



FEDERAL RESERVE BANK *of* NEW YORK

The Role of Education in Students' Economic Mobility and Long Term Outcomes

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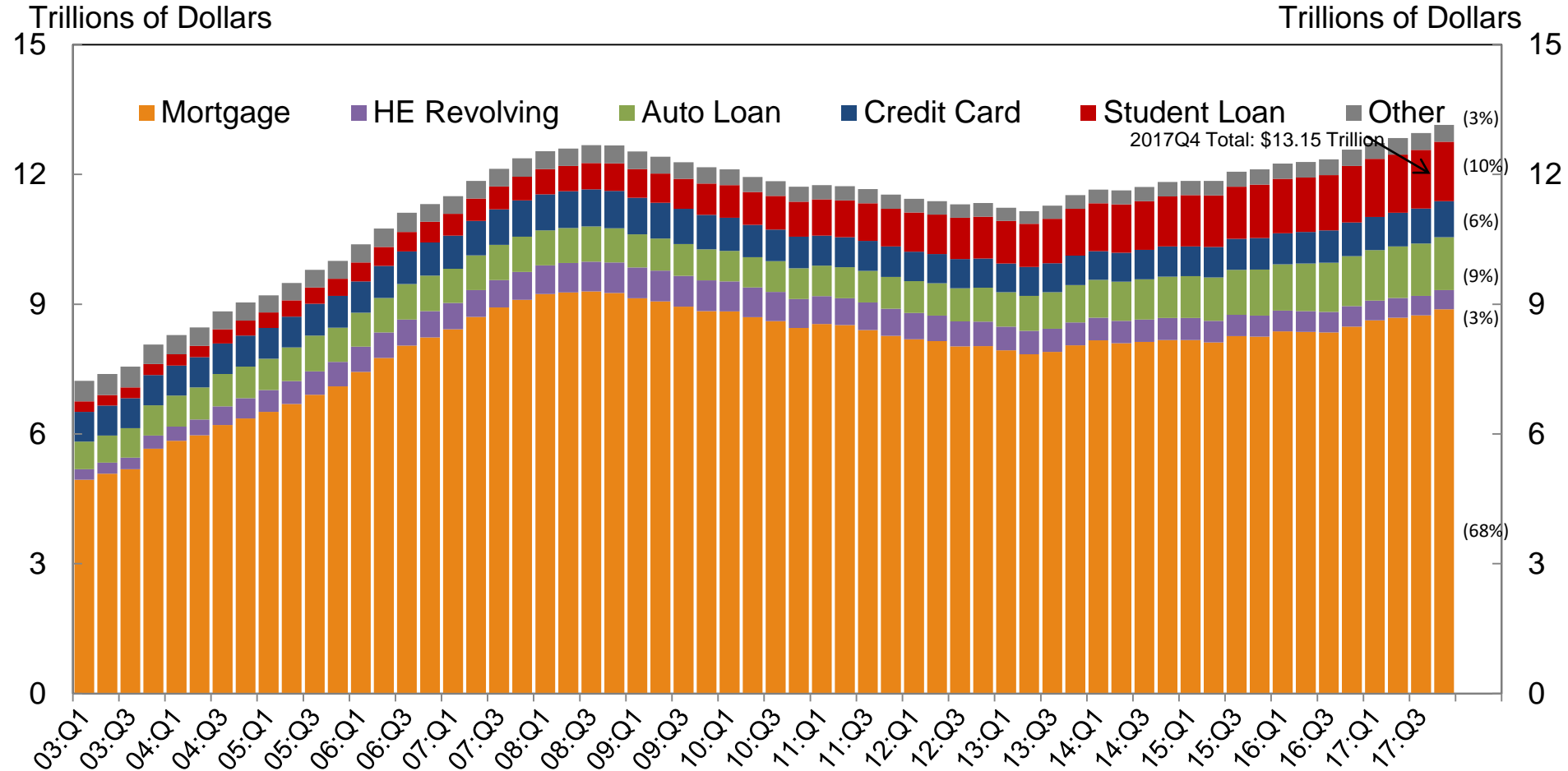
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Outline

