

Charter Schools & Postsecondary Education

Susan Dynarski

Professor, University of Michigan

Ford School of Public Policy

School of Education

Department of Economics

Do charter schools improve student outcomes?

- Hard question to answer!
- Say we compare test scores of charters & traditional public schools and find...
 - Charters do better
 - Charter opponents: Cream skimming!
 - Charters do worse
 - Charter supporters: Charters serve neediest!
- Nerd stats term: “selection bias”
 - Makes results of analyses very sensitive to methods

Effect of Selection Bias: Results Depend on Method

- Consider three studies of 2003 NAEP
 - Charters are worse: AFT (2004)
 - Results are inconclusive: US ED (2004)
 - Charters are better: Hoxby (2004)
- Critical difference: choice of comparison group
 - AFT, ED: all TPS students
 - Hoxby: students at nearest “comparable” school
- Researchers argue about the correct comparison group → hard to converge on results

Randomized Trials: The Gold Standard of Research

- 1) People volunteer for a study
- 2) Coin flip decides who gets treatment and who does not (“control group”)
- 3) Compare results

Power of Randomized Trials

- Randomization (coin flip) means treatment and control groups are identical (on average) in *every way*
 - Parental education
 - Previous test scores
 - Sex
 - Race
 -?
- So any differences we find between the T&C groups are caused by the *treatment* and *not* selection bias

How does this help with charter schools?!

- Every charter school that uses a lottery to admit students is running a randomized trial!
 - Compare lottery winners & losers
 - Researchers are studying these experiments
- Research to date that uses lotteries
 - Boston & Massachusetts (me & coauthors)
 - NYC (Hoxby)
 - Harlem Children's Zone (Dobbie & Fryer)
 - Multi-state Study (Mathematica)
 - KIPP Lynn (me & coauthors)



Center for Education Policy Research
HARVARD UNIVERSITY

Student Achievement in Massachusetts' Charter Schools



January 2011

Student Achievement in Massachusetts' Charter Schools

February 7, 2011

Joshua Angrist
Sarah Cohodes
Susan Dynarski
Jon Fullerton
Thomas Kane
Parag Pathak
Chris Walters

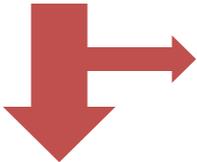
Prepared for the Massachusetts
Department of Elementary and
Secondary Education with support from
the U.S. Department of Education

The Massachusetts Charter Landscape

- The Boston and Lynn public school systems are big-city districts, serving mostly minority populations
 - In our lottery sample, charters in urban districts emphasize instruction time and mostly subscribe to “No Excuses” organizational principles
- Outside urban areas
 - Charters emphasize a range of approaches and philosophies (e.g. performing arts, expeditionary learning)
 - Charters serve far fewer minority and low-income students

Lottery Study Details

Identify applicants to a given **set** of charters

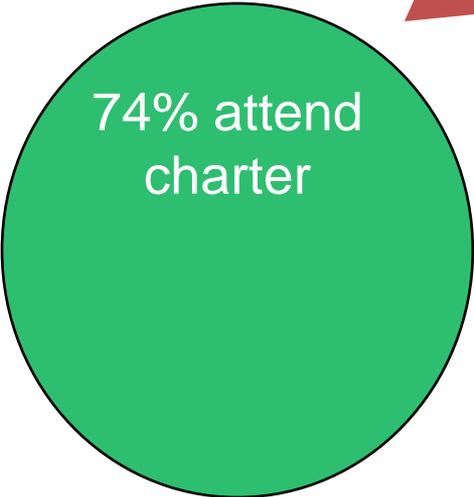


Remove those guaranteed admission

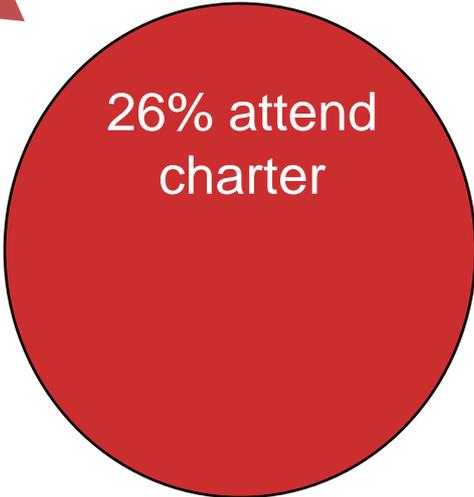
List of applicants in lotteries



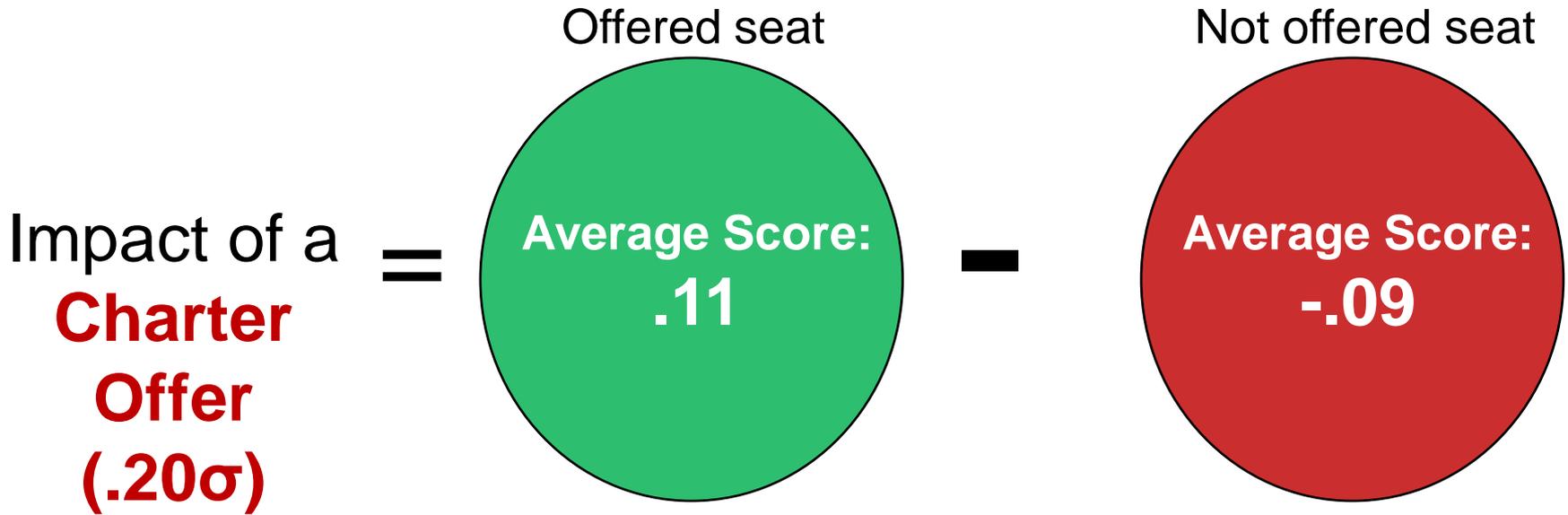
Offered seat



Not offered seat



Lottery Study Details



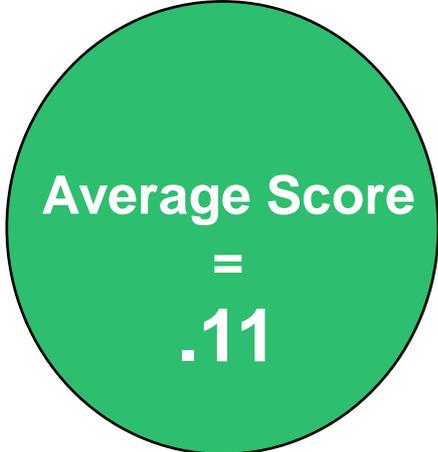
Middle school math scores (standardized) for charter lottery applicants.

Lottery Study Details

Offered seat

Not offered seat

Impact of a
**Year in
Charter**
(.24σ=.2/.8)



