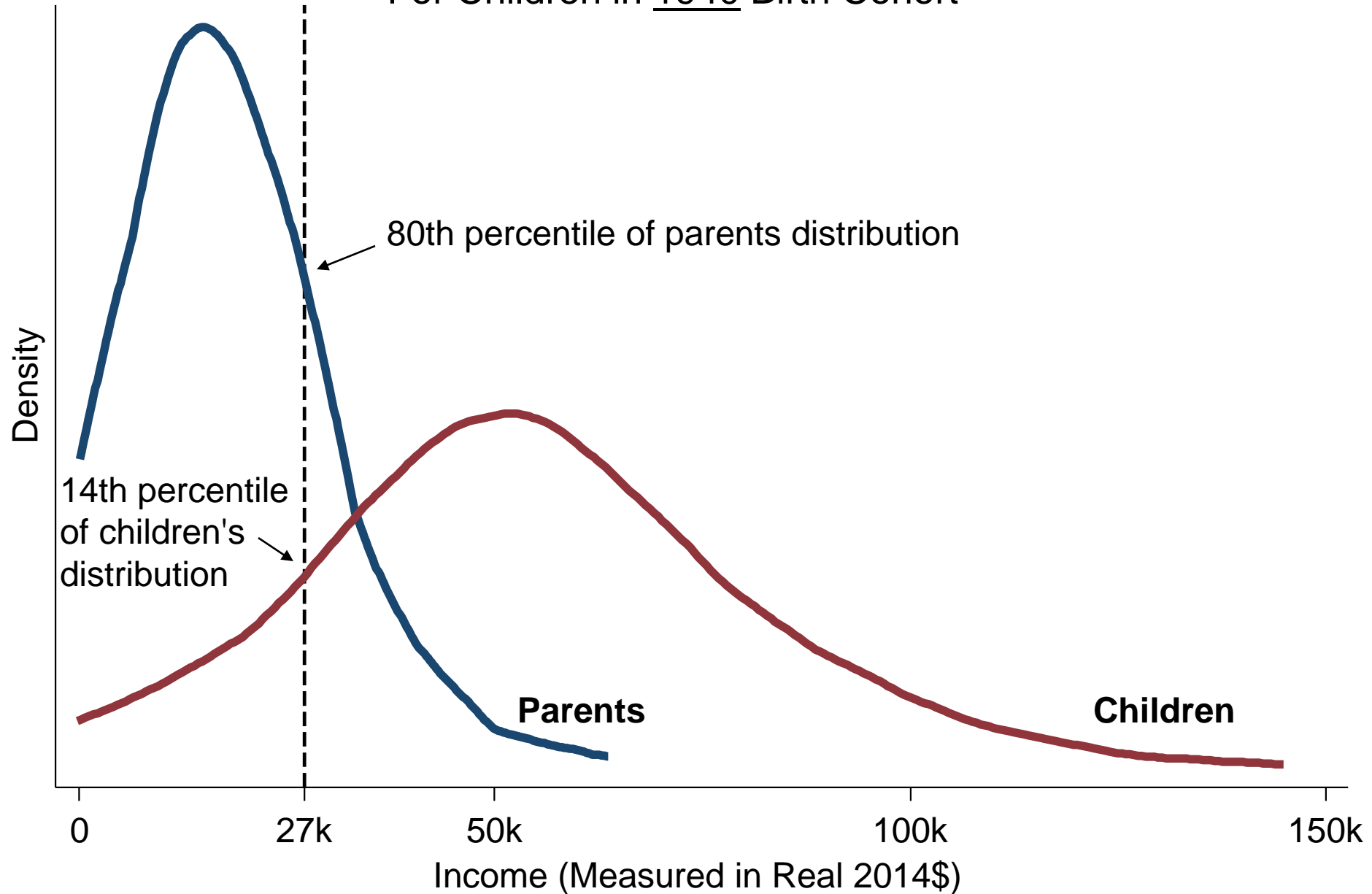
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Household Income Distributions of Parents and Children at Age 30

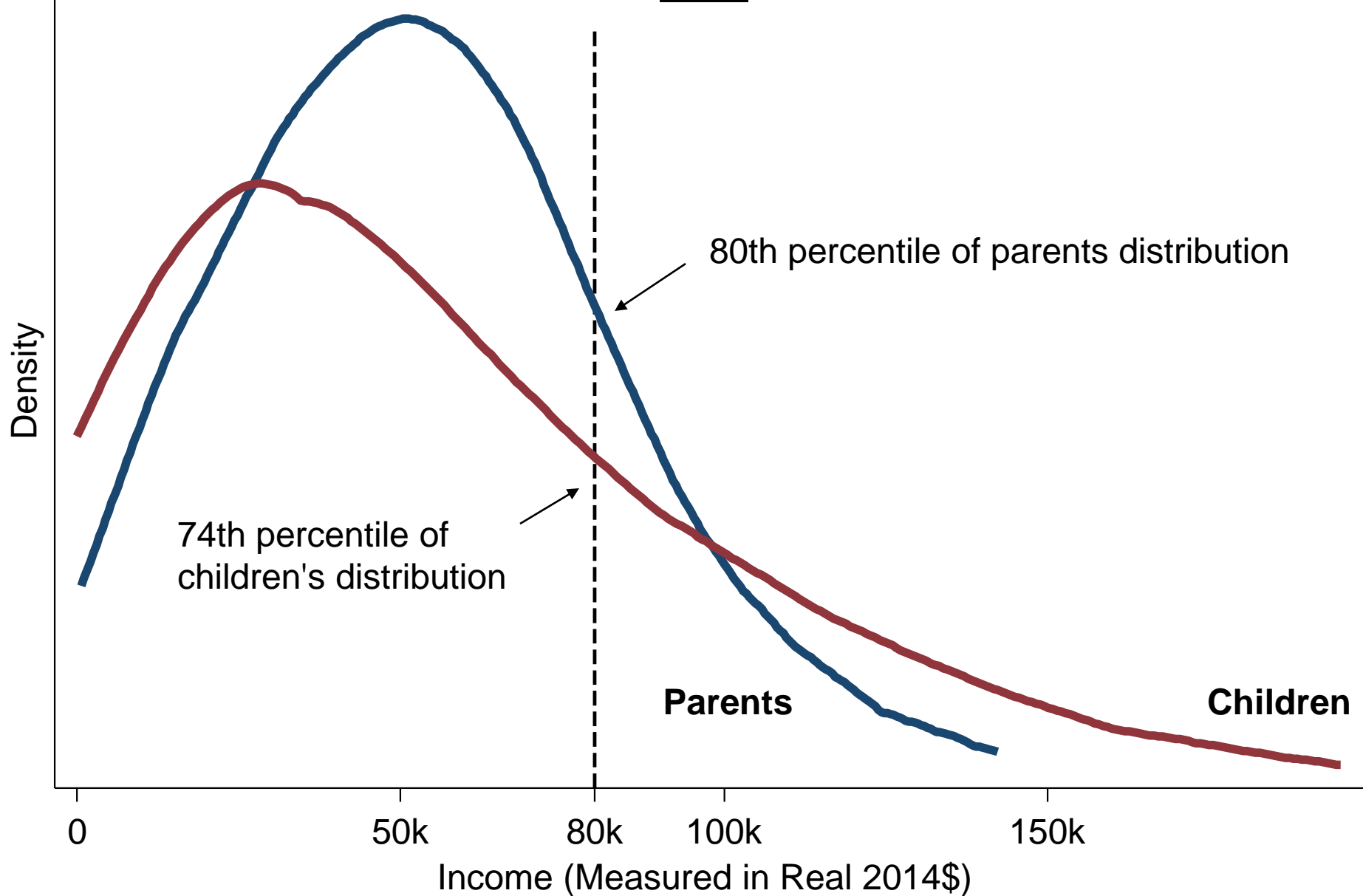
For Children in 1940 Birth Cohort



Methodology: Constructing Historical Estimates of Mobility

- We are able to get reliable estimates of mobility even though we do not have historical data linking kids to parents
- Fundamental reason: almost **all** kids born in 1940 earned more than **all** parents → does not matter which kids are born to which parents
- This is **not** the case for kids born in 1980s, but fortunately we have data linking kids to parents for that generation

Household Income Distributions of Parents and Children at Age 30
For Children in 1980 Birth Cohort