- Large Returns to Higher Education & More Important Today
- However, large increase in student debt in past two decades
 - Critical to understand whether student debt holdings have affected young Americans' later life outcomes, example homeownership
 - Almost 25% of student debt holders default by their early 30s
 - Economic Mobility, Student debt/default, labor market outcomes integrally related
- Underscores the importance of understanding whether Education (Graduation, Major, College Type and Selectivity) Matters
 - For default
 - For Homeownership
 - For Earnings, Employment , Economic Mobility
- Leverage unique mergers of few datasets
 - New York Fed Consumer Credit Panel and National Student Clearinghouse
 - National Student Loan Data System and Treasury data

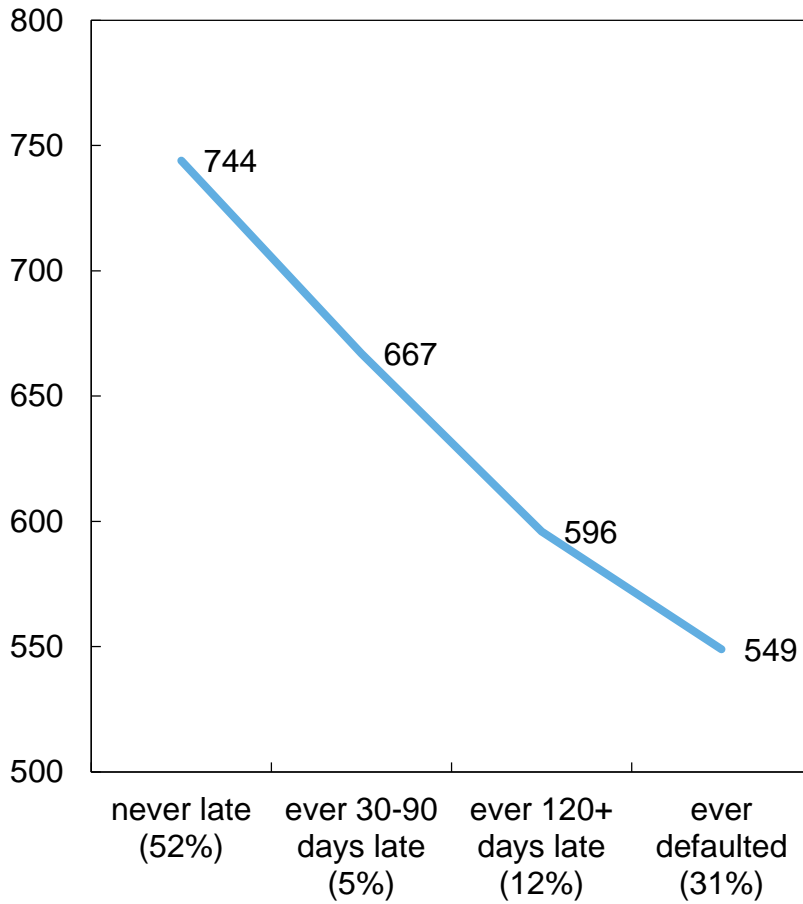
Total Household Debt Passed 2008Q3 Peak But Composition Has Changed