-

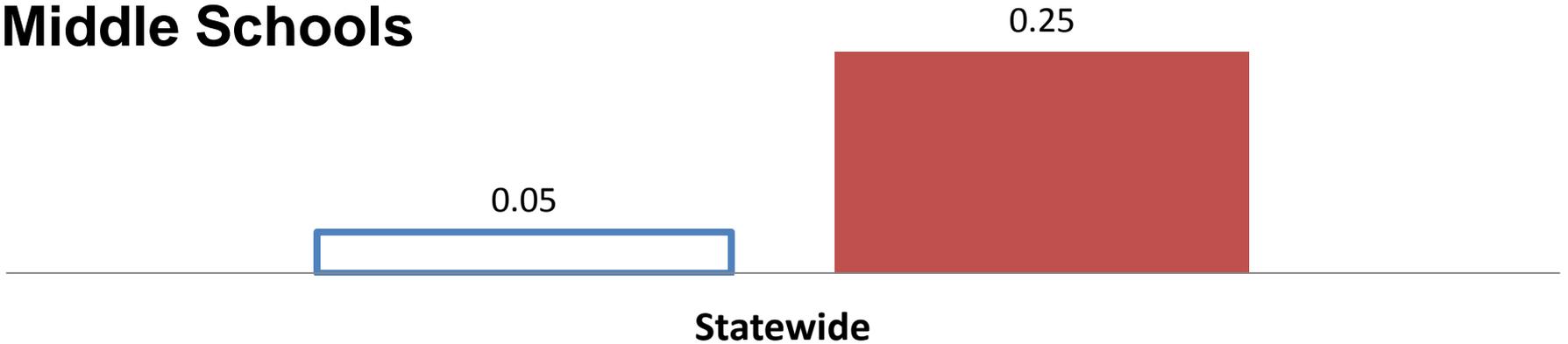


-

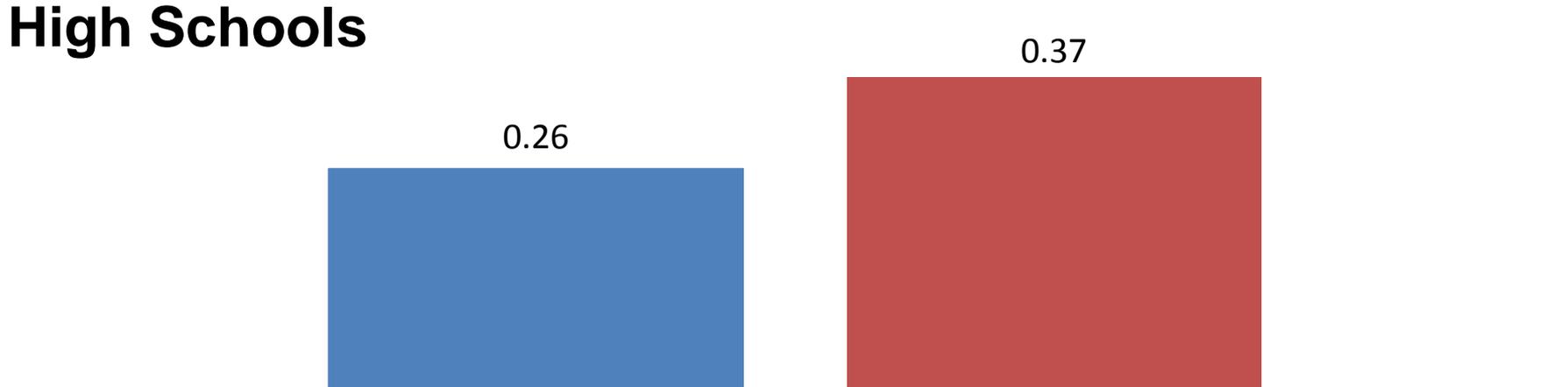


Lottery Estimates: Statewide

Middle Schools



High Schools



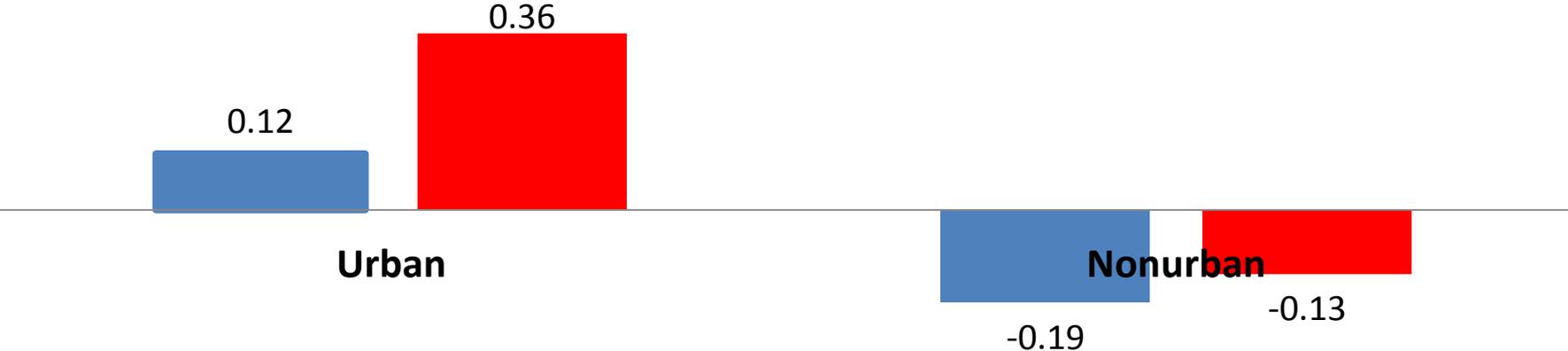
■ ELA

■ Math

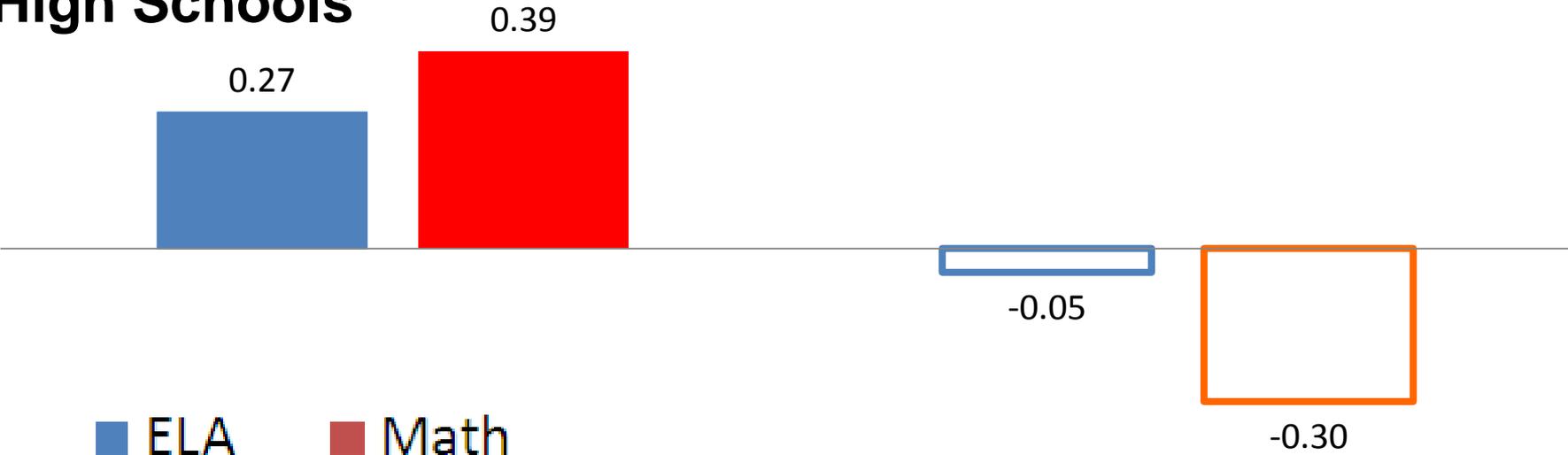
Solid bars show significant estimates (p<.05); open bars show insignificant.

