

Returns to Schooling in the US: 1940 to 2000

Lance Lochner

Department of Economics
University of Western Ontario

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Social vs. Private Returns

- Social returns also include benefits and costs to society at large:
 - public education expenditures
 - higher tax revenues
 - changes in public health care expenditures
 - crime reduction
 - spillover effects from more educated co-workers
 - increased innovation
- Private returns determine individual decisions
- Social returns determine value to society as a whole

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- Discounting future income more than today's is a central issue in evaluating the returns to school

How can we Measure the Private Returns to School?

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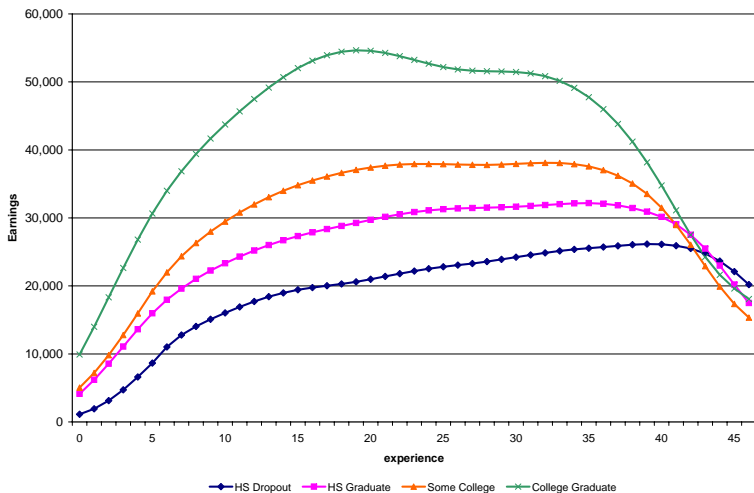
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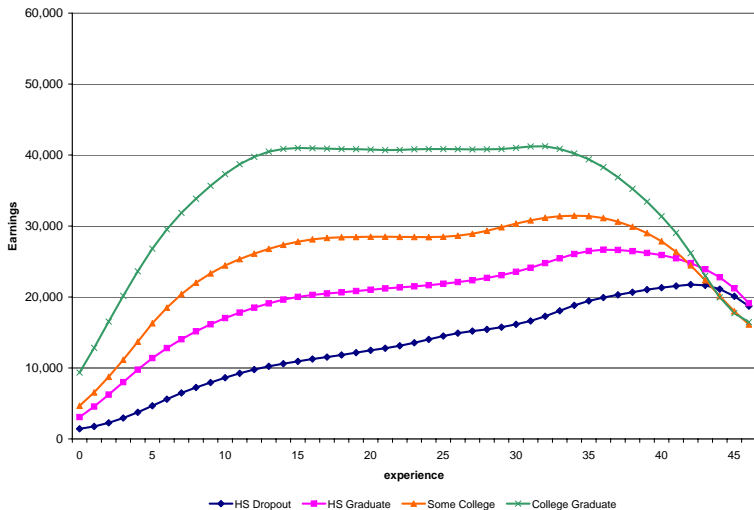
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- Analysis takes into account differences in earnings, tuition costs, and taxes (Heckman, Lochner, and Todd, 2007)

Earnings for by Education and Experience (White Men, 2000 Census)



Earnings for by Education and Experience (African American Men, 2000 Census)