Total Debt Balance and Its Composition

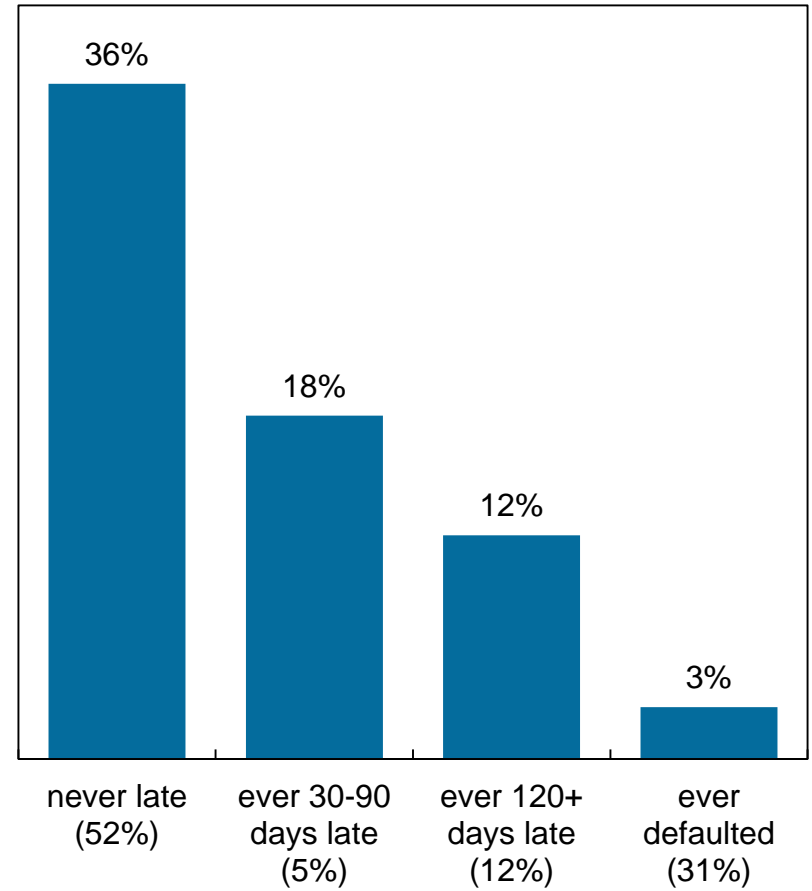


Delinquency and Default Associated with Lower Credit Scores and Homeownership Rates at Age 30

Median Credit Score in 2016*



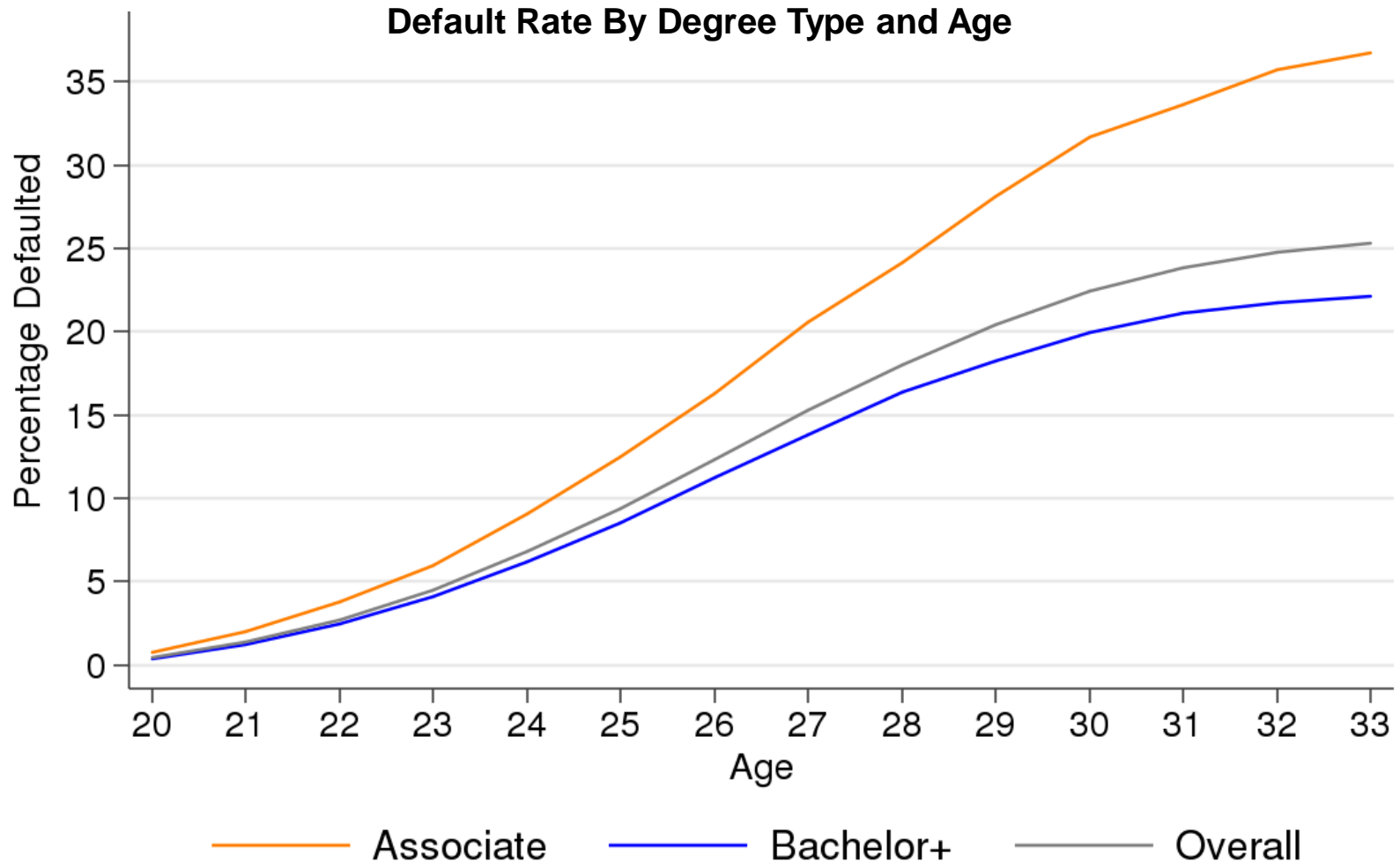
Homeownership in 2016*



* Among borrowers who were age 30 in 2016 and left school between 2006-2011.