Lottery Estimates: Urban and Nonurban schools

Middle Schools



High Schools

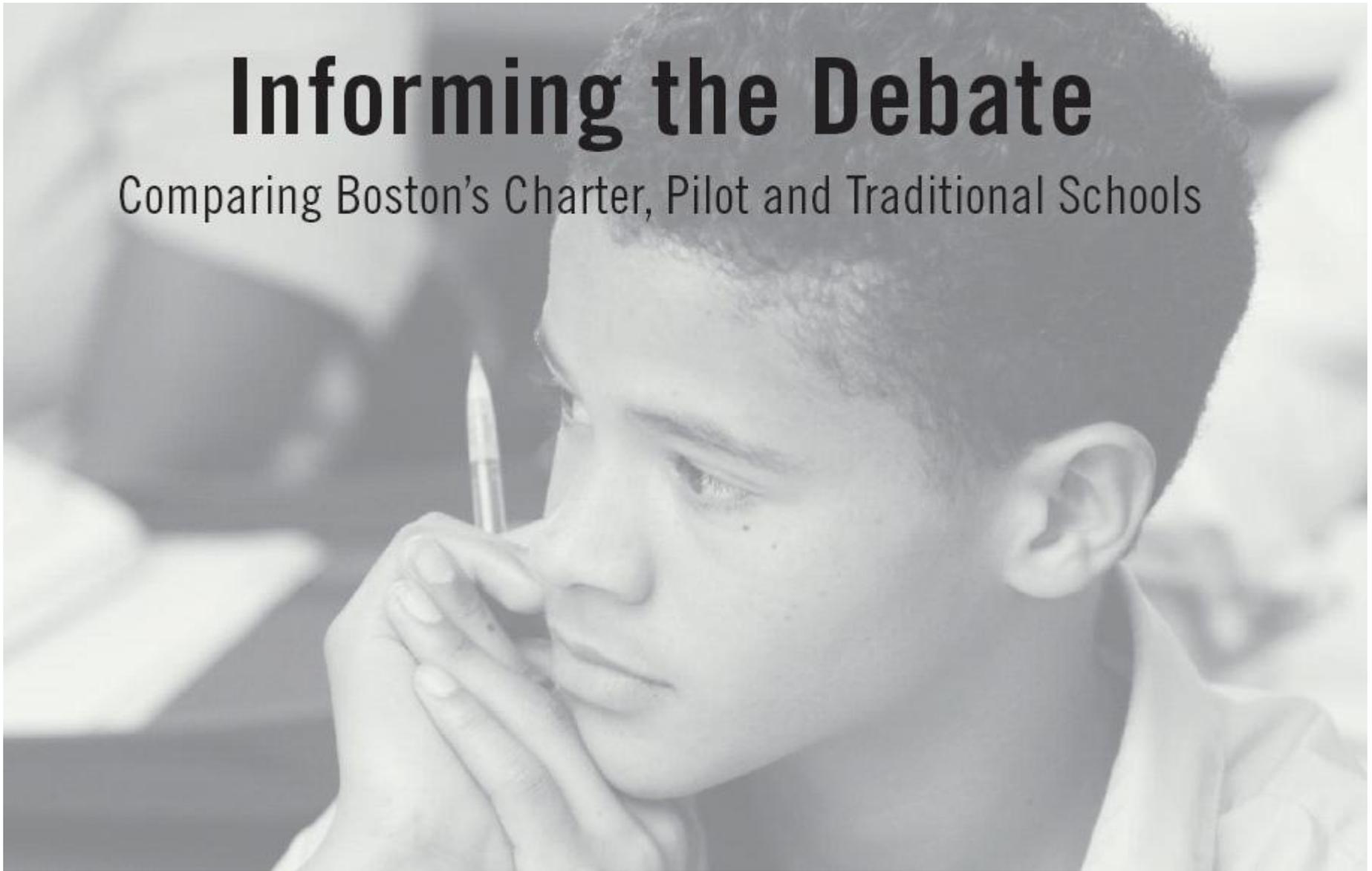


■ ELA ■ Math

Solid bars show significant estimates (p<.05); open bars show insignificant.

Informing the Debate

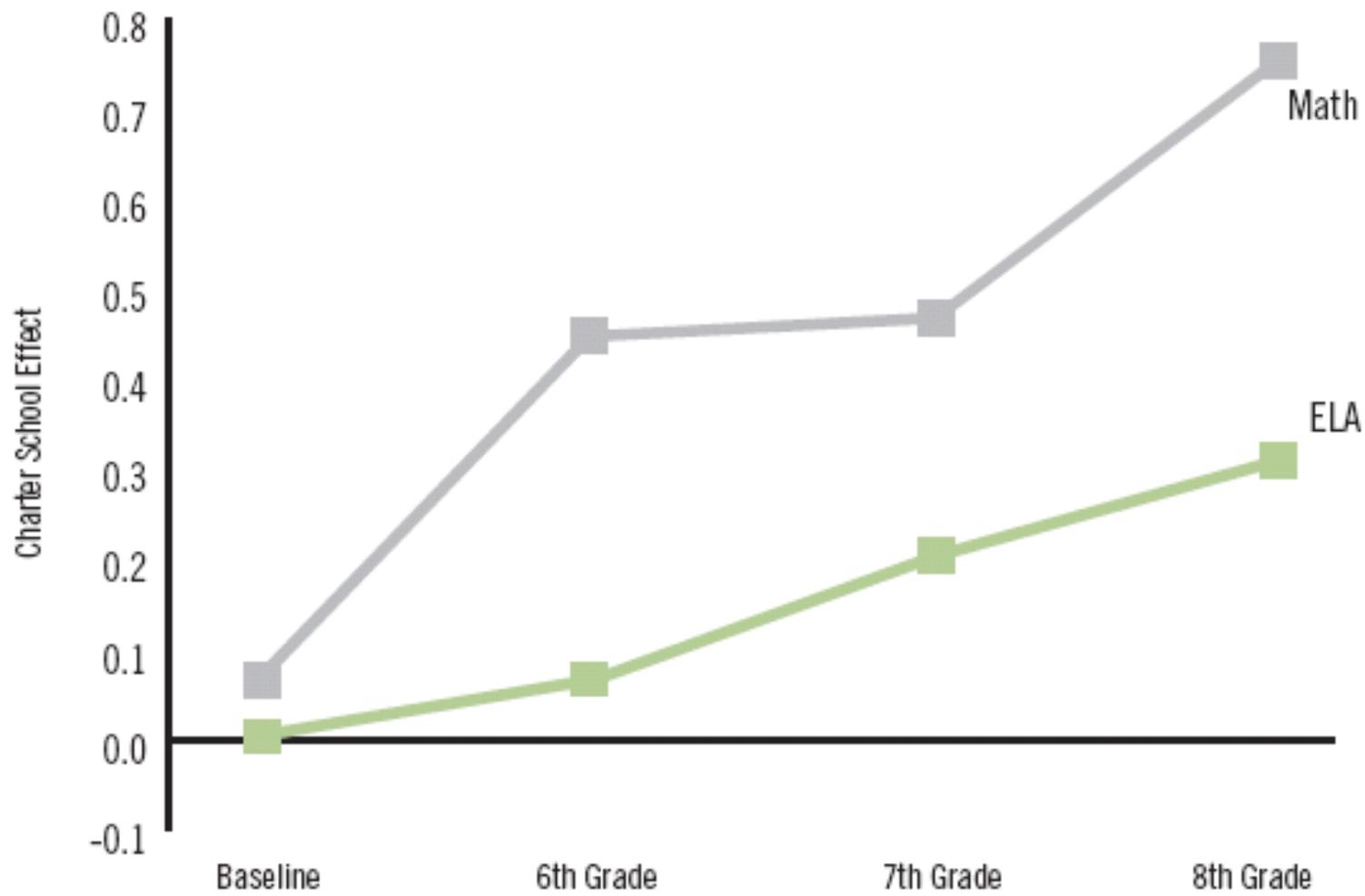
Comparing Boston's Charter, Pilot and Traditional Schools



Boston Findings

- Charter schools increase math scores by 0.4 sd (standard deviations) a year
 - Context: Black-White gap in high school is 0.8 sd
- Reading results: 0.2 sd/year

Results for Charter Middle Schools by Grade: Lottery Winners vs. Lottery Losers



KIPP Lynn Findings

- Overall, KIPP Lynn increases
 - math scores by 0.3 sd a year
 - reading scores by 0.18 sd a year
- These effects are more than twice as large among the ELL & special ed kids

What we (now) know

- Charter schools serving poor, nonwhite kids in urban areas increase test scores.
- Especially large effects for ELL, special ed, kids starting with lowest scores
- Charter schools serving non-poor, white kids in suburbs don't appear to increase test scores
 - Mathematica, MA

Need to know more!

- We suspect that it is differences in practices driving the different results
- Need lots more schools in diverse settings with diverse practices to nail this down

Learning from charter schools

- Why are charters more effective for some students and in some settings?
 - The students
 - The school practices
 - The traditional public schools
 - The regulatory environment
 - ...?
- What lessons & practices can we carry to other charter schools? To traditional public schools?
 - Length of school day
 - Tutors
 - Curriculum
 - Teacher training

Michigan Charter Research Project

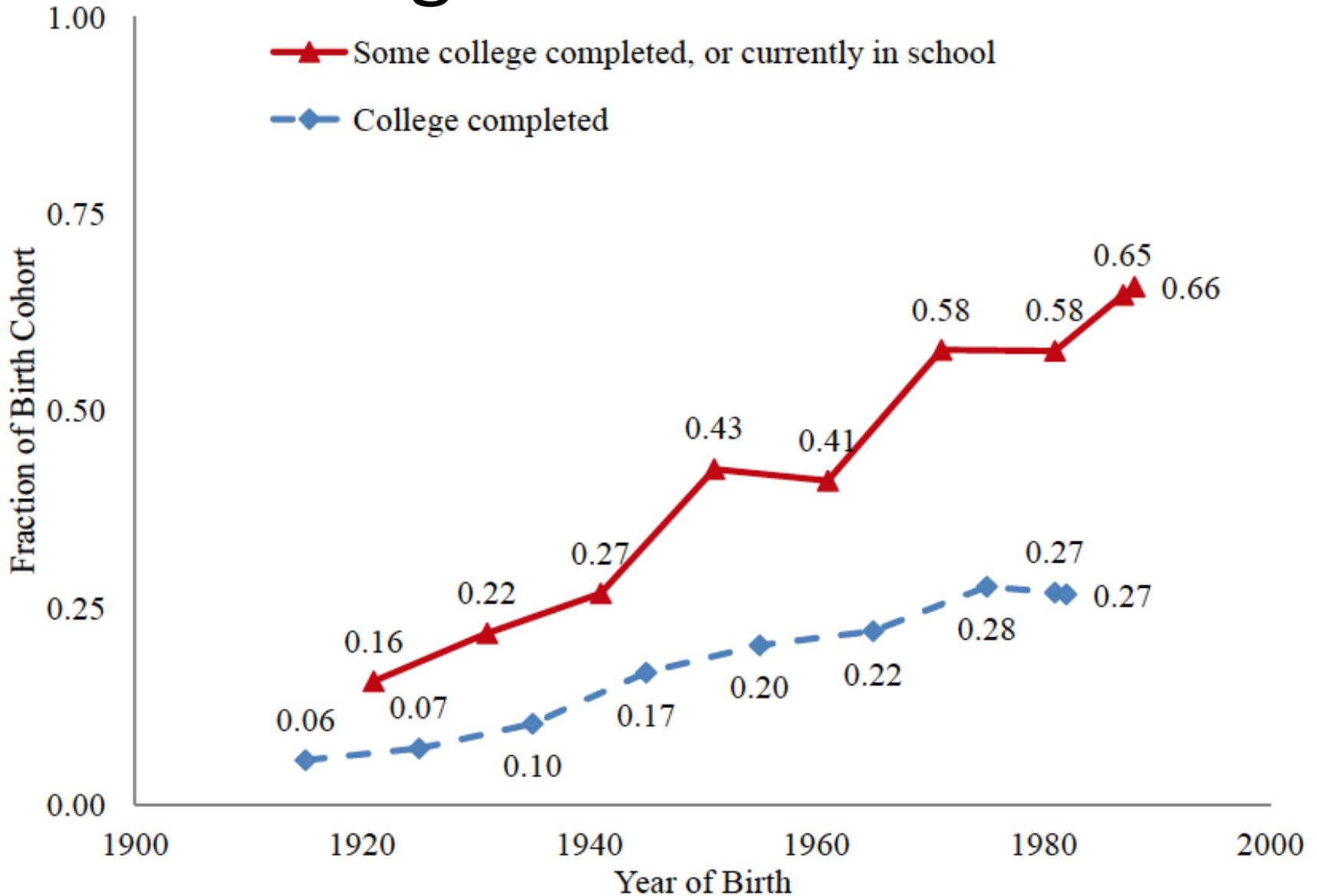
- Measure the effect of Michigan's 242 charter schools on student learning & educational attainment
 - Test Scores
 - HS graduation
 - College attendance, choice, graduation
- Identify the charter practices that are associated with the largest positive effects

Can We Learn About Effect of Charters in OH?