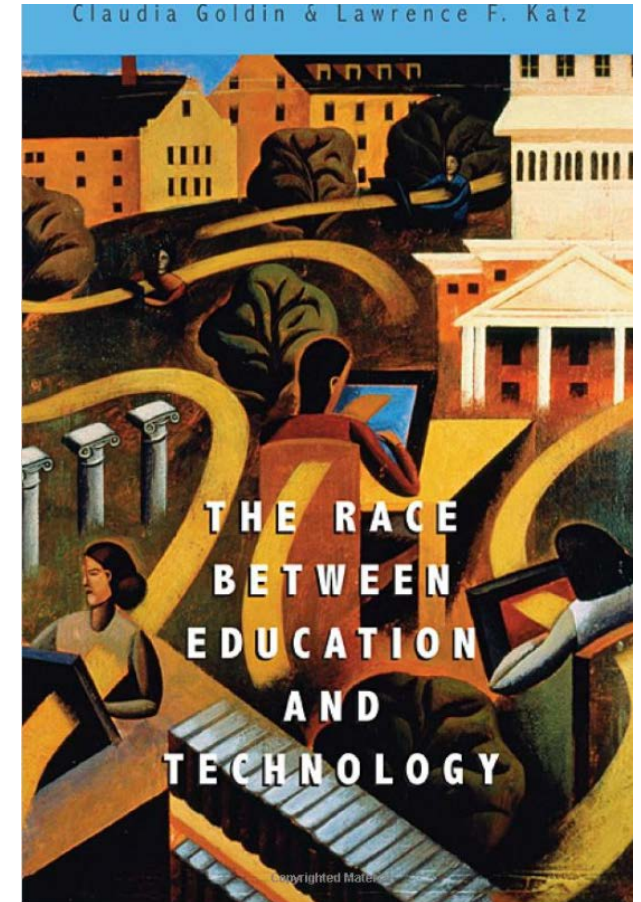
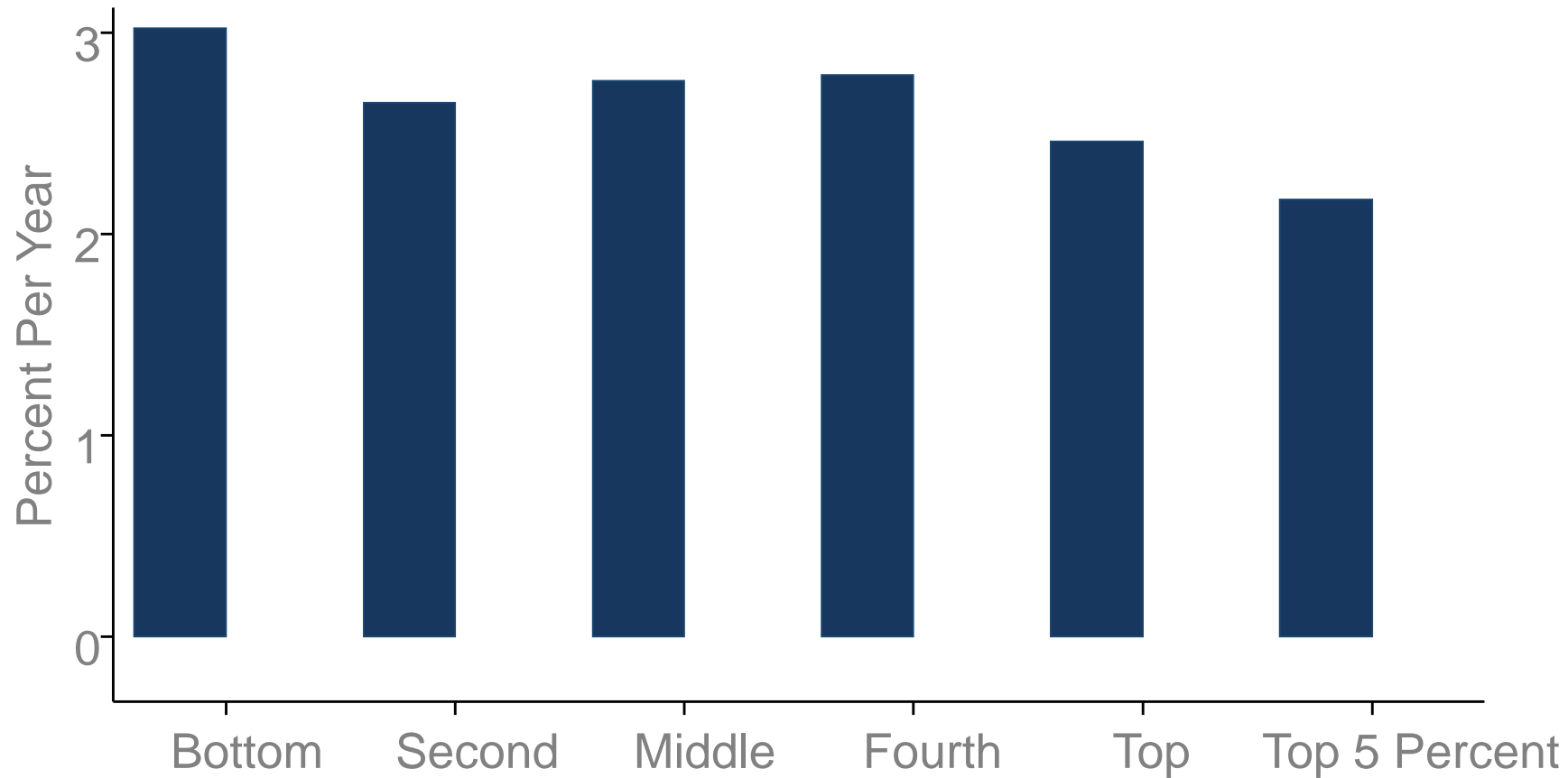


What Policies Can Increase Absolute Mobility?

- Two major changes in American economy since 1940: lower total economic growth rates and less equal distribution of growth

Growth in Real Mean Family Income by Income Quintile

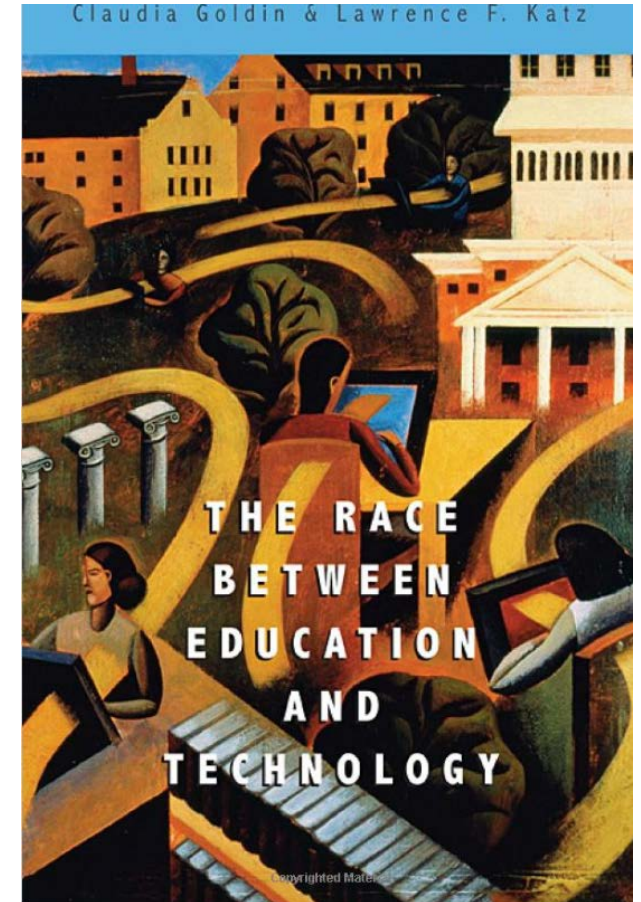
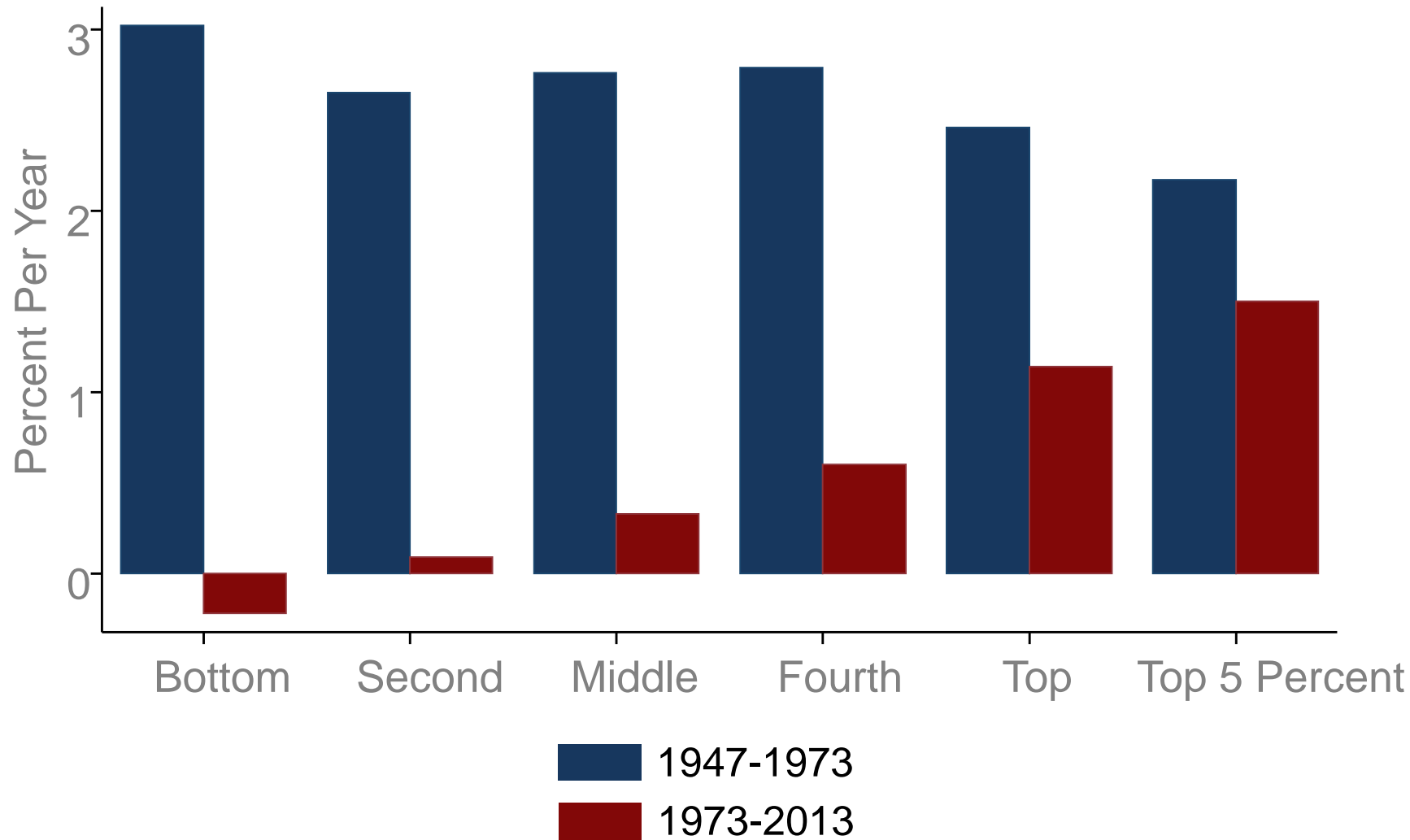
1947 – 1973