Does Education Type Matter for Default?

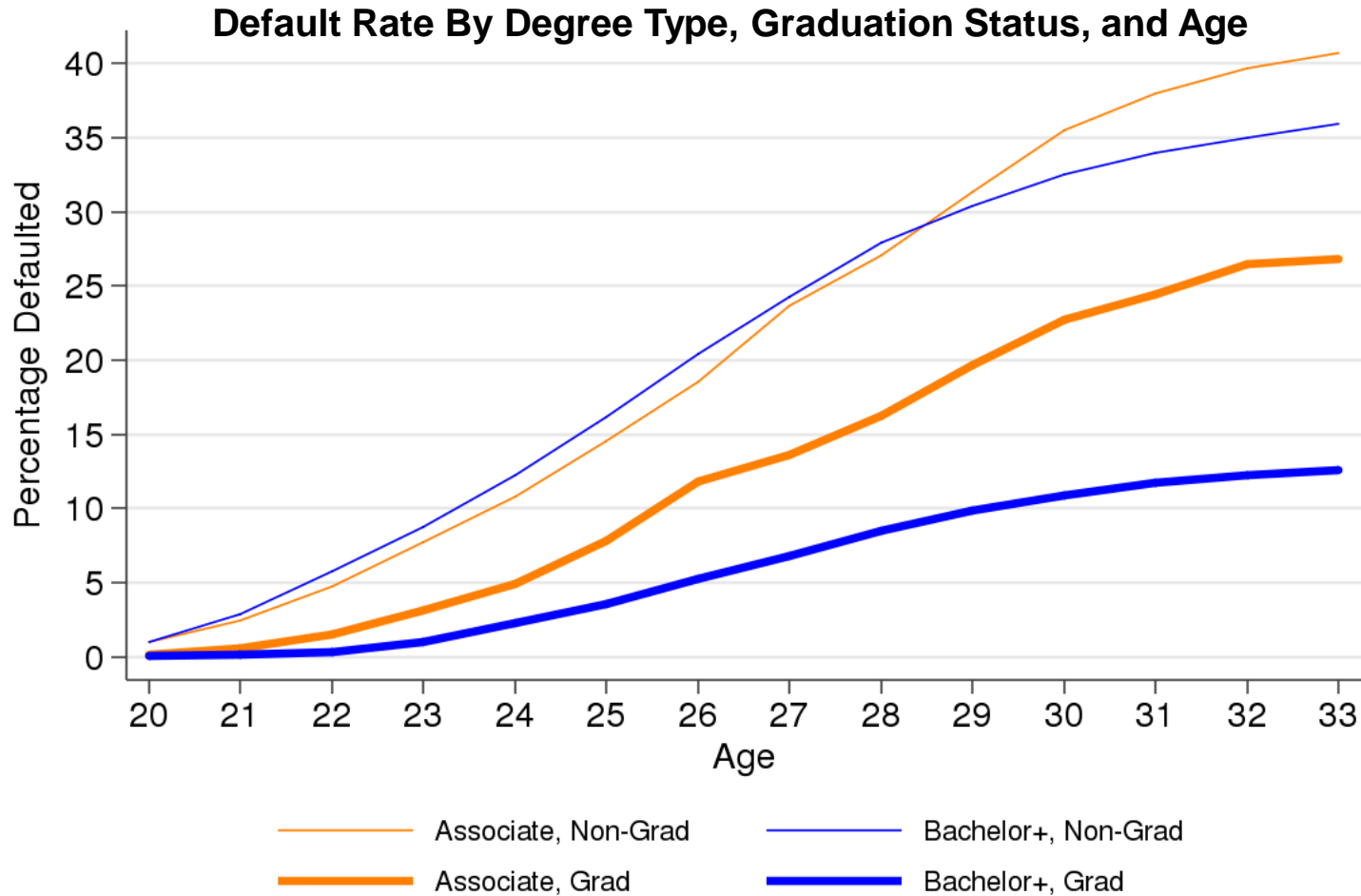
Associates Students Have Markedly Higher Default Rates than Bachelor's



- At age 33, Associates students have 15% higher default rates than Bachelor's students.