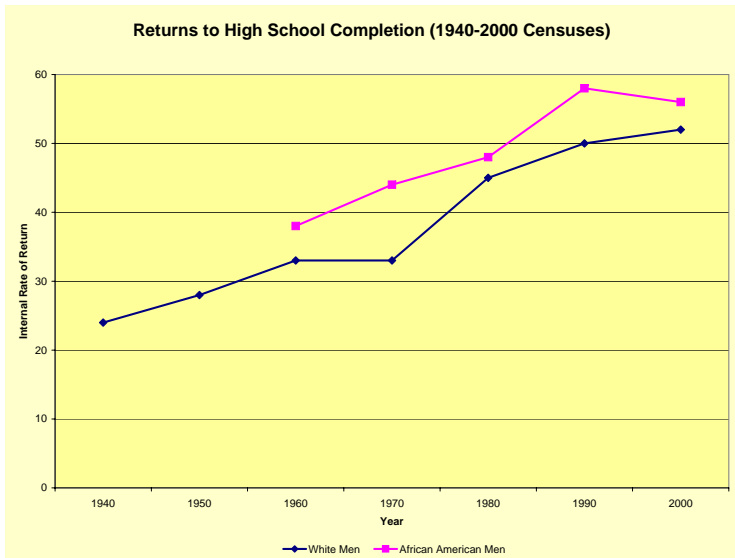
Rates of Return to HS Completion and College vs. HS (2000 Census)

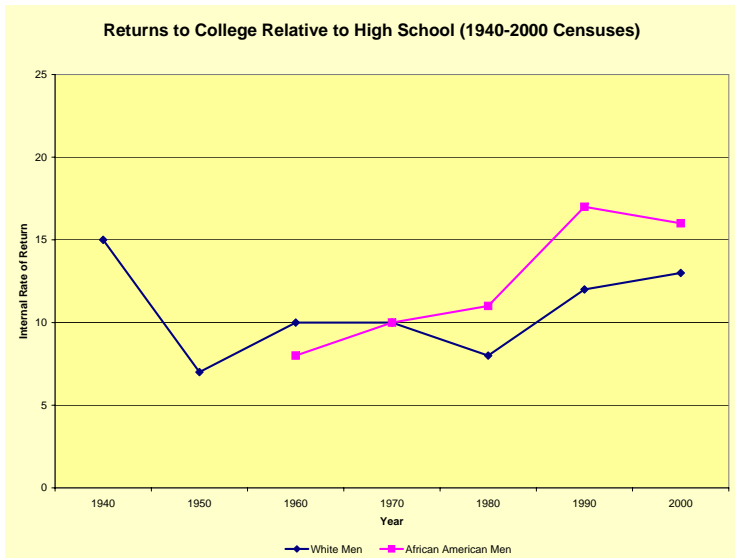
Return	White Men		African American Men	
	HS Completion	College vs. HS	HS Completion	College vs. HS
5% Interest Rate:				
Diff. in DPV Income	74,000	121,000	83,000	132,000
Increase in DPV Income	28%	32%	48%	47%
10% Interest Rate:				
Diff. in DPV Income	30,000	20,000	37,000	35,000
Increase in DPV Income	26%	11%	49%	26%
Internal Rate of Return	46%	13%	52%	16%

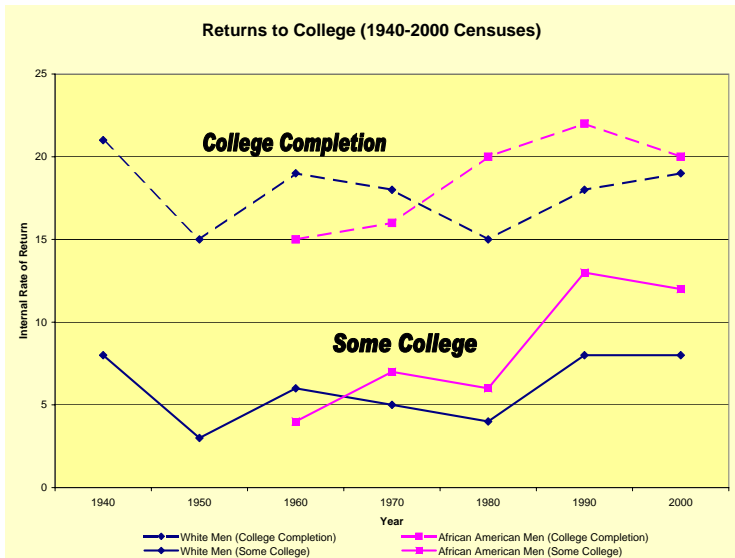
Education Levels

Consider returns for the following schooling levels:

