

# Income Inequality, Social Mobility, and the Decision to Drop Out of High School

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# Inequality of what?

## 1. more inequality has two countervailing impacts on dropping out

- 1 a higher return to human capital (and by implication more labour market inequality) will increase the incentive to stay in school
- 2 at the same time greater inequality induces “relative disenchantment” about rates of return, decreasing the incentive to stay in school
  - it is inequality in the lower half of the income distribution that bites, and matters for this channel

# Dropping out increases with more lower tail inequality but decreases with a higher relative wage premium

Table 4: Impact of Educational Wage Premiums on Boys' Likelihood of Dropping Out of High School, by Socioeconomic Status

	50/10 ratio (1)	HS Grad to HS Dropout Wage Premium (2)	College Grad to HS Grad Wage Premium (3)
Correlation between 50/10 ratio and characteristic:		0.27	0.35
50/10 Ratio* Mom HS Dropout	0.041 (0.015)	0.046 (0.015)	0.037 (0.017)
50/10 Ratio* Mom HS Graduate	0.025 (0.017)	0.023 (0.018)	0.022 (0.019)
State Characteristic* Mom HS Dropout	--- ---	-0.117 (0.076)	0.039 (0.043)
State Characteristic* Mom HS Graduate	--- ---	0.029 (0.062)	0.024 (0.043)

Source: Kearney and Levine (2016), Table 4.

# Inequality of what?

## 2. inequality is based on incomes that include government transfers

The 50/10 ratio based upon state level census information on pre-tax, post-transfer household income

- “Total household income in the census is defined as the sum of eight categories: Wages, salary, commissions, bonuses, or tips from all jobs; Self-employment net income; interest, dividends, net rental income, royalty income, or income from estates and trusts; Social Security or Railroad Retirement; Supplemental Security Income (SSI); any public assistance or welfare payments from the state or local welfare office; retirement, survivor, or disability pensions other than social security; any other sources of income received regularly such as Veterans’ (VA) payments, unemployment compensation, child support, or alimony.” (Kearney and Levine, pp. 24-25)

## Social mobility for whom?

### 1. upward mobility from the bottom is threatened, but only for boys

- 1 the findings focus our attention on the influence of relative incomes on upward mobility from the bottom in an absolute indicator
  - lower tail inequality negatively impacts the high school graduation prospects of boys
  - no significant results for girls
- 2 the findings are robust to a host of factors, with one possible exception
  - somewhat weaker when a measure of ability is controlled for

# Robust results with one possible exception

controlling for "ability" has some bite

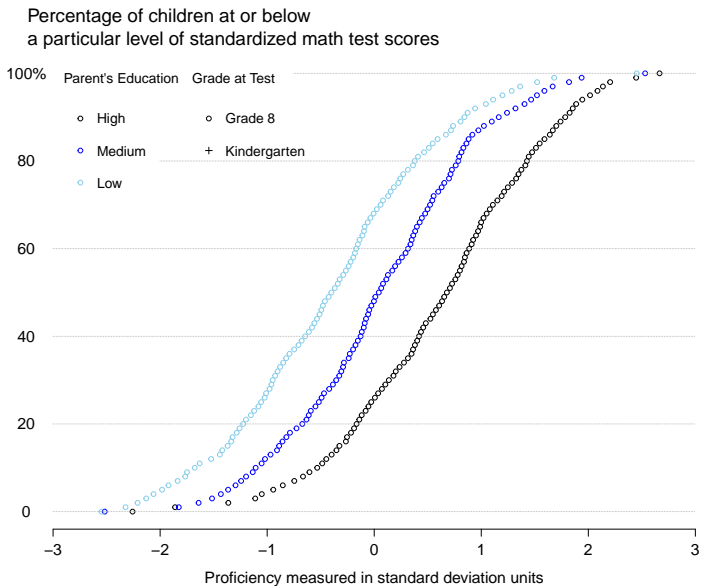
**Table 8: Relationship between Socioeconomic Status, Inequality, and AFQT Scores for Boys**

Sample	All 5 Datasets (1)	NLSY79 and NLSY97 (2)	NLSY79 and NLSY97 (3)	NLSY79 and NLSY97 (4)
Dependent Variable	HS Dropout	HS Dropout	HS Dropout	AFQT
Mean of Dependent Variable	11.2	17.7	17.7	50.7
Mom HS Dropout*50/10 Ratio	0.042 (0.016)	0.067 (0.029)	0.045 (0.028)	-4.48 (2.49)
Mom HS Graduate*50/10 Ratio	0.024 (0.018)	0.077 (0.025)	0.057 (0.023)	-4.10 (2.27)
AFQT	---	---	-0.005 (0.0002)	

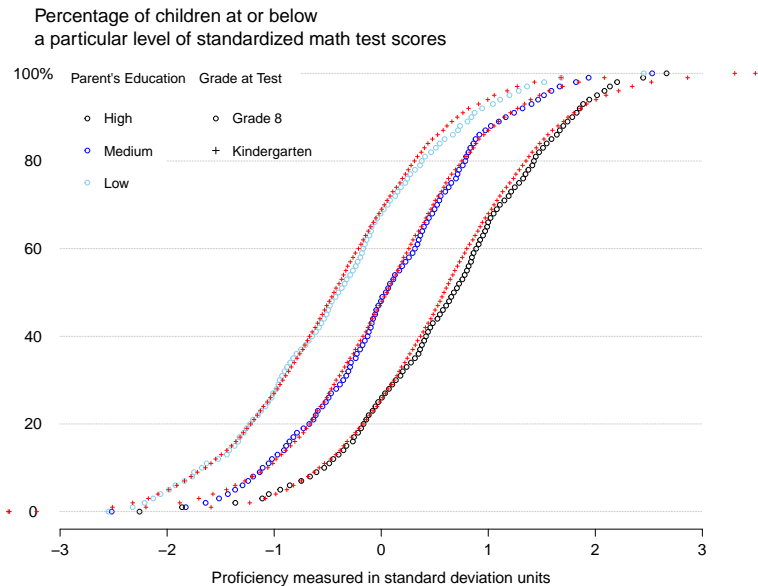
Notes: Reported standard errors in parenthesis are adjusted for clustering at the state level. Estimates in Column 1 differ slightly from previous estimates because no state level policy variables are included. The sample used in Column 2 is restricted to those observations with available AFQT scores to compare to Column 3. The samples used for the regressions in Columns 2 through 4 are the NLSY79 and NLSY97 and the sample size is 7,955.