Percentage ever defaulted by each age, out of college-goers with student loans. Bachelor's and Bachelor's+ refer synonymously refer to Bachelor's and post-Bachelor's students. Source: New York Fed Consumer Credit Panel/Equifax and National Student Clearinghouse

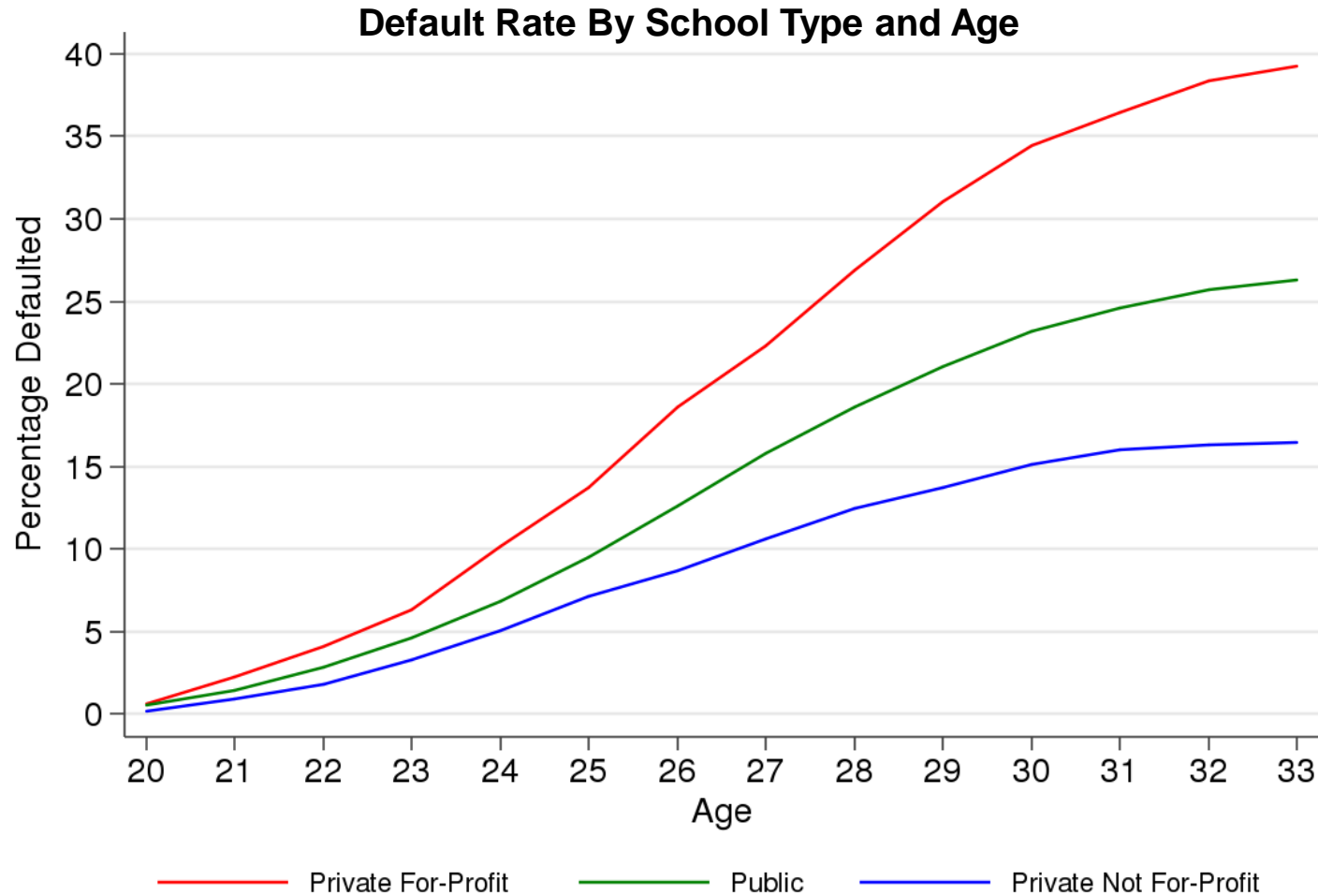
Non-Graduates Have Higher Default Rates, Regardless of Degree Type



- The gap between Bachelor's graduates and non-graduates is 23 percentage points.