Source: Goldin and Katz (2007)

Growth in Real Mean Family Income by Income Quintile

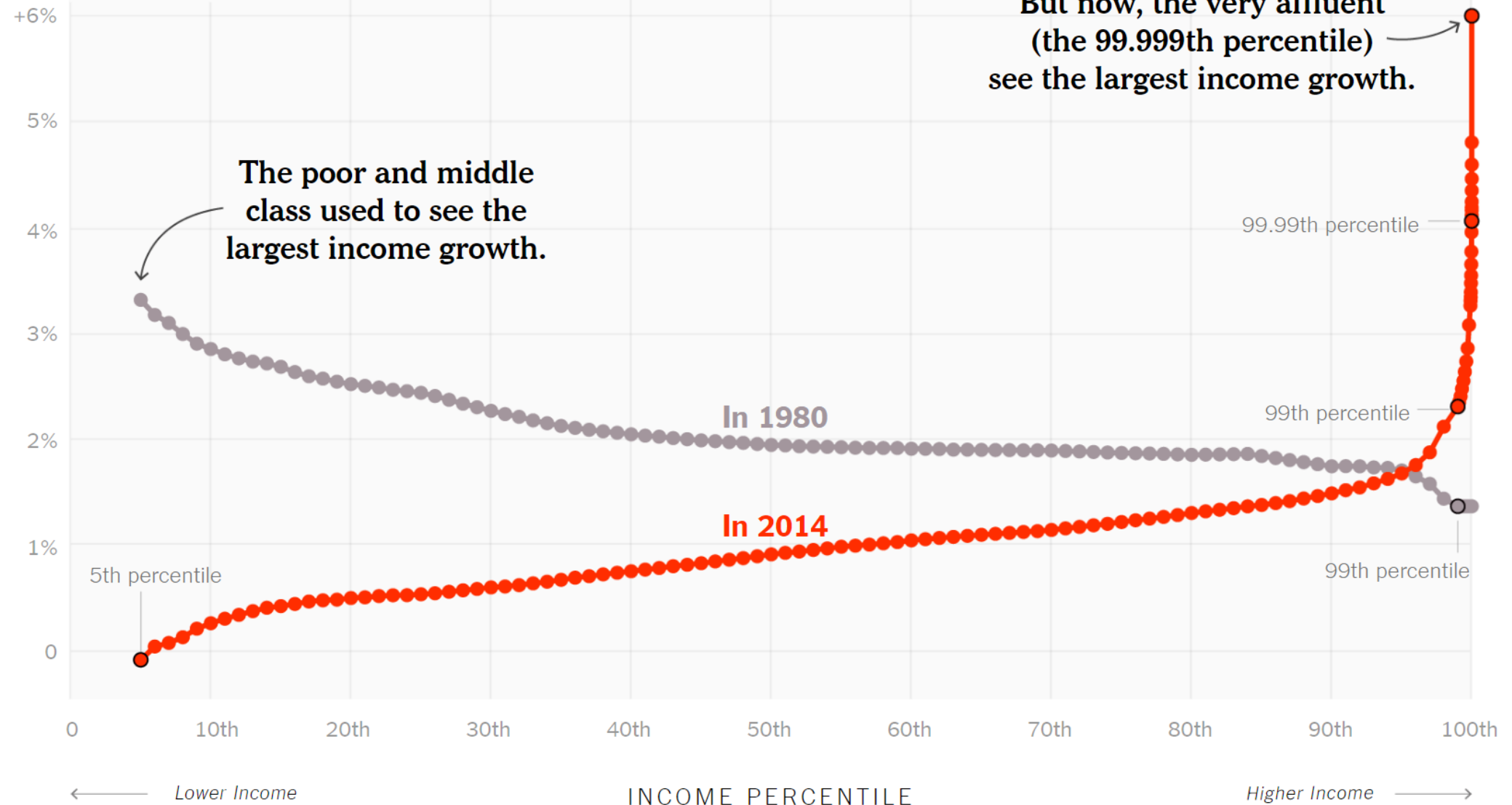
1947 – 1973 vs. 1973-2013



Source: Goldin and Katz (2007)

INCOME GROWTH

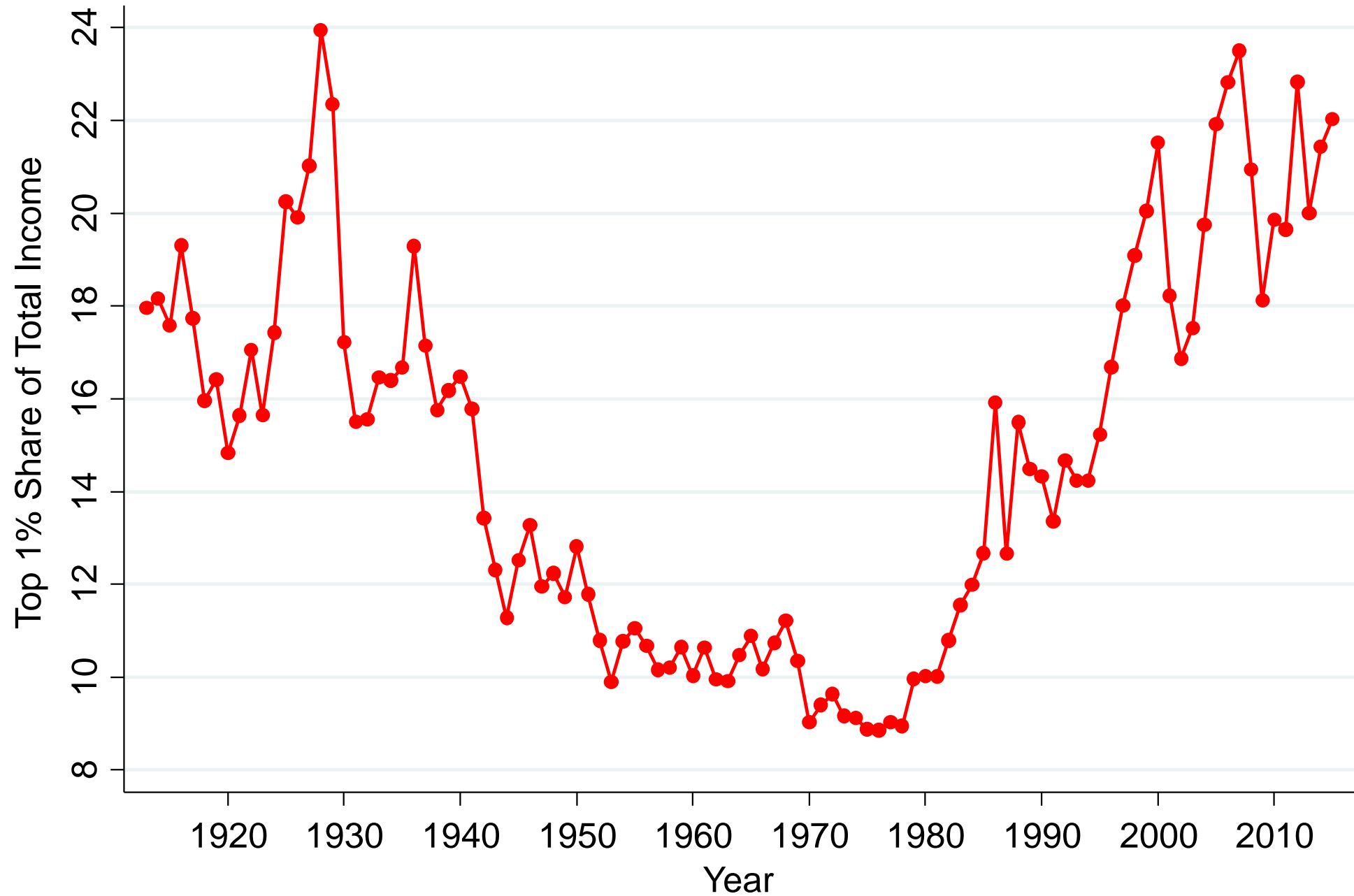
Over previous 34 years



Note: Inflation-adjusted annual average growth using income after taxes, transfers and non-cash benefits.

Source: Piketty, Saez, and Zucman (2017); Leonhardt (2017)