- High school completion
- Attending some college
 - two-year or three-year post-secondary degrees
 - dropouts from four-year BA/BS programs
- Completing college
 - compares two-years of college with four-years
- Completing college vs. completing high school



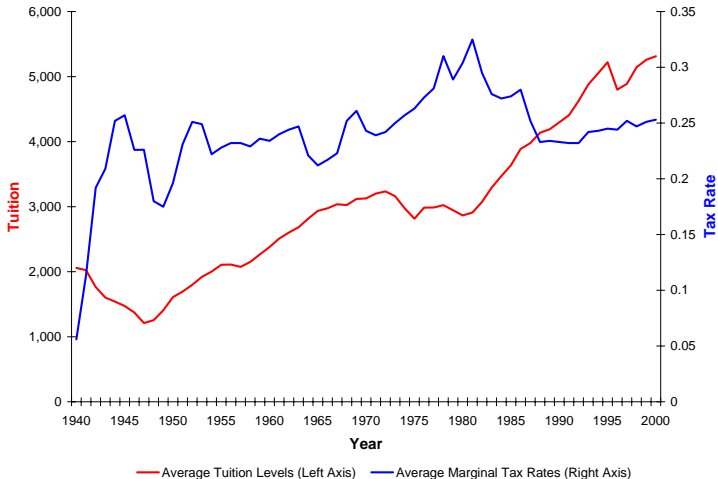




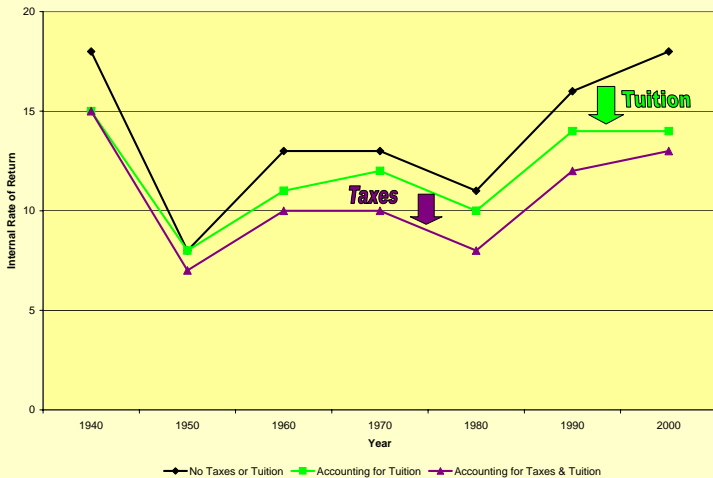
The Effects of Tuition and Tax Policy (1940-2000)

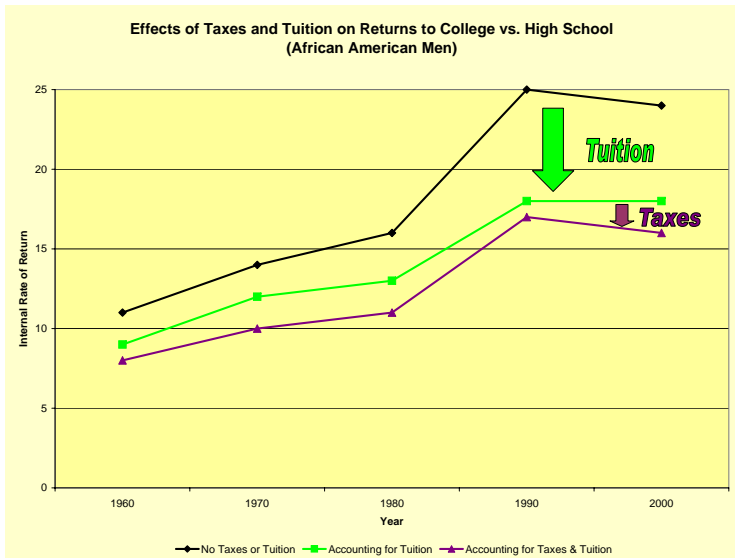
- Average tuition levels rose considerably over the years
- Average marginal tax rates have also risen over the years
- Both of these factors reduce returns by a few percentage points in recent years but have little effect on overall time trends