- Need student-level, statewide data systems
- Link students who apply to charters to statewide data on:
 - Assessments
 - College attendance
 - College performance, graduation
 - Earnings

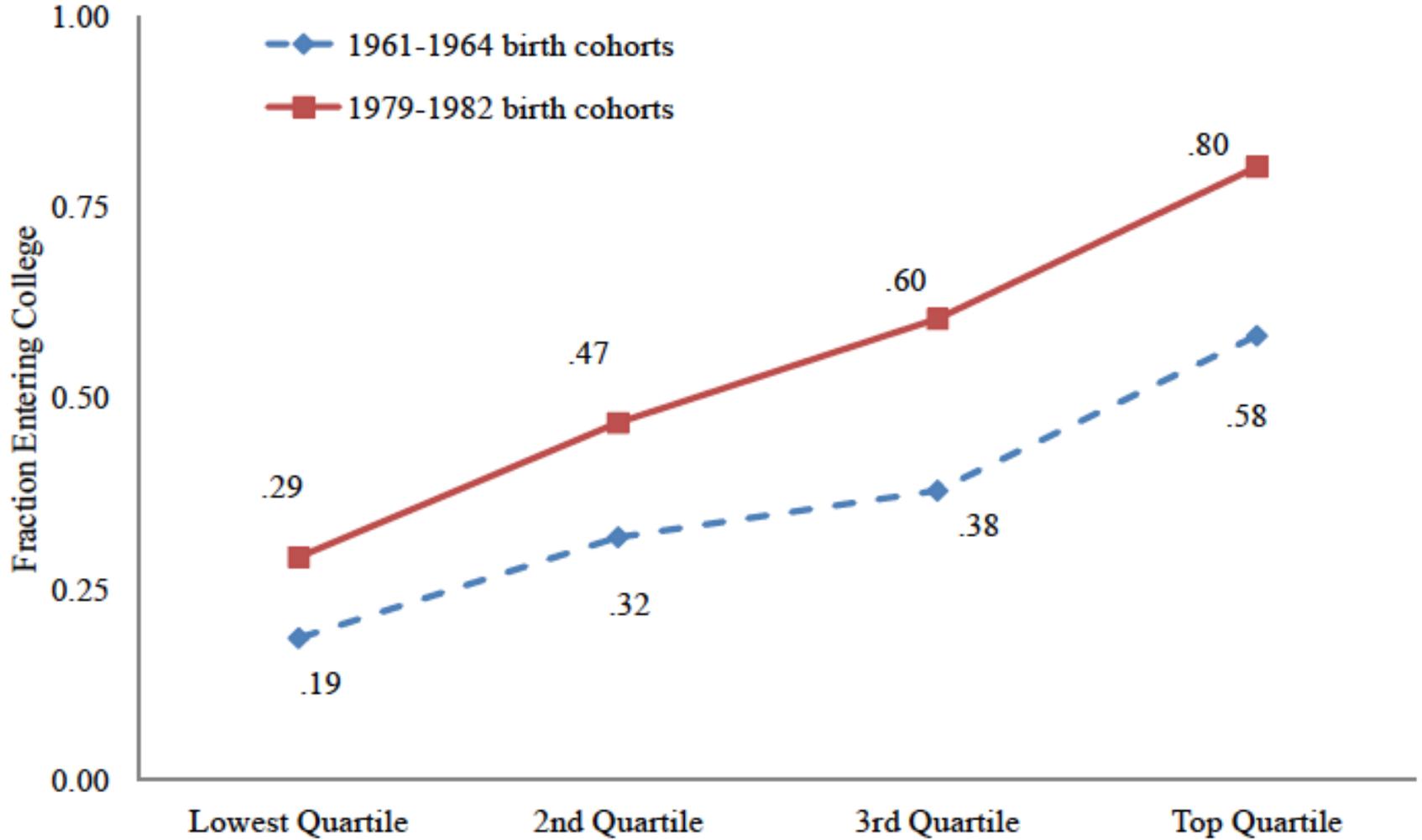
Is College Still Worth It?

Rising Education Levels



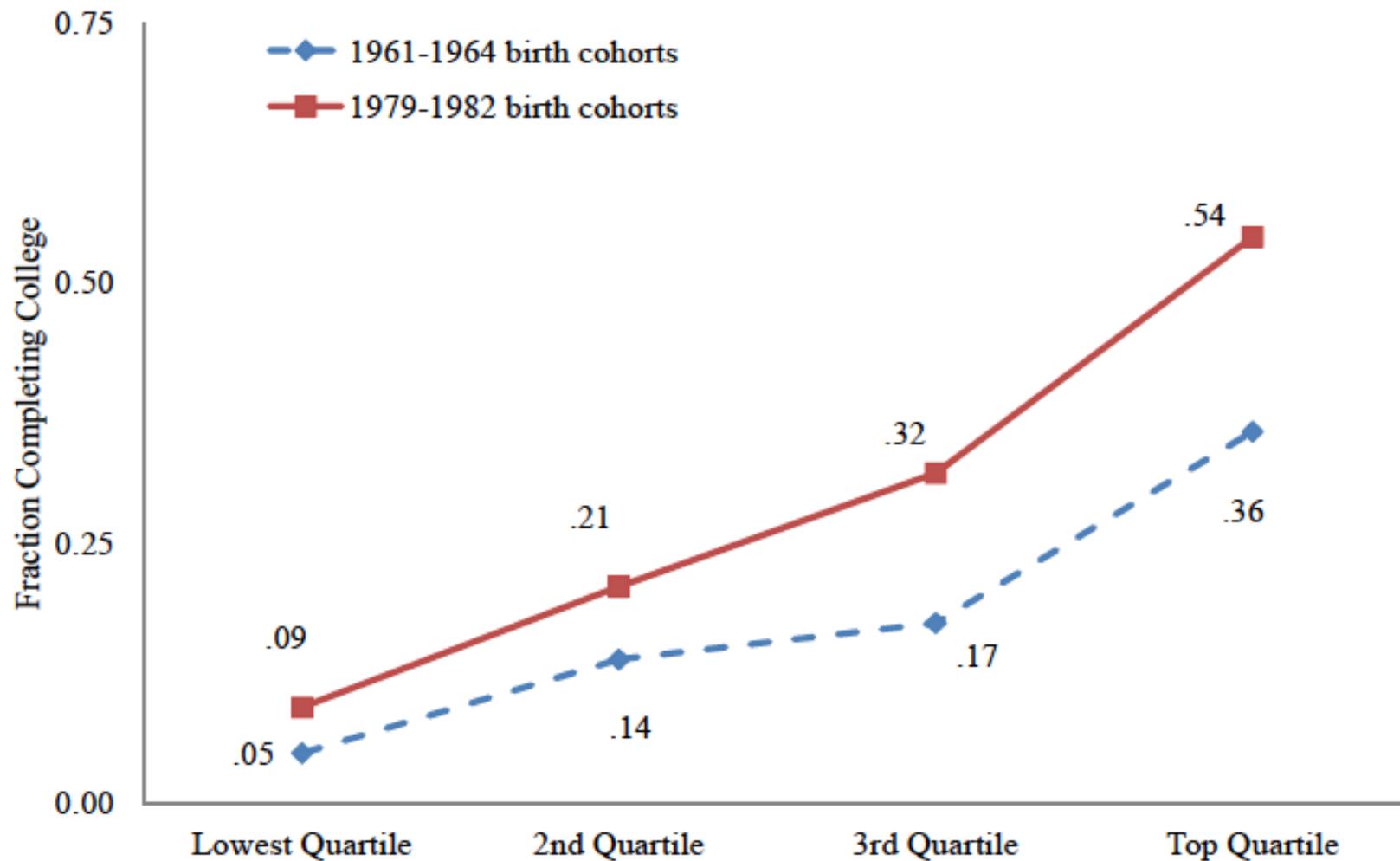
Source: Bailey & Dynarski (2011)

Uneven Gains



Source: Bailey & Dynarski (2011)