Share of Income Going to Households in the Top 1%, by Year



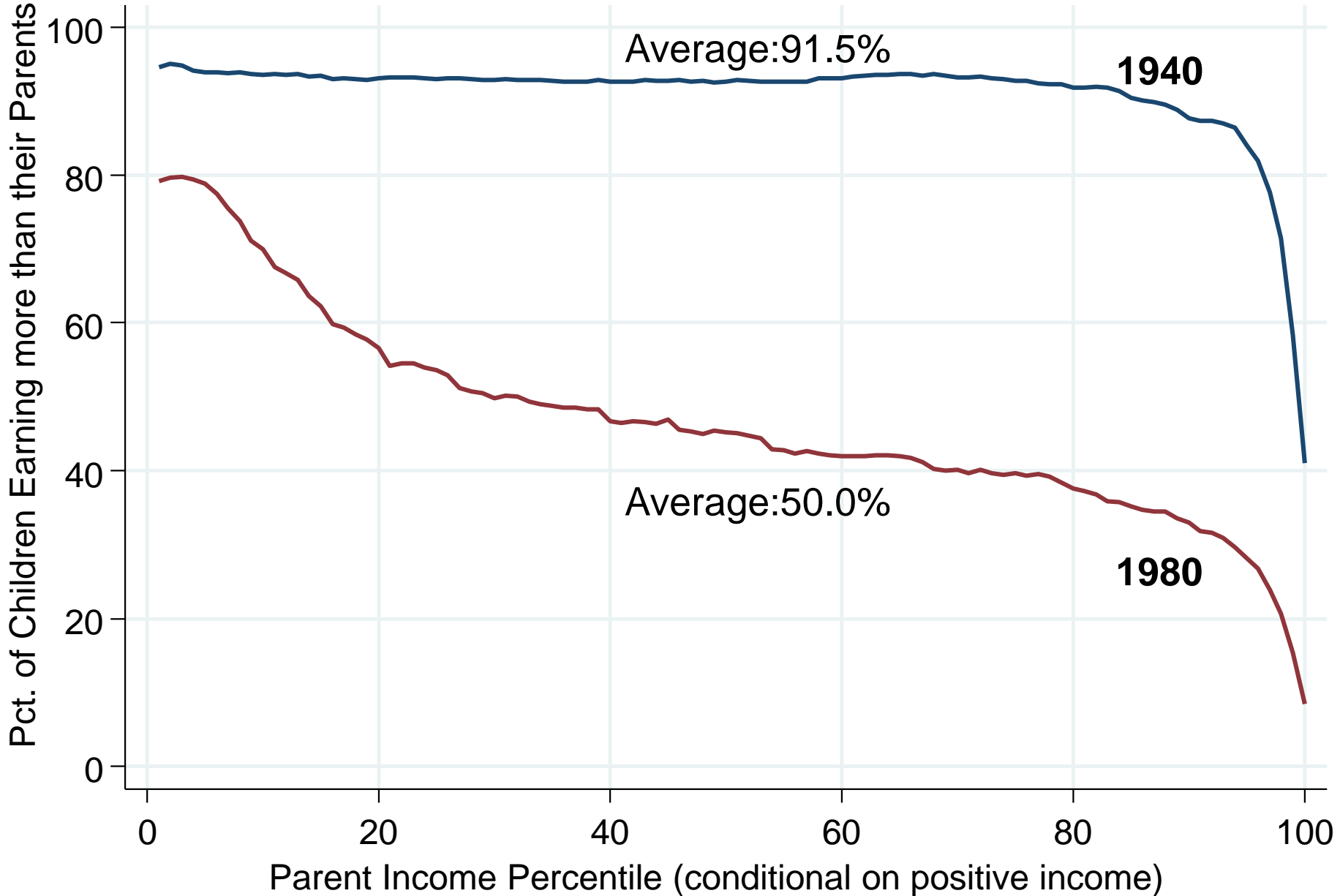
**WE
ARE
THE
99%**

A close-up shot of a person's hand holding a bright yellow protest sign. The sign features the text 'WE ARE THE 99%' in large, bold, sans-serif font. 'WE' is white, while 'ARE', 'THE', and '99%' are black. The person holding the sign is wearing a dark long-sleeved shirt and a large, dark, circular ring on their ring finger. In the background, a large, diverse crowd of people is visible, some holding up phones to take pictures. The setting appears to be a city street with tall buildings in the background, suggesting a major protest or rally. The lighting is bright, indicating it is daytime.

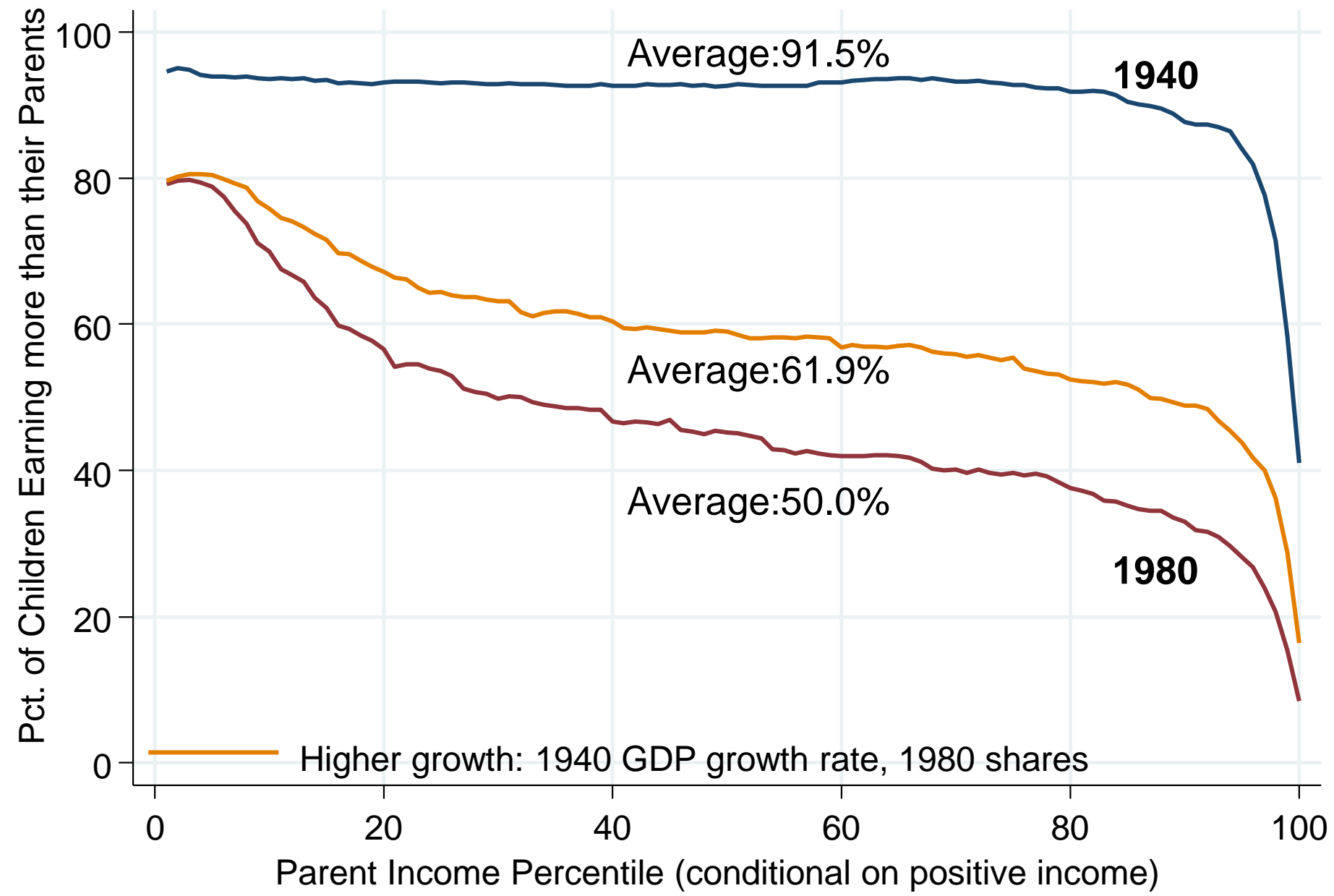
What Policies Can Revive Absolute Mobility?

- Two major changes in American economy since 1940: lower total economic growth rates and less equal distribution of growth
- Consider two hypothetical scenarios for children born in 1980:
 1. **Higher growth:** growth rate since birth corresponding to 1940 cohort, with income distributed as it is today
 2. **More broadly shared growth:** Same growth rates as today, but distributed across income groups as in 1940 cohort

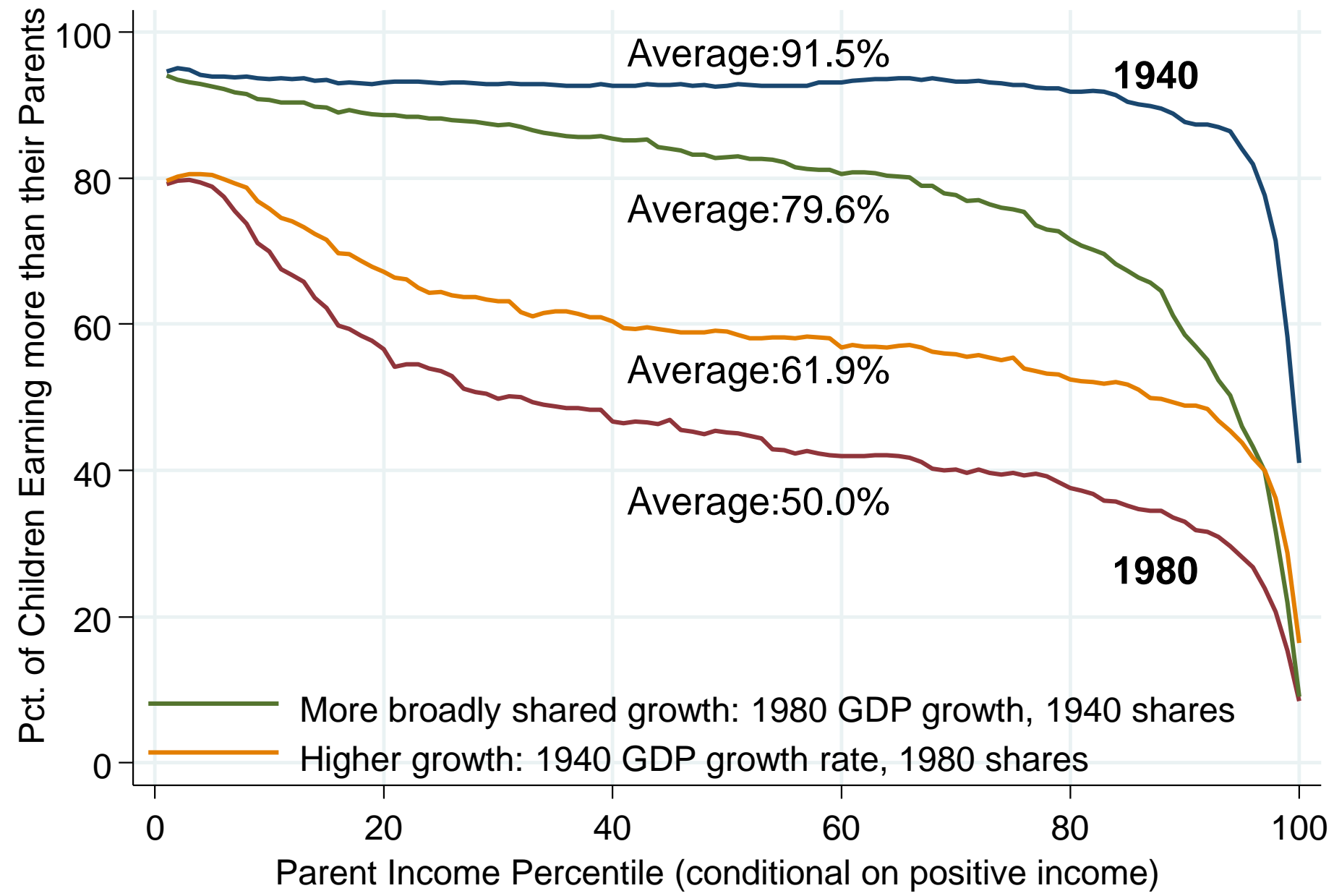
Percent of Children Earning More than Their Parents: Hypothetical Scenarios