Average Tuition and Marginal Tax Rates (1940-2000)

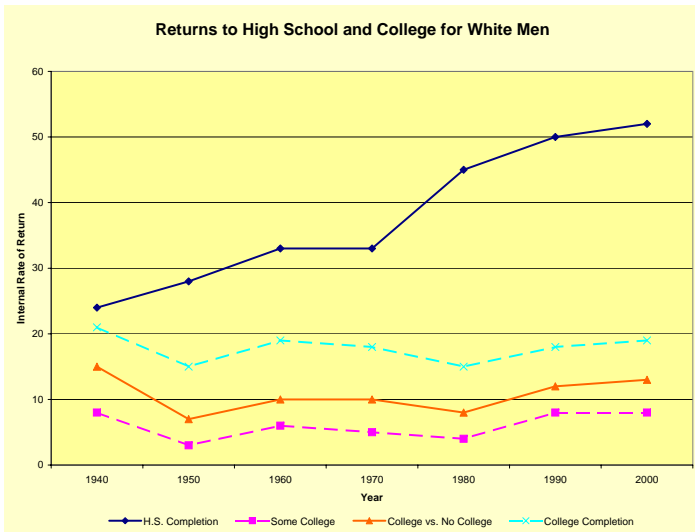


Effects of Taxes and Tuition on Returns to College vs. High School (White Men)