BA Especially Unequal

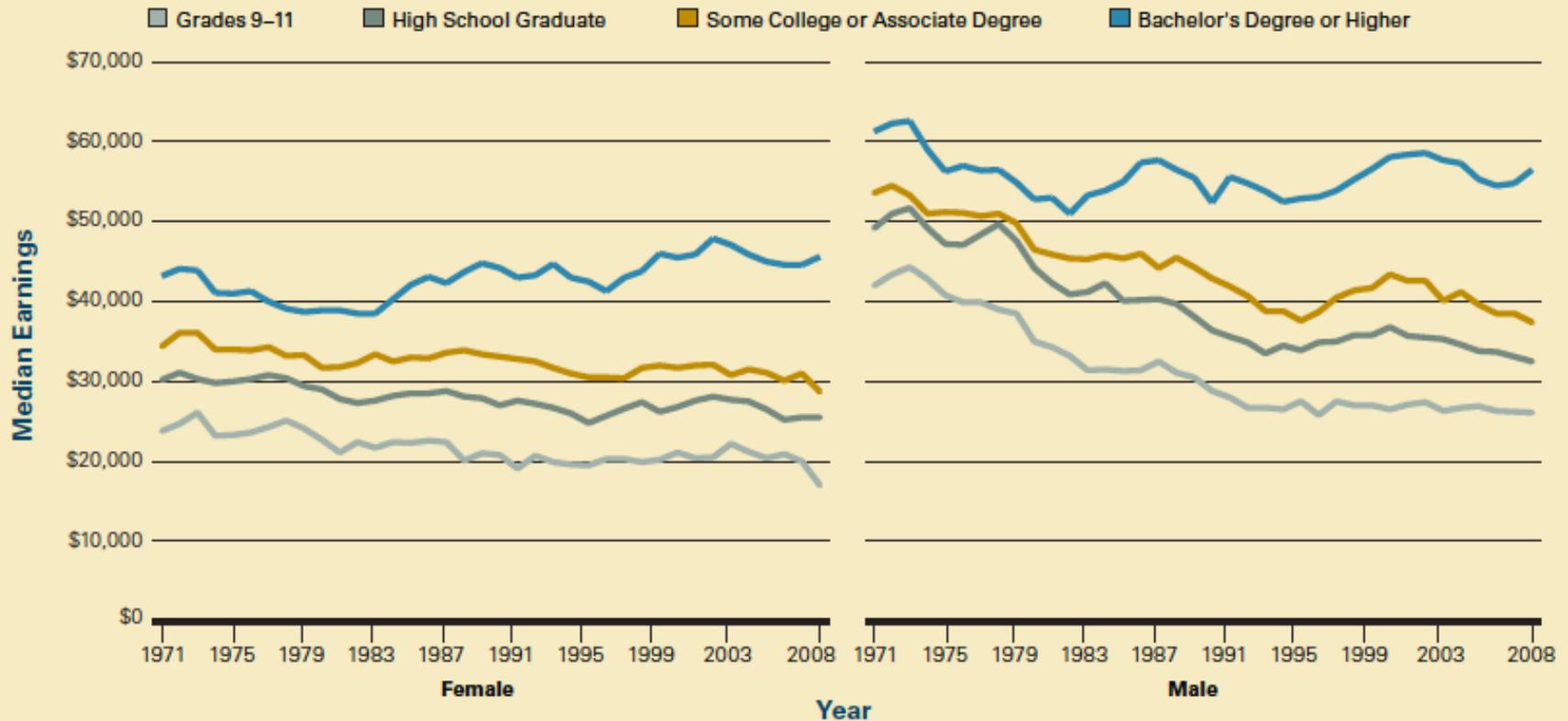


Education Increasingly Divides
the Haves and Have-Nots

Earnings by Education Over Time

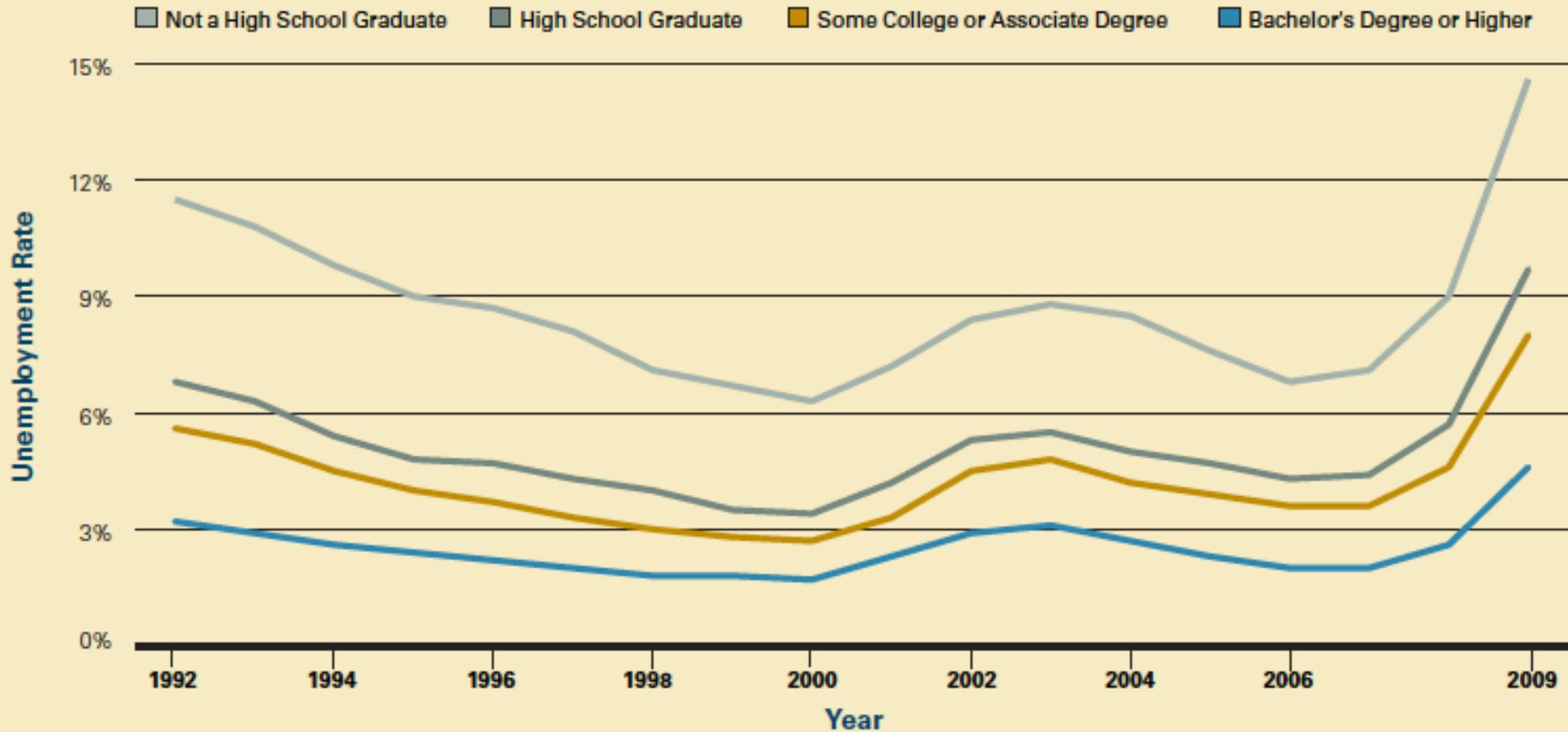
Figure 1.6

Median Earnings of Full-Time Year-Round Workers Ages 25–34, by Gender and Education Level, 1971–2008 (in Constant 2008 Dollars)