Percentage ever defaulted by each age, out of college-goers with student loans. Bachelor's and Bachelor's+ refer synonymously refer to Bachelor's and post-Bachelor's students. Source: New York Fed Consumer Credit Panel/Equifax and National Student Clearinghouse

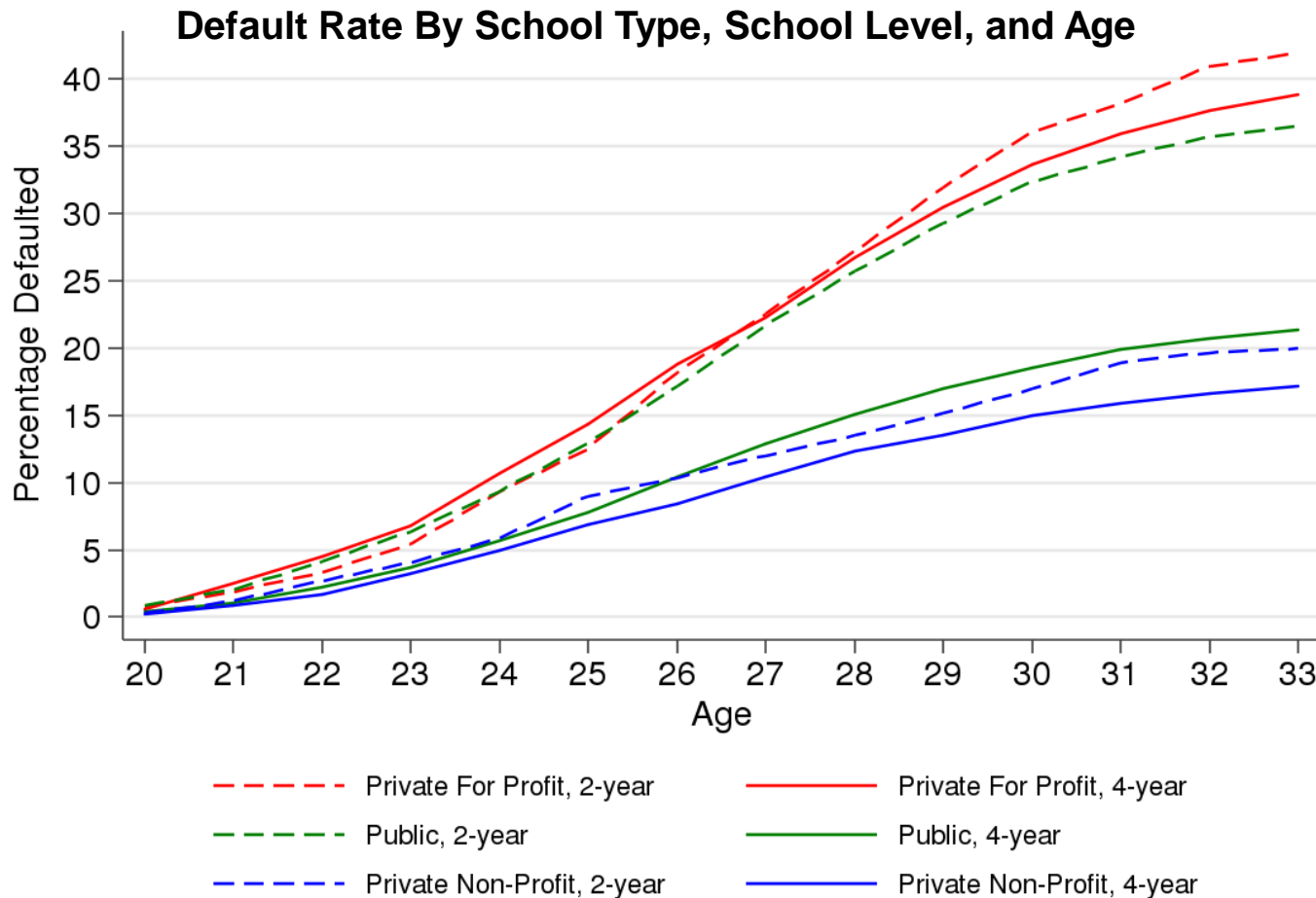
For-profit College Students Have, By Far, the Highest Default Rates



- Default rates of for-profit students are 23 (13) ppt higher than private not-for-profit (public).