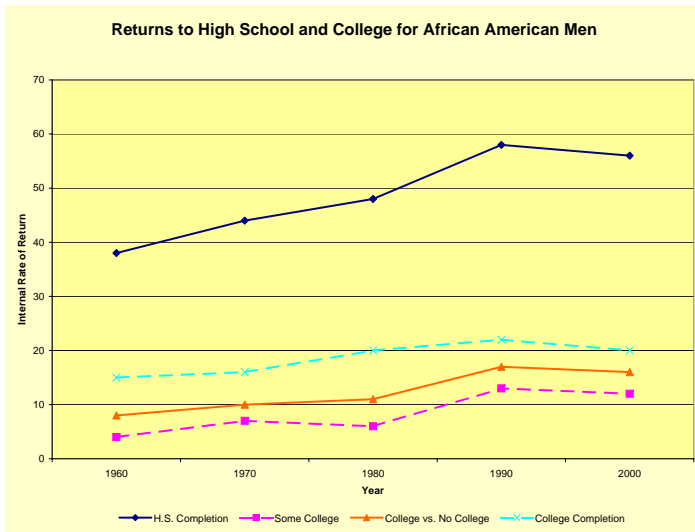




Summarizing Returns for White Men



Summarizing Returns for African American Men

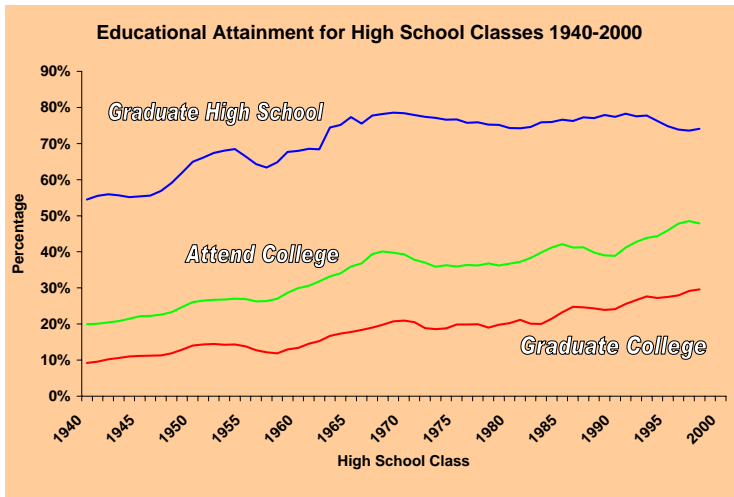


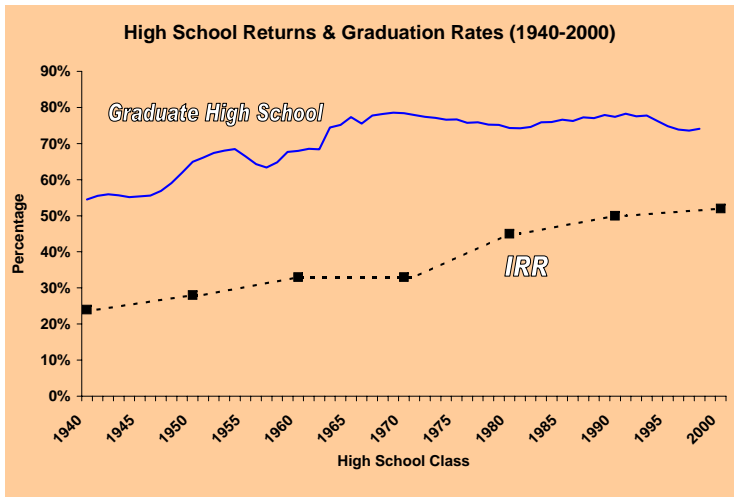
How have American Youth Responded?

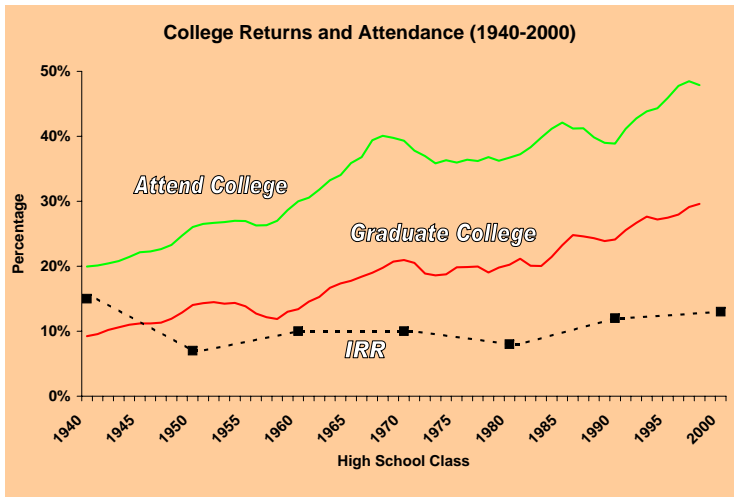
- Continuous and sizeable rise in college attendance and graduation rates despite modest long-run changes in college returns

How have American Youth Responded?

- Continuous and sizeable rise in college attendance and graduation rates despite modest long-run changes in college returns
- Rising high school completion rates until 1970s with small *decline* thereafter
 - recent decline is puzzling given sizeable increase in returns over recent decades
- Source: Heckman and LaFontaine (2008)







Who is Responding to Rising Returns to College?

- Can analyze college attendance by family income and 'ability' for high school classes from the early 1980s (NLSY79) and early 2000s (NLSY97)