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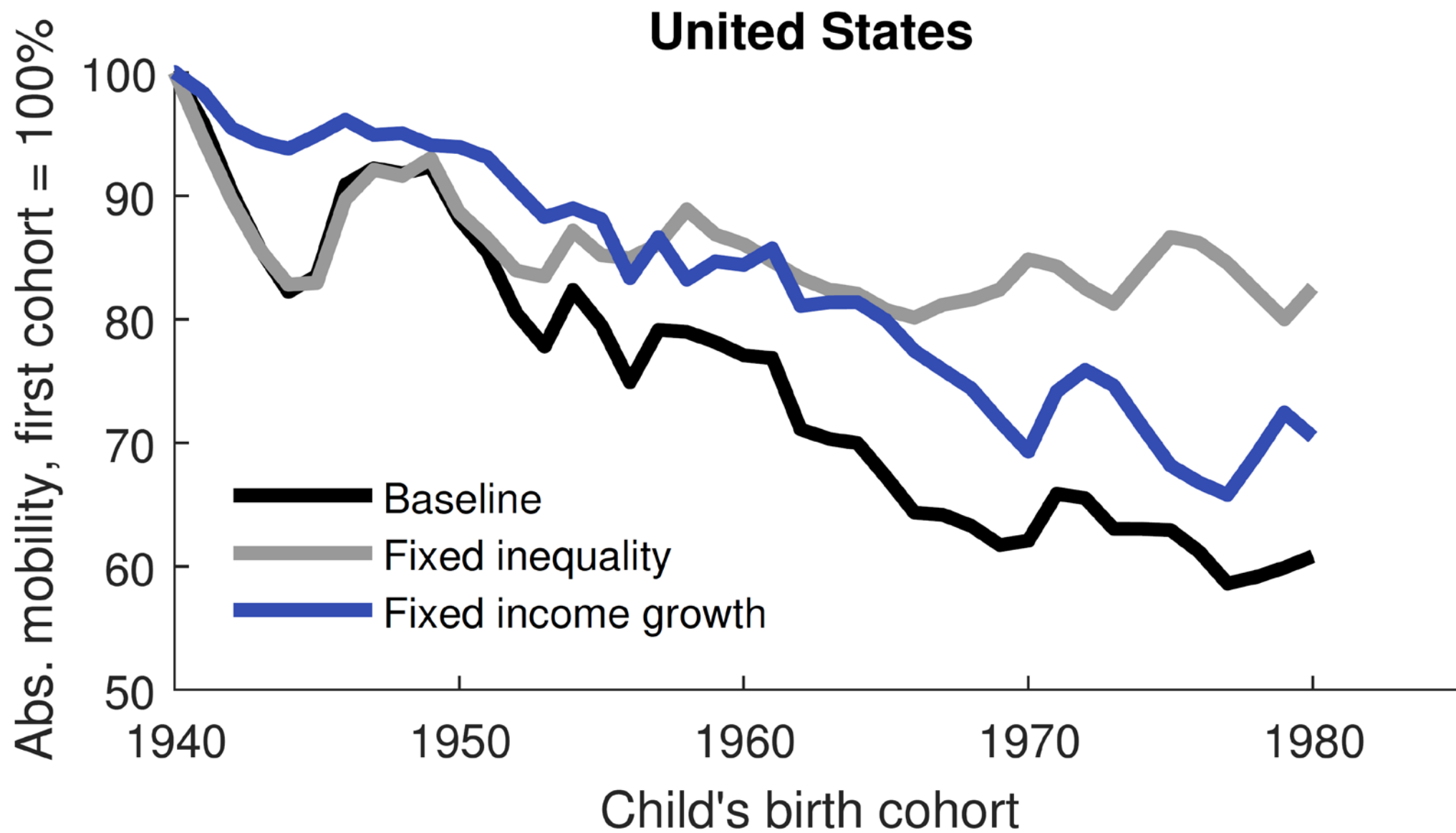


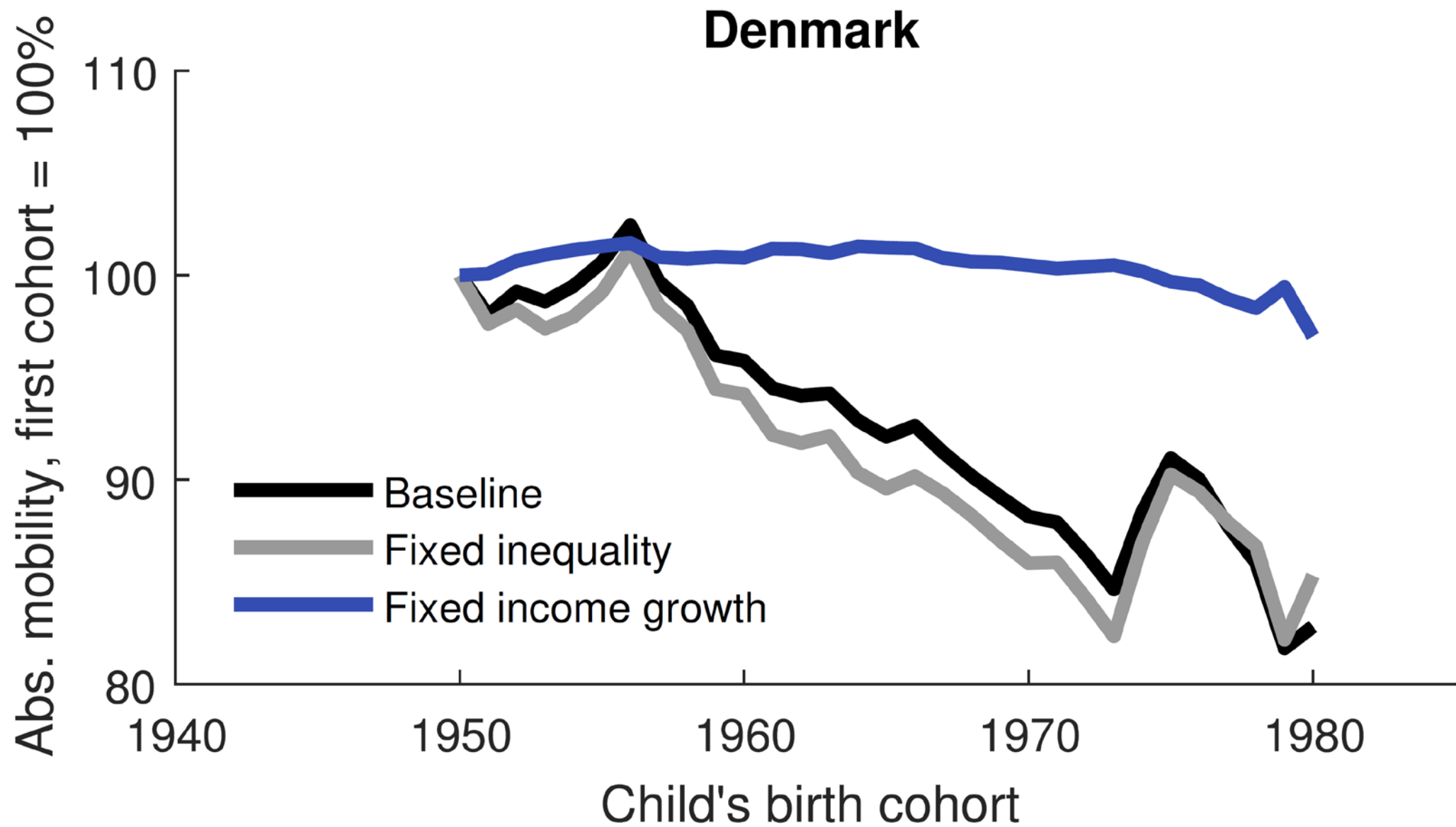
Percent of Children Earning More than Their Parents: Hypothetical Scenarios