Percentage ever defaulted by each age, out of college-goers with student loans. Source: New York Fed Consumer Credit Panel/Equifax and National Student Clearinghouse

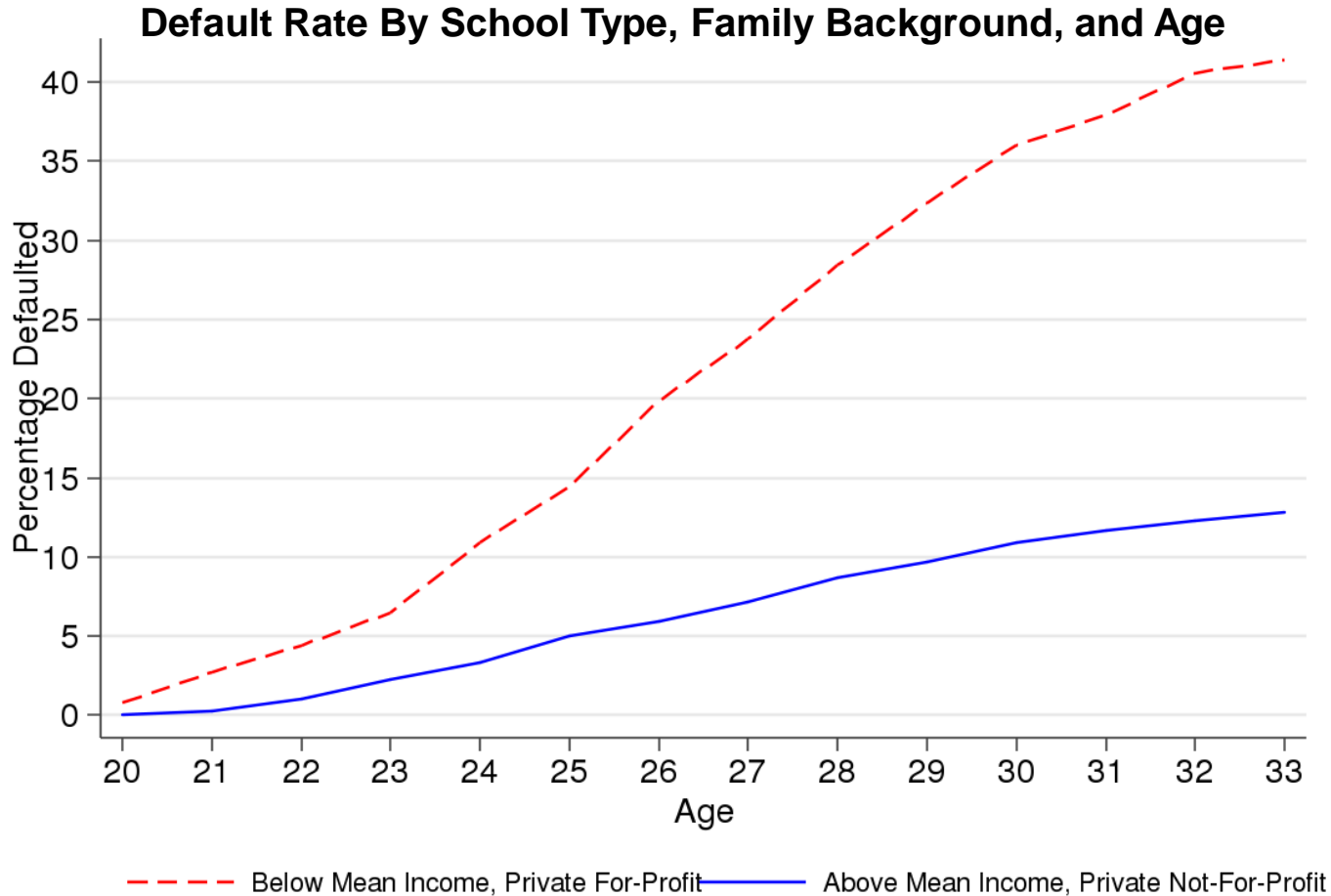
Default Rates of Community College Students Not Too Different from For-profit Students



- Wide divergence (16 ppt at age 33) of default rates between 2 year and 4 year public college students, unlike for for-profits and not-for-profits.