Source: College Board, *Education Pays*

Unemployment Drops with Education



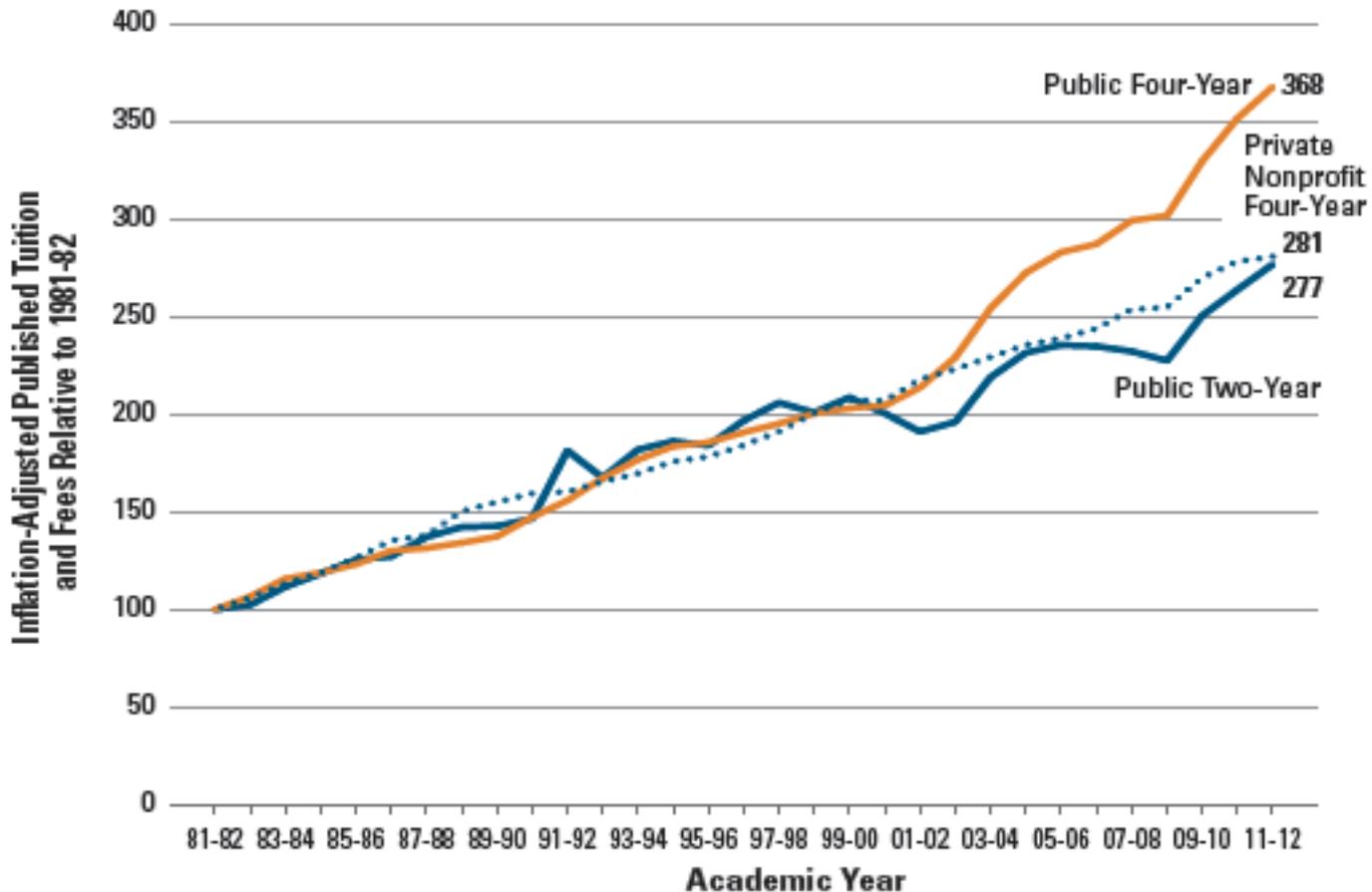
Source: College Board, *Education Pays*

Are High Tuition Prices
the Culprit?

Tuition Prices Have More Than Tripled

FIGURE 5

Inflation-Adjusted Published Tuition and Fees Relative to 1981-82, 1981-82 to 2011-12 (1981-82 = 100)



Source: College Board, *Trends in College Pricing*

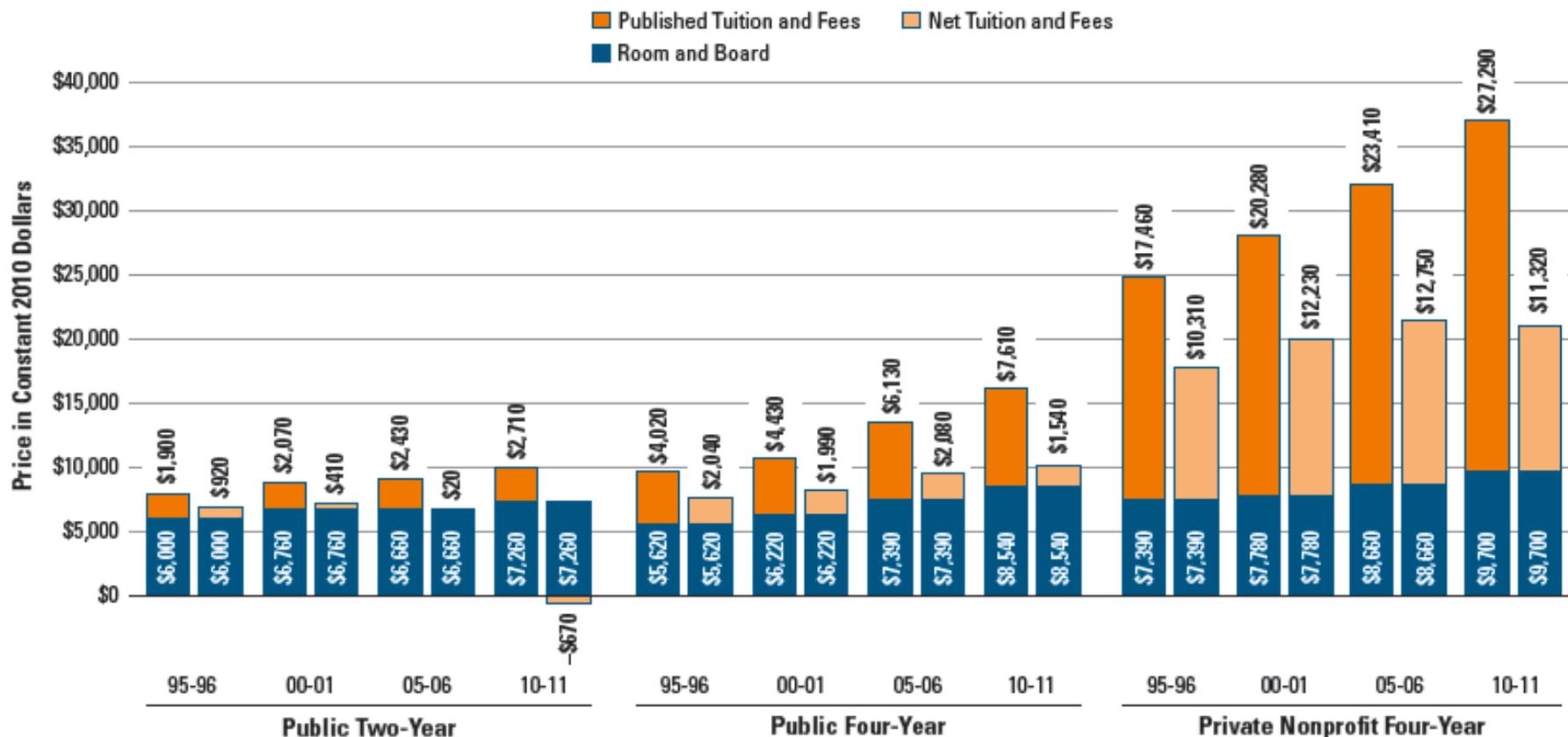
Sticker Price \neq Net Price

- Grant aid
 - From state & federal governments
 - From schools
- Loans
 - Subsidized interest rate from government, no collateral
 - Private sector loans, collateral/co-signer required
- Tax Credits & Deductions

Net Prices Have Risen More Slowly

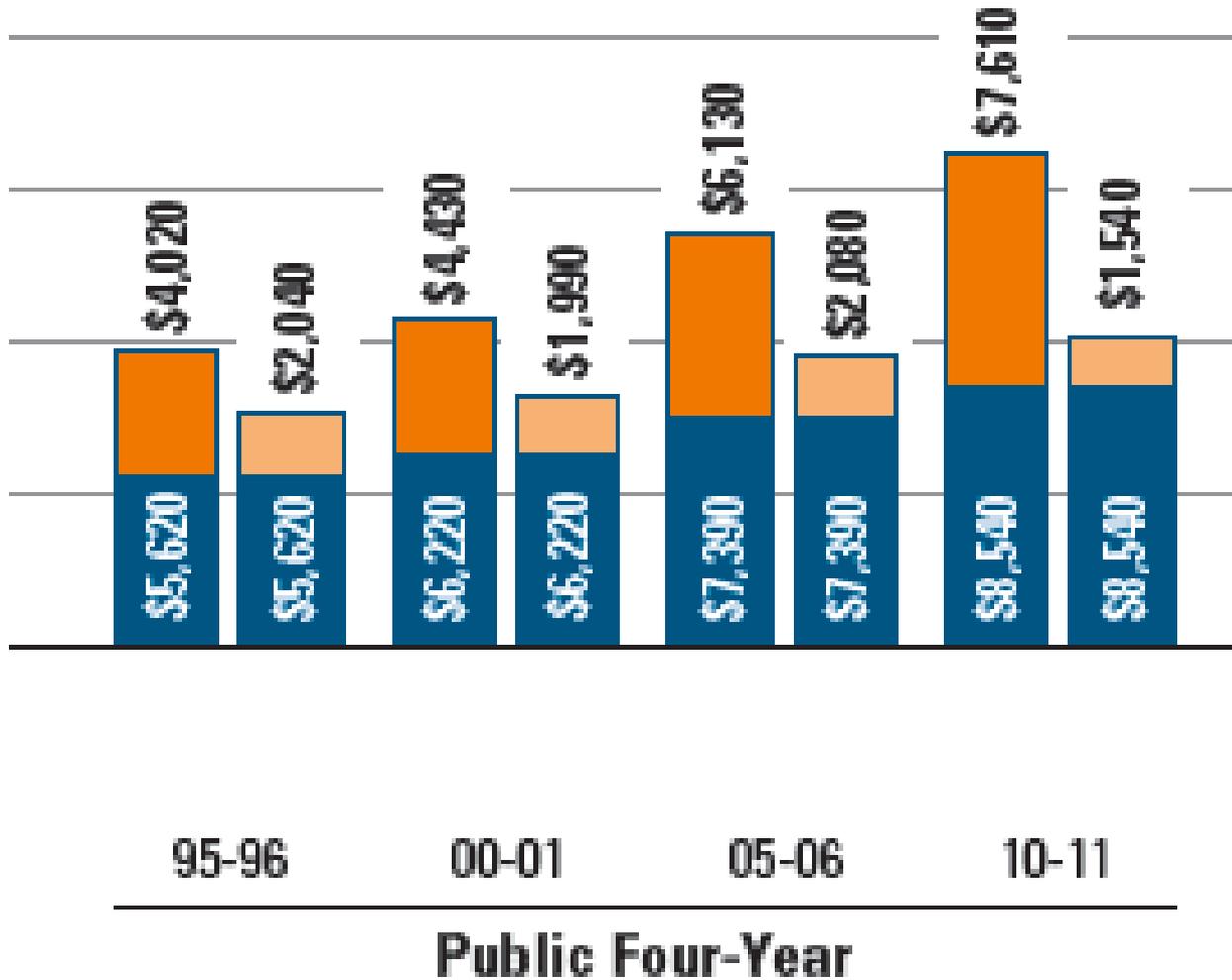
FIGURE 7

Published Tuition and Fees, Net Tuition and Fees, and Room and Board in Constant 2010 Dollars, Full-Time Undergraduate Students, 1995-96, 2000-01, 2005-06, and 2010-11 (Estimated)