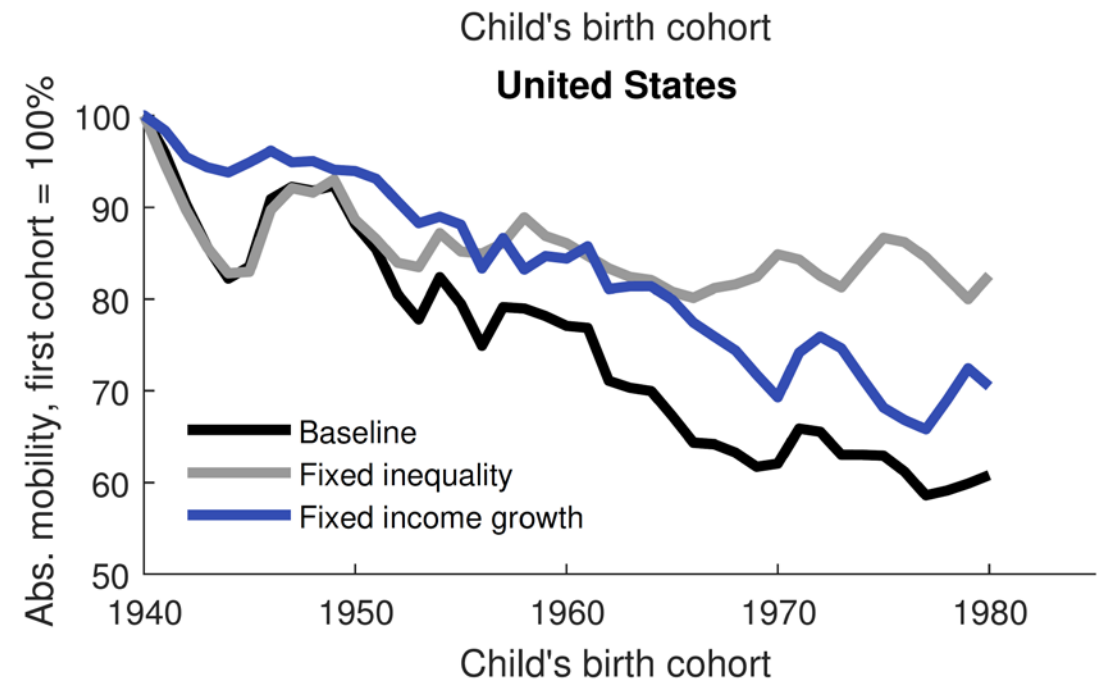
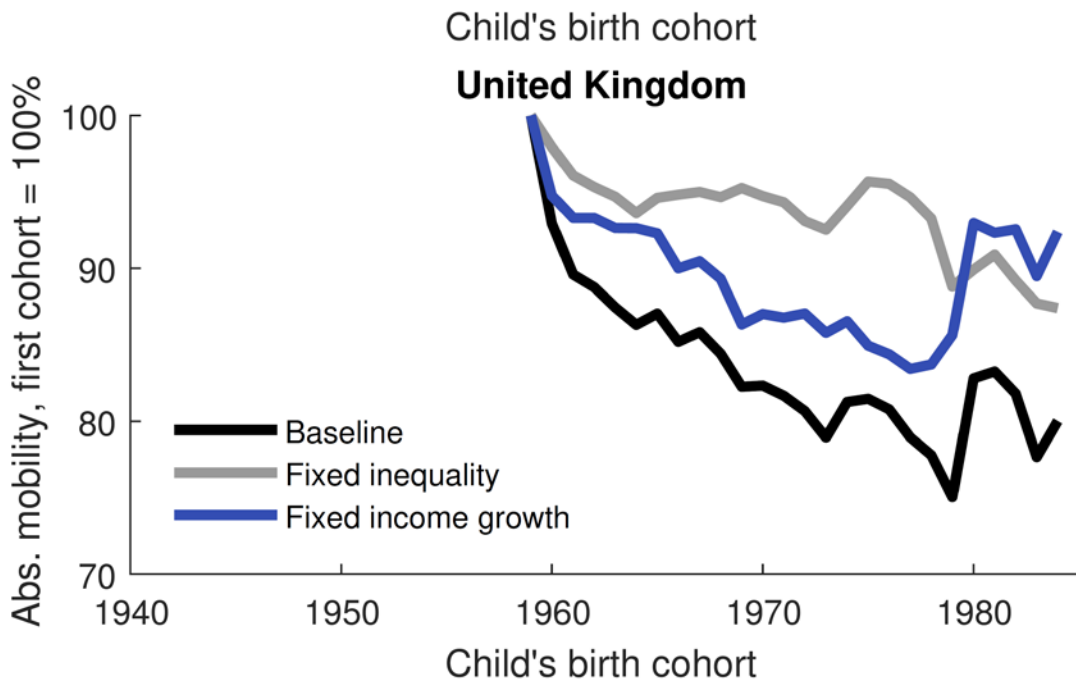
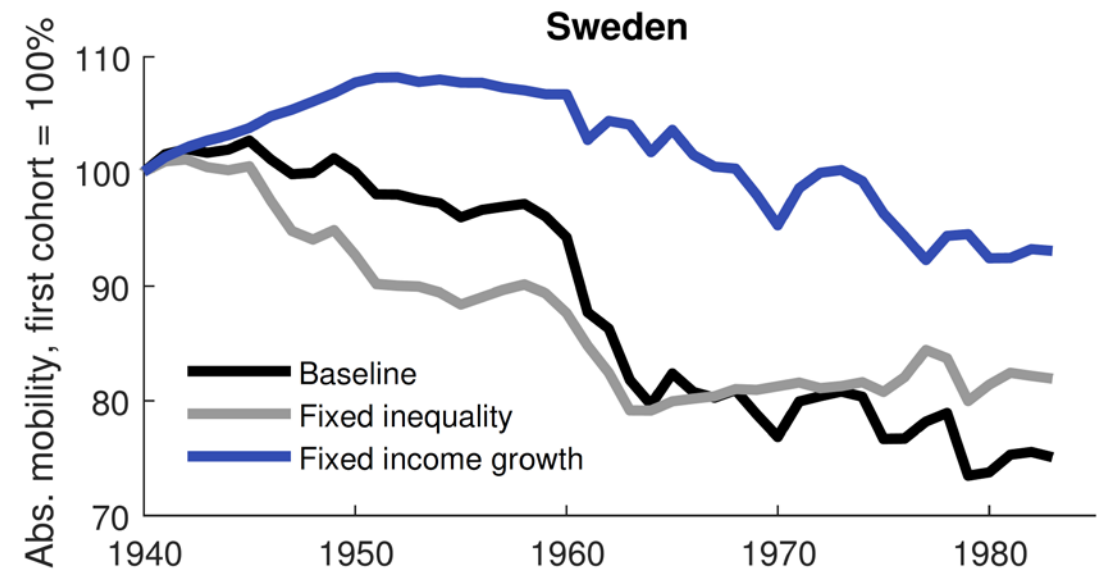
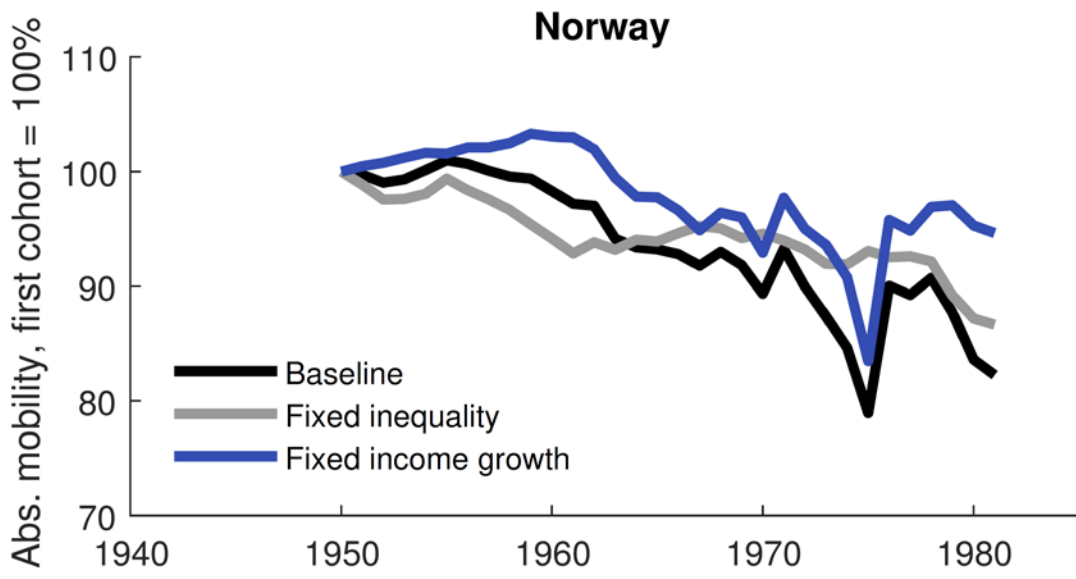