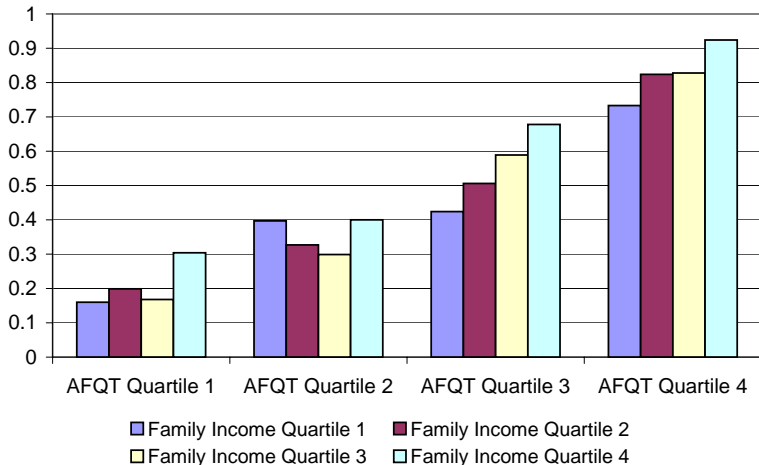
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- 'Ability' measured by scores on AFQT
 - Test used to determine eligibility for military
 - Primarily measures math and reading skills
 - Not innate ability – 'ability' or 'achievement' during teenage years

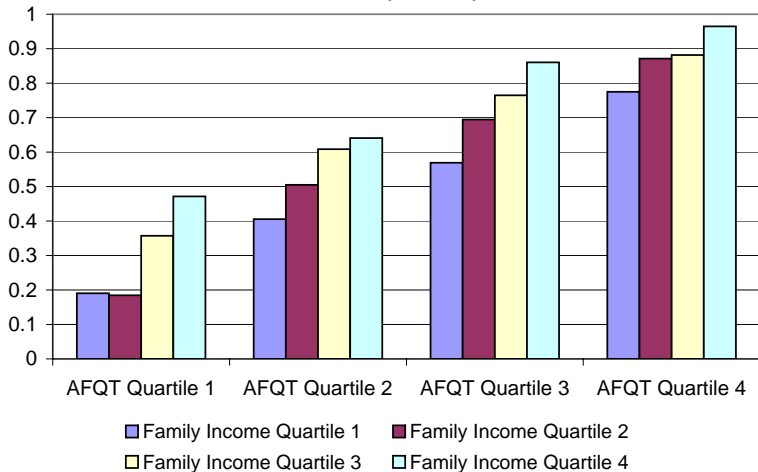
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- Family income measured around ages 16-17 but not a 'lifetime' measure
- Source: Belley and Lochner (2007)

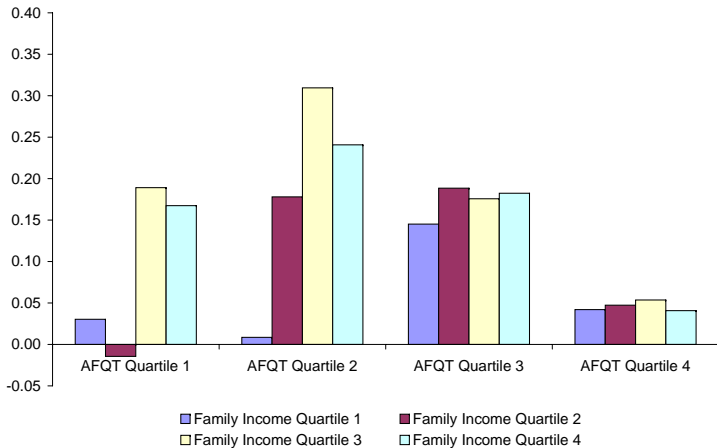
**Figure 2a: College Attendance by AFQT and Family Income
Quartiles (NLSY79)**



**Figure 2b: College Attendance by AFQT and Family Income
Quartiles (NLSY97)**



Changes in College Attendance Rates (1980s to 2000s)



Conclusions

- College:
 - Returns to 4-year college completion generally exceed returns to attending fewer years (including 2-year programs)
 - Modest increase in returns to college in recent decades
 - Continuous increase in college attendance and graduation rates over time
 - Recent attendance increases greatest for youth from higher income families

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- High School:
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 - High school graduation rates actually declined in recent decades

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- High School:
 - Returns to high school are substantially higher than college and have increased more rapidly in recent decades
 - High school graduation rates actually declined in recent decades
- Returns are generally slightly higher for African Americans