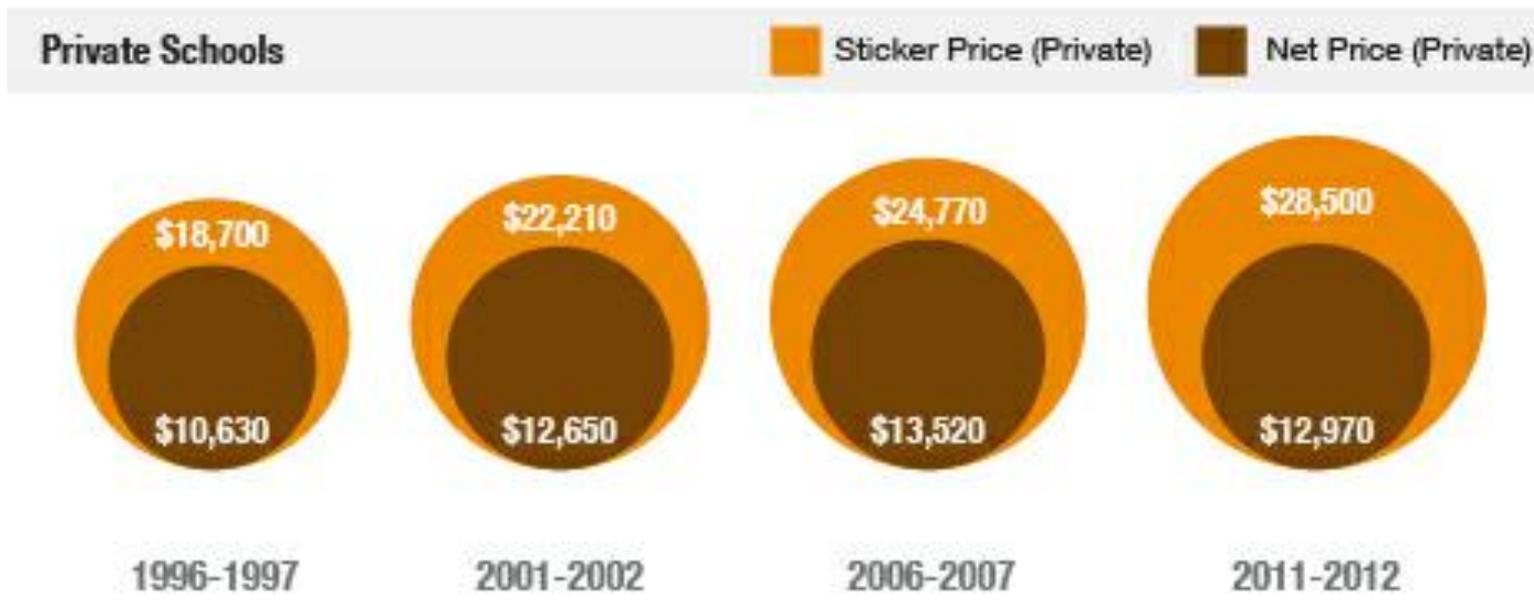
Source: College Board, *Trends in College Pricing*

■ Published Tuition and Fees ■ Net Tuition and Fees
■ Room and Board



Source: College Board, *Trends in College Pricing*

College Tuition and Fees, 1996-Present



Sources: NPR Planet Money graphic based on data from College Board, *Trends in College Pricing*

Big Problem #1:

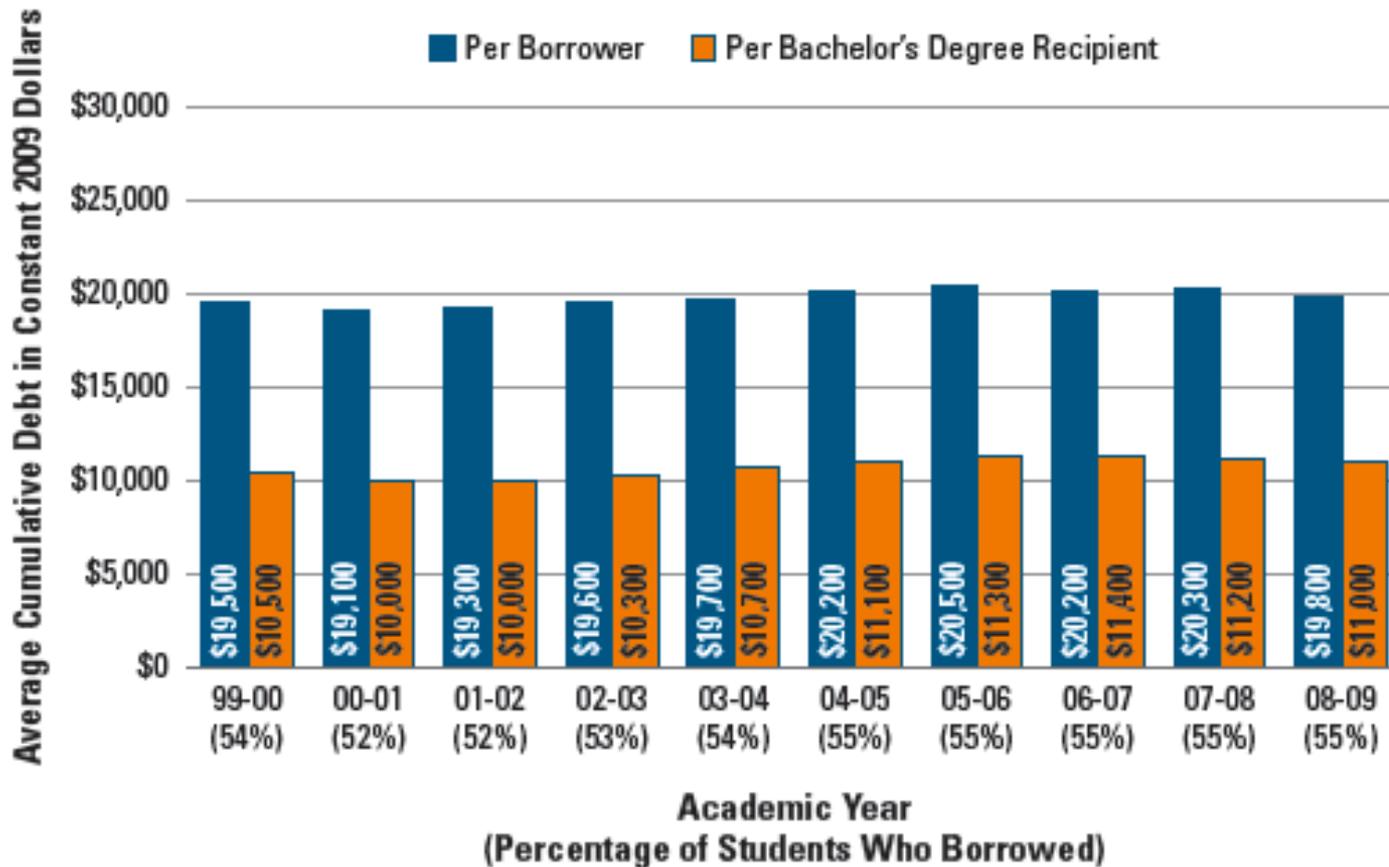
Families don't know about net price.
Low-income families, especially,
vastly over-estimate cost of college.

Are Loans Too Much
of a Burden?