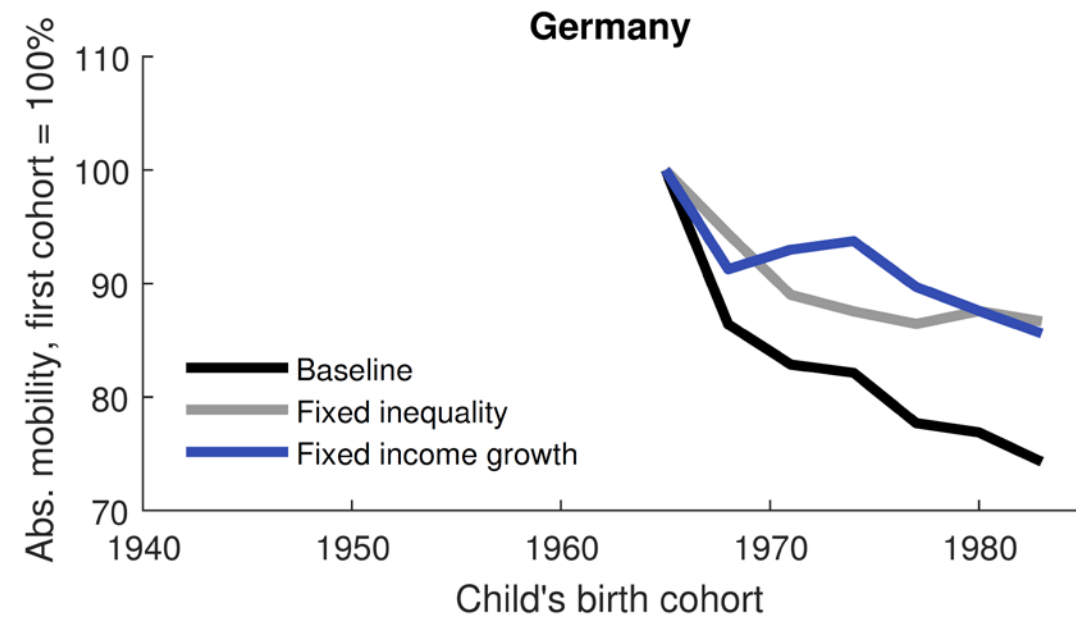
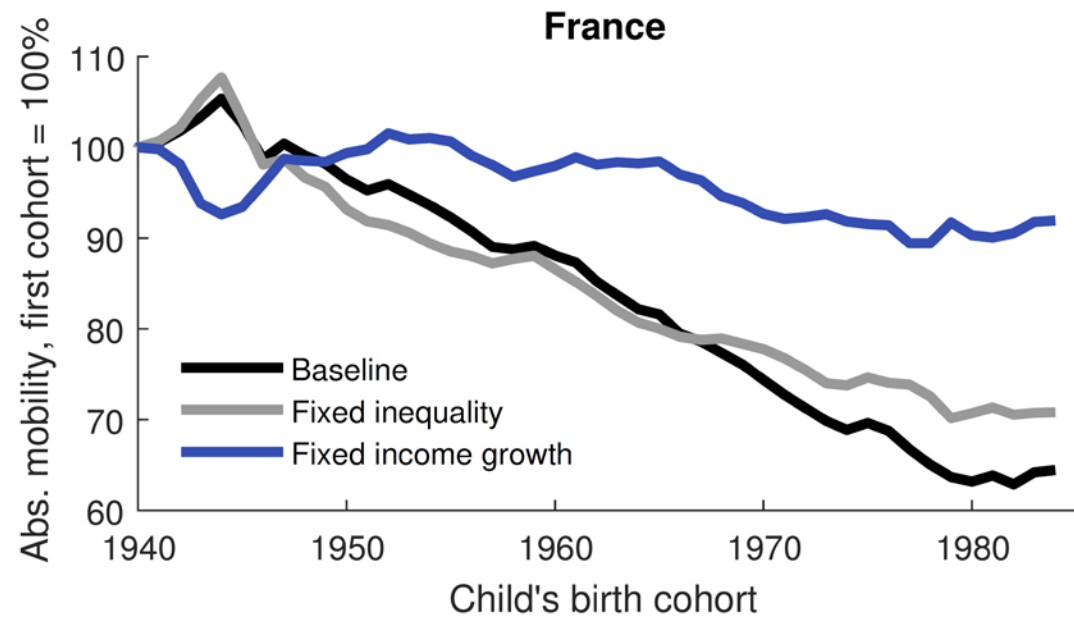
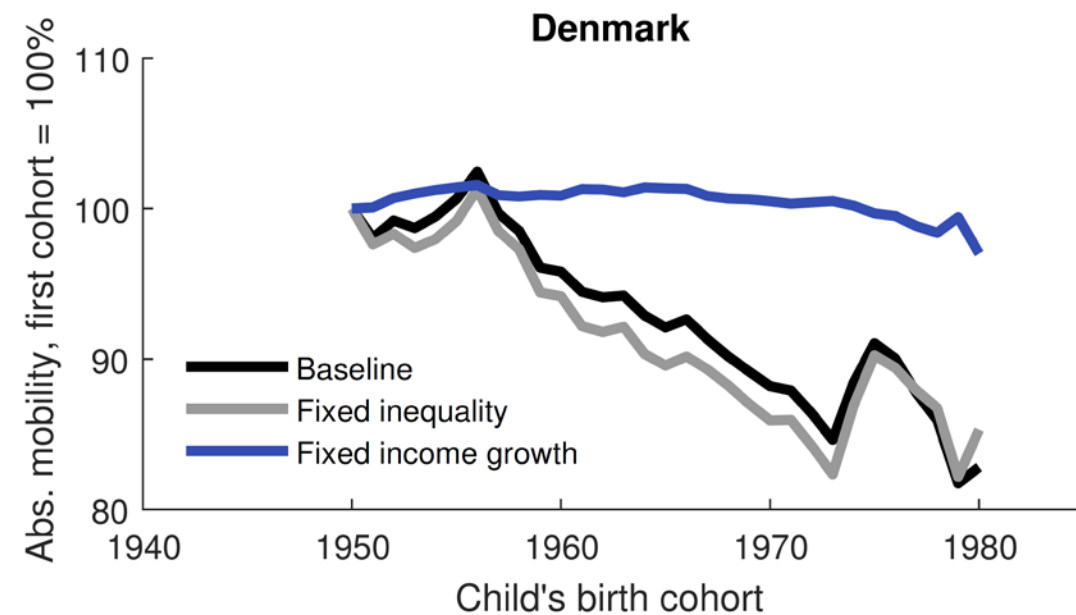
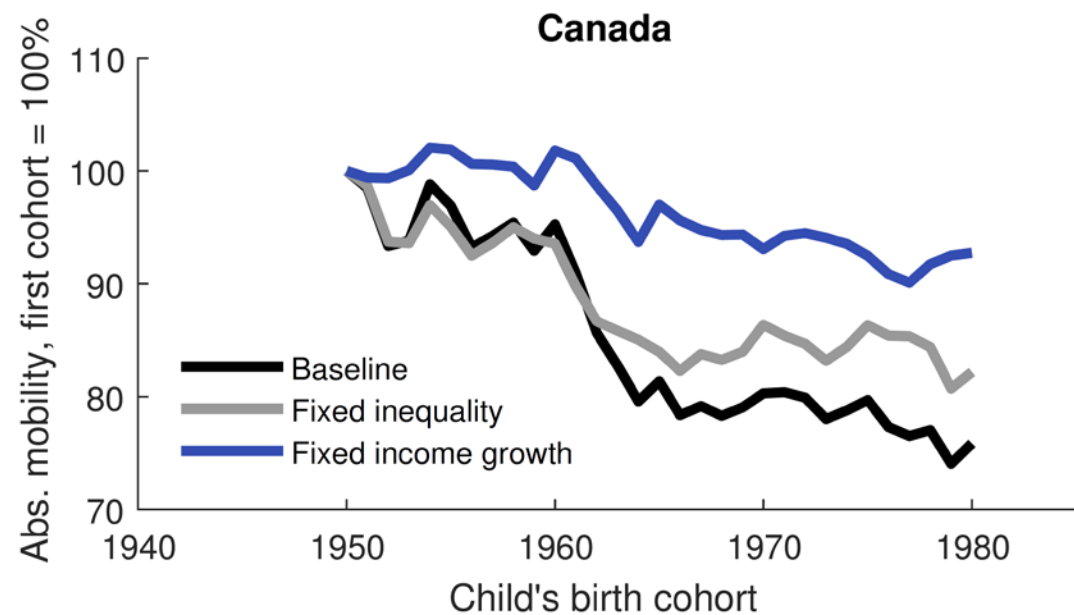
Trends in Upward Mobility: International Comparisons

- Recap of last lecture: fraction of children earning more than their parents fell from 90% for those born in 1940 to 50% for those born in 1980
- Two-thirds of this decline was due to changes in the distribution of growth and one-third was due to slowing overall growth rate of American economy
- How does the American experience compare to other countries?
- Berman (2018) applies methodology of Chetty et al. (2017) in other countries to answer this question










Restoring the American Dream

- Main lesson: restoring the American Dream of high rates of upward mobility will require **more broadly shared** economic growth
- Need policies that will increase incomes in the bottom and middle of the income distribution

Restoring the American Dream

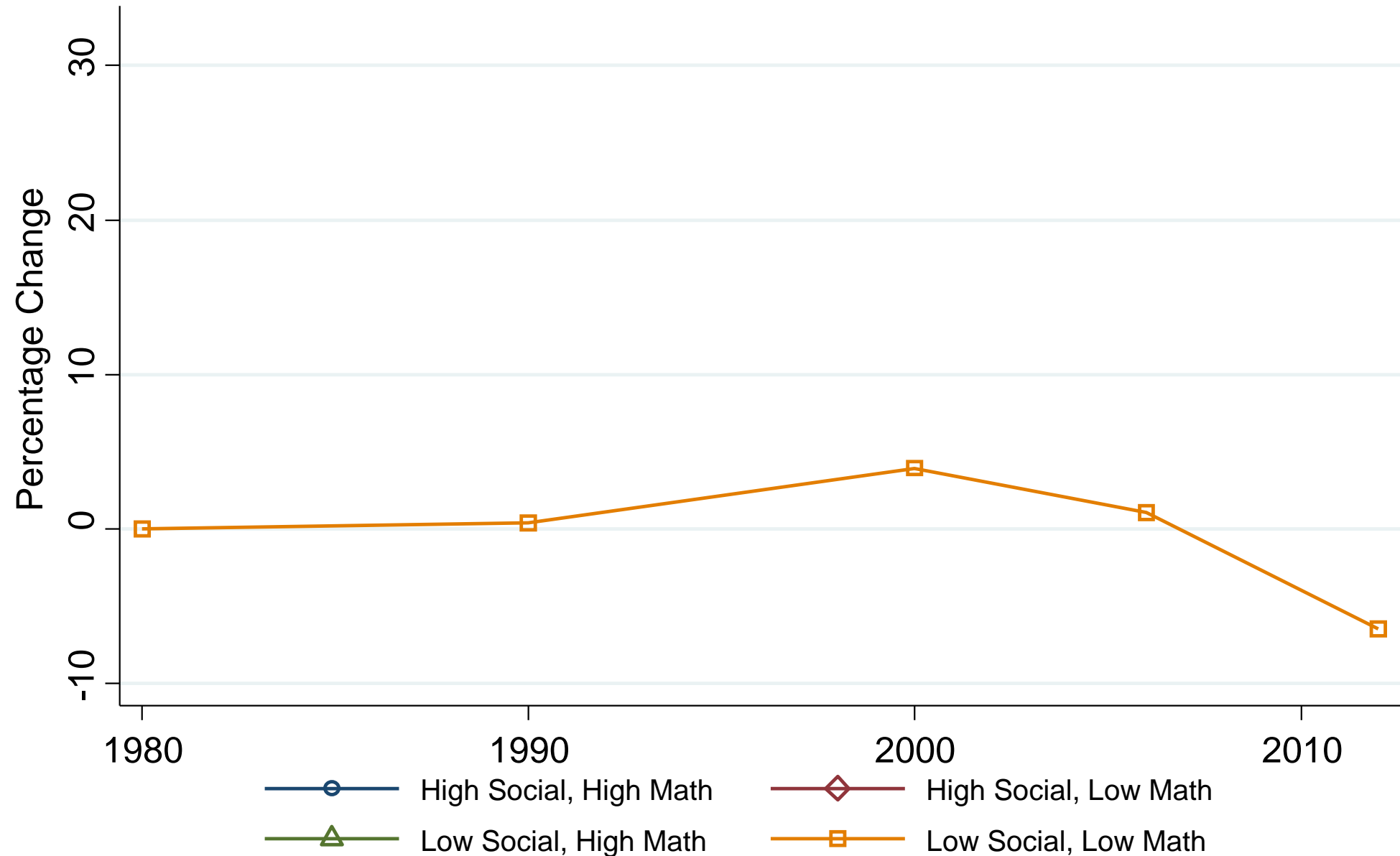
- Two broad approaches: redistribution (taxes/transfers, min wages) or increasing skills of lower-income Americans (“human capital”)