Source: Kearney and Levine (2016), Table 8.

# There are wide gaps in the math skills of 8th graders, but ...



... but these gaps were evident in kindergarten





## Social mobility for whom?

### 2. The early years and families matter

- 1 the findings focus our attention on the influence of relative incomes on upward mobility from the bottom in an absolute indicator
  - lower tail inequality negatively impacts the high school graduation prospects of boys
  - no significant results for girls
- 2 they are robust, with one possible exception
  - possibly somewhat weaker when a measure of ability is controlled for
- 3 if you believe policy should be directed to behaviour, then should it focus on the high school years or on the early years?

# Are trends in inequality and social mobility informative?

1. not really, but possibly for outcomes like high school graduation

- 1 Why don't we see falling social mobility in an era of higher inequality?
  - because we focus on the wrong type of inequality
  - it is not top income shares that drive the process, but middle income inequality (according to Chetty et al.) or lower tail inequality (according to Kearney-Levine)
    - looked at in these ways inequality hasn't gone up
- 2 More (or just as) likely this reflects:
  - new opportunities are first seized by the relatively advantaged
  - long lags, and non monotonic adjustments
- 3 But this raises a puzzle for trends in high school completion

# Relative wages haven't changed that much, yet ...

(for the high school grad that is not college bound)

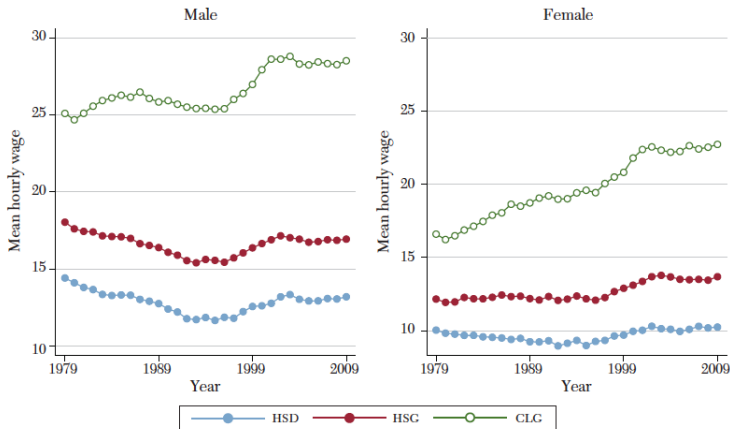


Figure 2. Real Wage Trends (2009 dollars) for High School Dropouts, Terminal High School Graduates, and Four-Year College Graduates with No Postgraduate Credential

Source: Richard Murnane (2013). "US High School Graduation Rates: Patterns and Explanations." *Journal of Economic Literature*. (June), Figure 2.

# ... yet graduation rates began rising after 2000

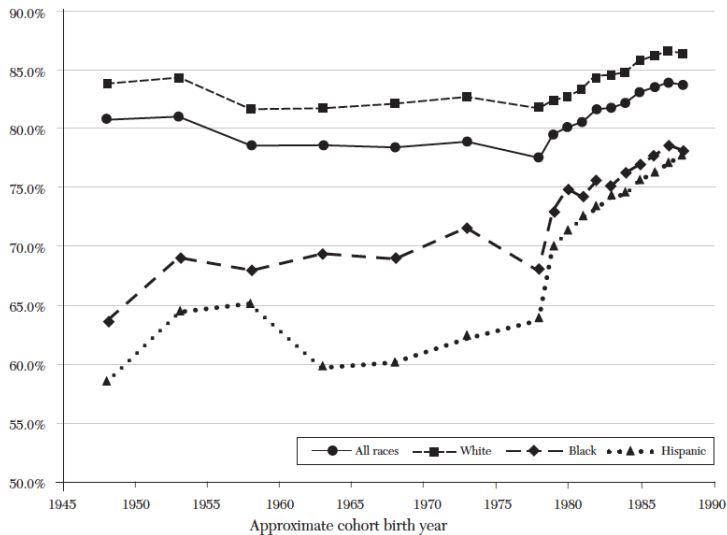


Figure 1. U.S. High School Graduation Rate for 20-24-Year-Olds by Race/Ethnicity and Birth Cohort

Source: Richard Murnane (2013). "US High School Graduation Rates: Patterns and Explanations." *Journal of Economic Literature*. (June), Figure 1.

# References



Bradbury, Bruce, Miles, Corak, Jane Waldfogel, and Elizabeth Washbrook (2015). *Too many Children Left Behind: The U.S. Achievement Gap in Comparative Perspective*. New York: Russell Sage Foundation.



Kearney, Melissa and Phillip Levine (2016). "Income Inequality, Social Mobility, and the Decision to Drop Out of High School." Paper presented to the Brookings Papers on Economic Activity Spring 2016 Conference.



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