Debt Burden Flat for Public BAs

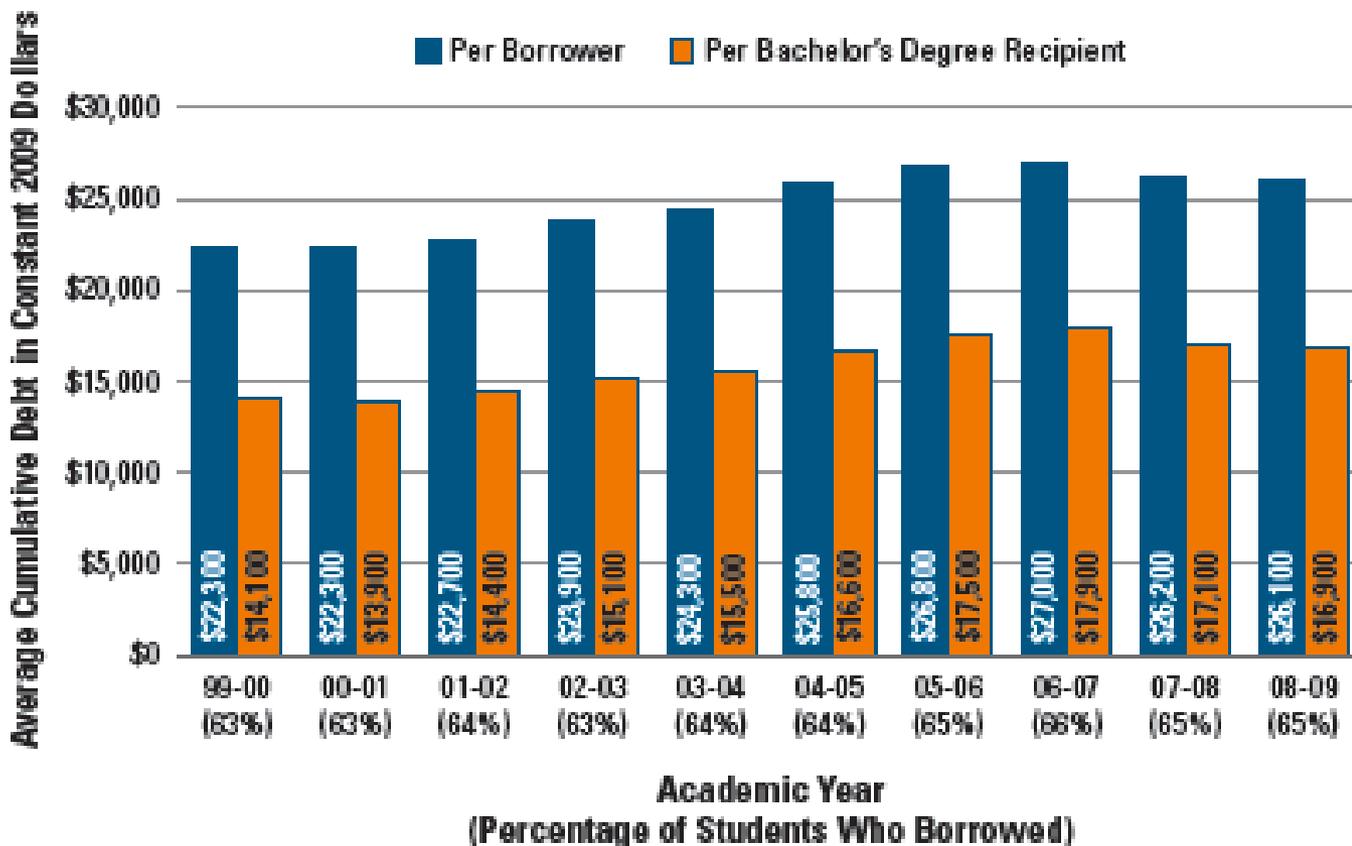
FIGURE 10A

Average Total Debt Levels of Bachelor's Degree Recipients, Public Four-Year Colleges and Universities, in Constant 2009 Dollars, 1999-2000 to 2008-09



Source: College Board, *Trends in Student Aid*

Rising for Private Colleges



Very Low for Community Colleges

Figure 19A: Distribution of Total Undergraduate Debt by Sector and Type of Degree or Certificate, 2007-08

	No Debt	Less than \$10,000	\$10,000 to \$19,999	\$20,000 to \$29,999	\$30,000 to \$39,999	\$40,000 or more
Bachelor's Degree						
Public Four-Year	38%	16%	19%	14%	6%	6%
Private Nonprofit Four-Year	28%	10%	19%	17%	10%	15%
For-Profit	4%	4%	12%	23%	33%	24%
Associate Degree						
Public Two-Year	62%	23%	9%	3%	1%	1%
For-Profit	2%	22%	34%	23%	13%	6%
Certificate						
Public Two-Year	70%	21%	7%	1%	1%	0%
For-Profit	10%	46%	34%	8%	2%	1%

Is \$20,000 Too Much Debt?

	Monthly Loan Payment, 10 Year Term	Income-Based, Income \$32,000	Graduated (starting payment)
Interest Rate 6.8%	\$230	\$190	\$158
Interest Rate 3.4%	\$197	\$190	\$127

Average new car loan: \$27,000

Monthly payment (5 years, 4.75%): \$506

Sources: Debt data from *Trends in Student Aid*; car loan data from Federal Reserve (http://www.federalreserve.gov/releases/g19/hist/cc_hist_tc.html), repayments from Dept of Education (<http://www2.ed.gov/offices/OSFAP/DirectLoan/RepayCalc/dlentry1.html>).

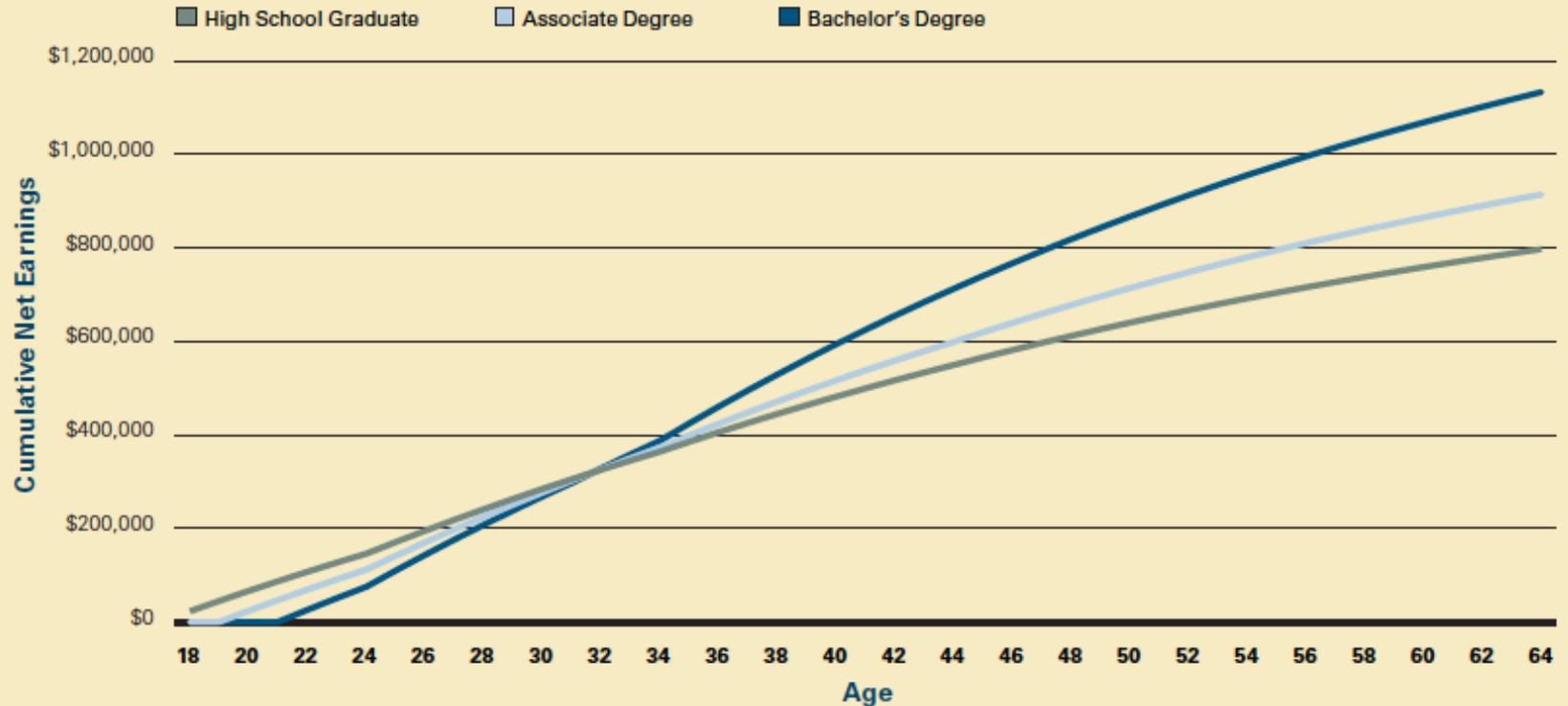
Big Problem #2:

Students think about the total debt rather than monthly payment and returns to schooling. Counsel them on the gentler payment plans!

Student Loans: Worth It Given Future Gains

Figure 1.3

Estimated Cumulative Earnings Net of Loan Repayment for Tuition and Fees, by Education Level



Source: *Education Pays*

Sources

- Martha Bailey and Susan Dynarski (2011), “Inequality in Postsecondary Education,” in *Whither Opportunity? Rising Inequality and the Uncertain Life Chances of Low-Income Children*, edited by Greg J. Duncan and Richard J. Murnane.
- College Board [Education Pays](#)
- College Board [Trends in College Pricing](#)
- College Board [Trends in Student Aid](#)
- Piketty, Thomas, Emmanuel Saez, and Stefanie Stantcheva (2011), [Taxing the 1%: Why the top tax rate could be over 80%](#). Vox, December.
- Board of Governors of Federal Reserve System (2012). [Consumer Credit G-19](#), Historical Series.