- Piketty and Saez: reductions in top income taxes and erosion of unions and minimum wages have led working-class Americans to fall behind
- Goldin and Katz: race between education and technology – need education to keep pace with technological change to increase wage rates

Restoring the American Dream

- We will discuss both tax policy and education in greater detail in later lectures
- Important note: “education” is not just about technical skills
 - Deming (2018) demonstrates this by investigating how wage rates vary with technical and social skills over time

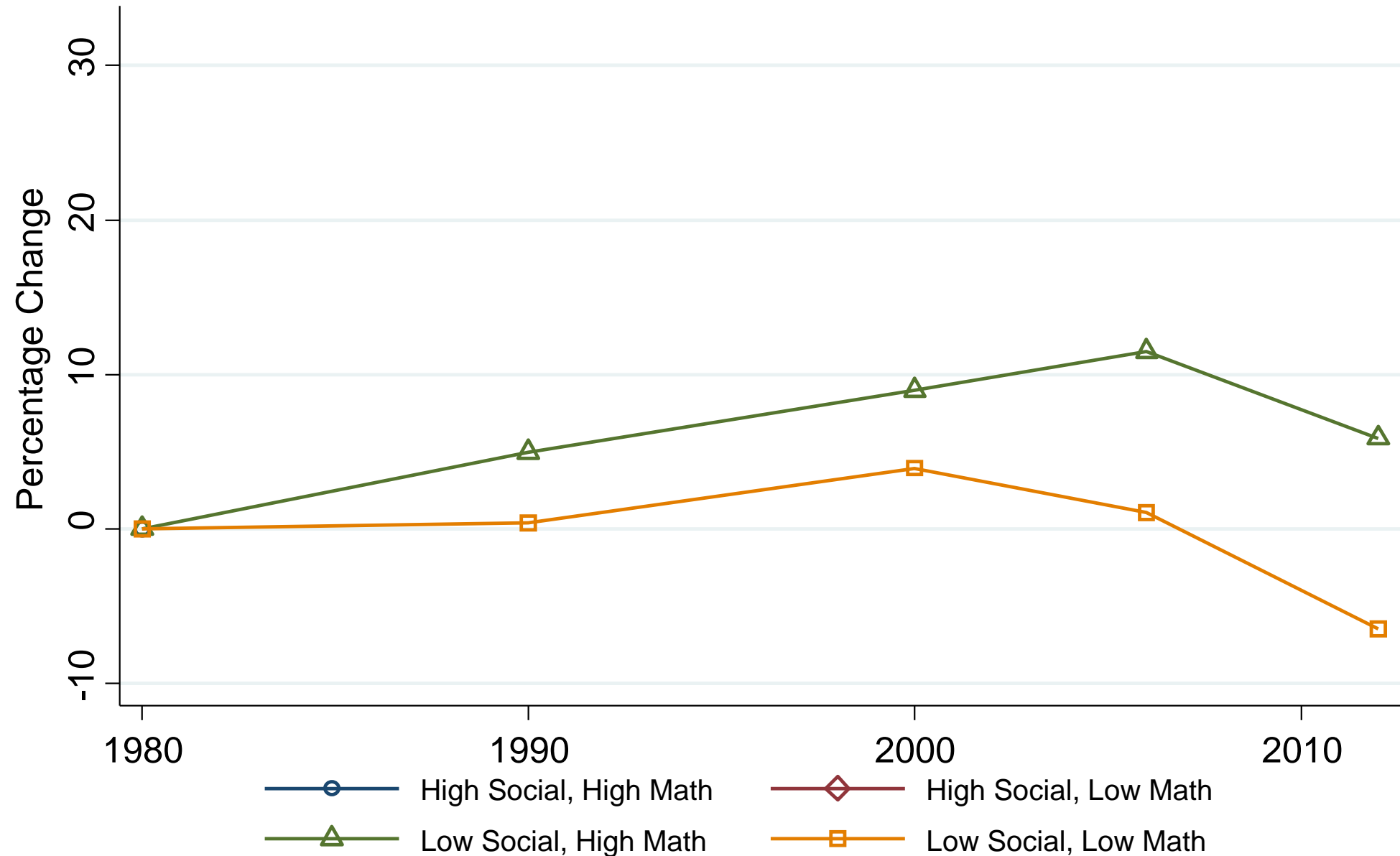
Growth in Real Hourly Wage Rates by Occupation Task Intensity

Cumulative Percent Change Between 1980 and 2012, Relative to 1980 Baseline



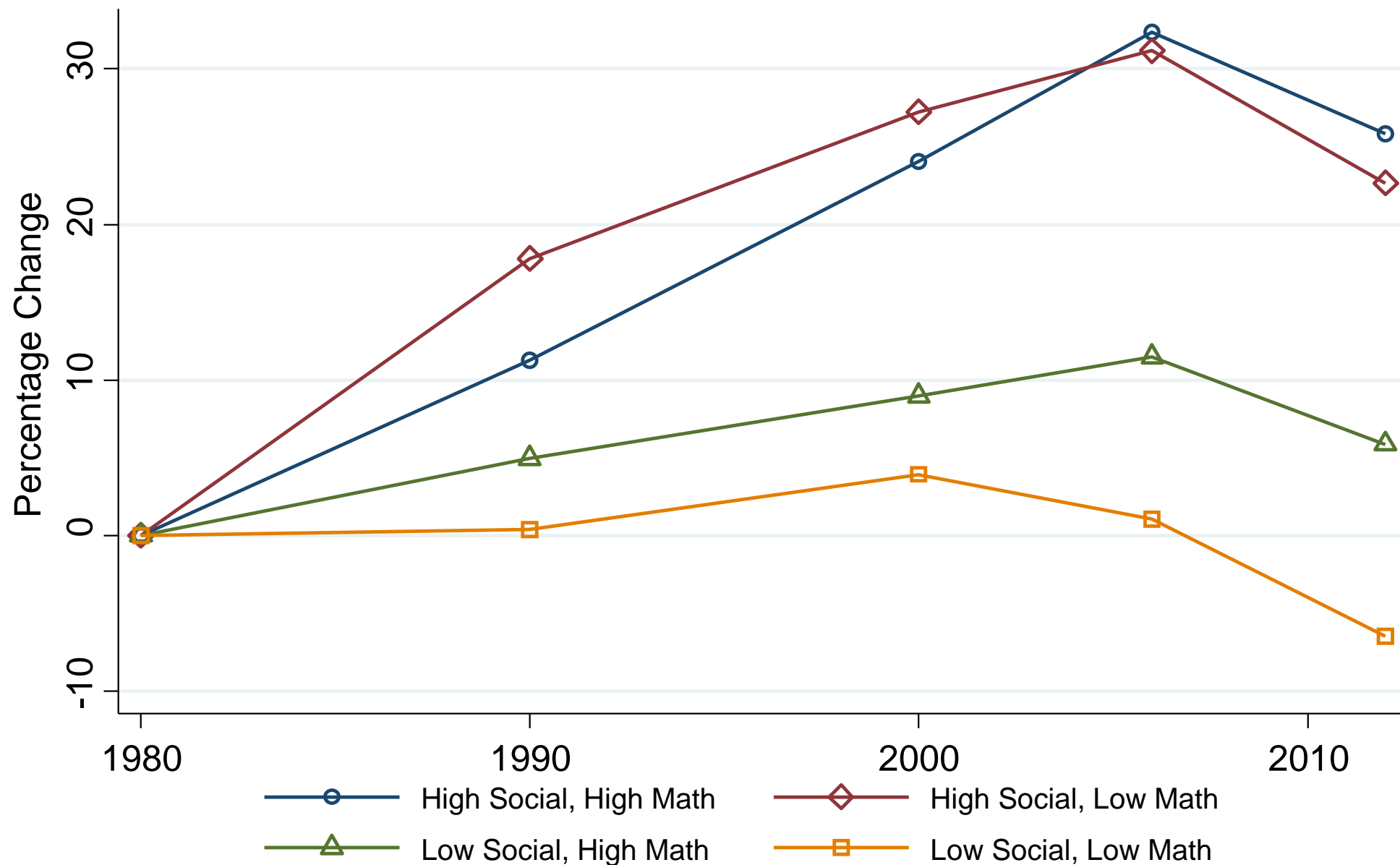
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- Important note: “education” is not just about technical skills
 - Deming (2018) demonstrates this by investigating how wage rates vary with technical and social skills over time
- Policies to improve such skills could range from changes in education and training programs to housing voucher policies



Is Increasing Social Mobility Desirable?

- Thus far we have assumed that our goal should be to increase mobility
- But policies that increase mobility may not be desirable from an efficiency perspective
 - Random college admissions would maximize social mobility
 - But would violate principle of meritocracy and would likely reduce total economic output and growth
- Next, assess tradeoff between mobility and growth, focusing on innovation as a driver of growth