Percentage ever defaulted by each age, out of college-goers with student loans. Source: New York Fed Consumer Credit Panel/Equifax and National Student Clearinghouse

yawning Gap Between Less-Advantaged For-Profit Students And Advantaged Not-For-Profit Students



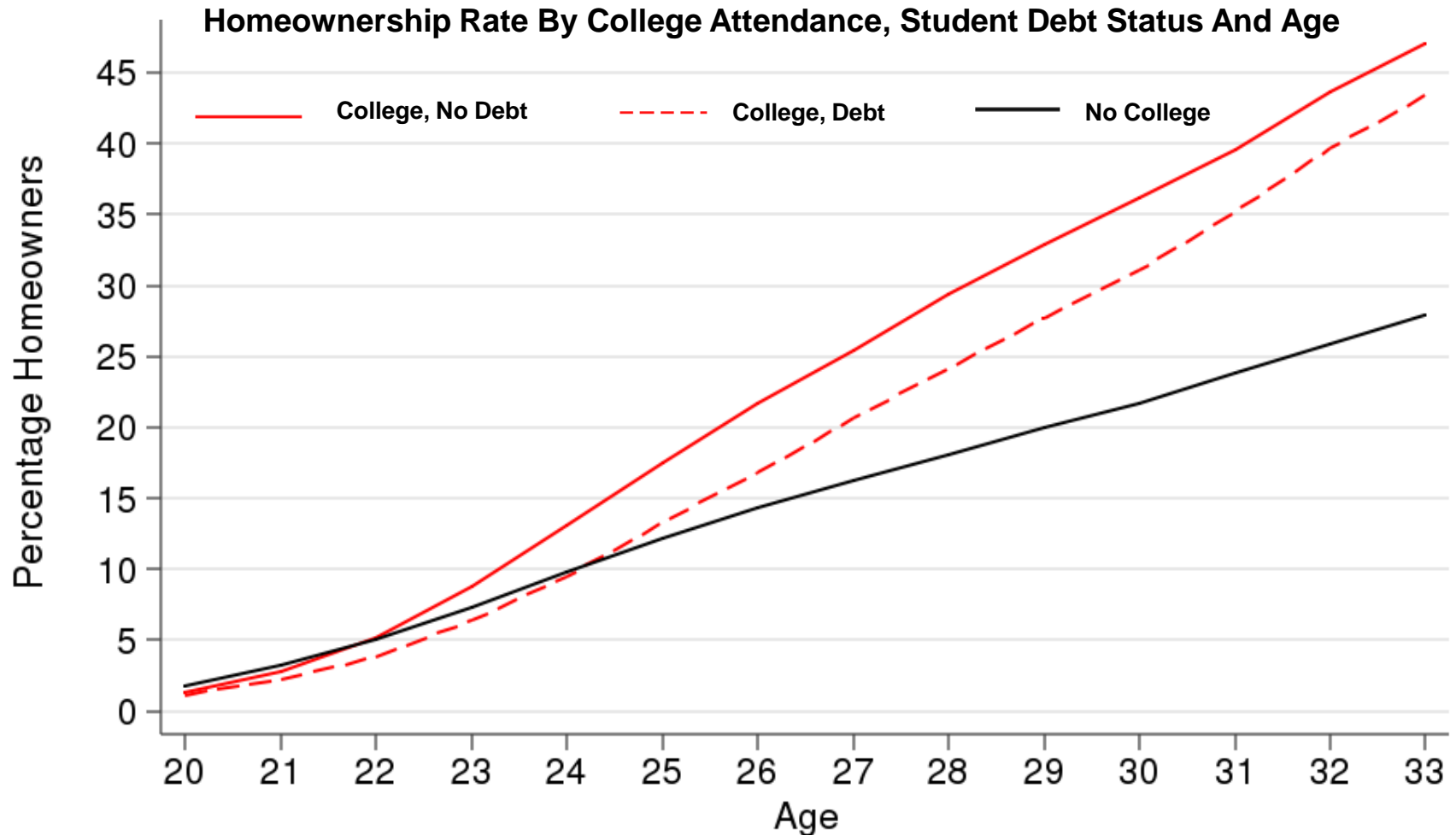
- Default Gap At Age 33 Between Less-advantaged For-Profit Students And Advantaged Not-For-Profit Students is Almost 30 ppt.

Percentage ever defaulted by each age, out of college-goers with student loans. Family background proxied by 2010 zip code-level mean income where an individual resided at the youngest age we observe. Mean income is \$55,000. Source: New York Fed Consumer Credit Panel/Equifax and National Student Clearinghouse

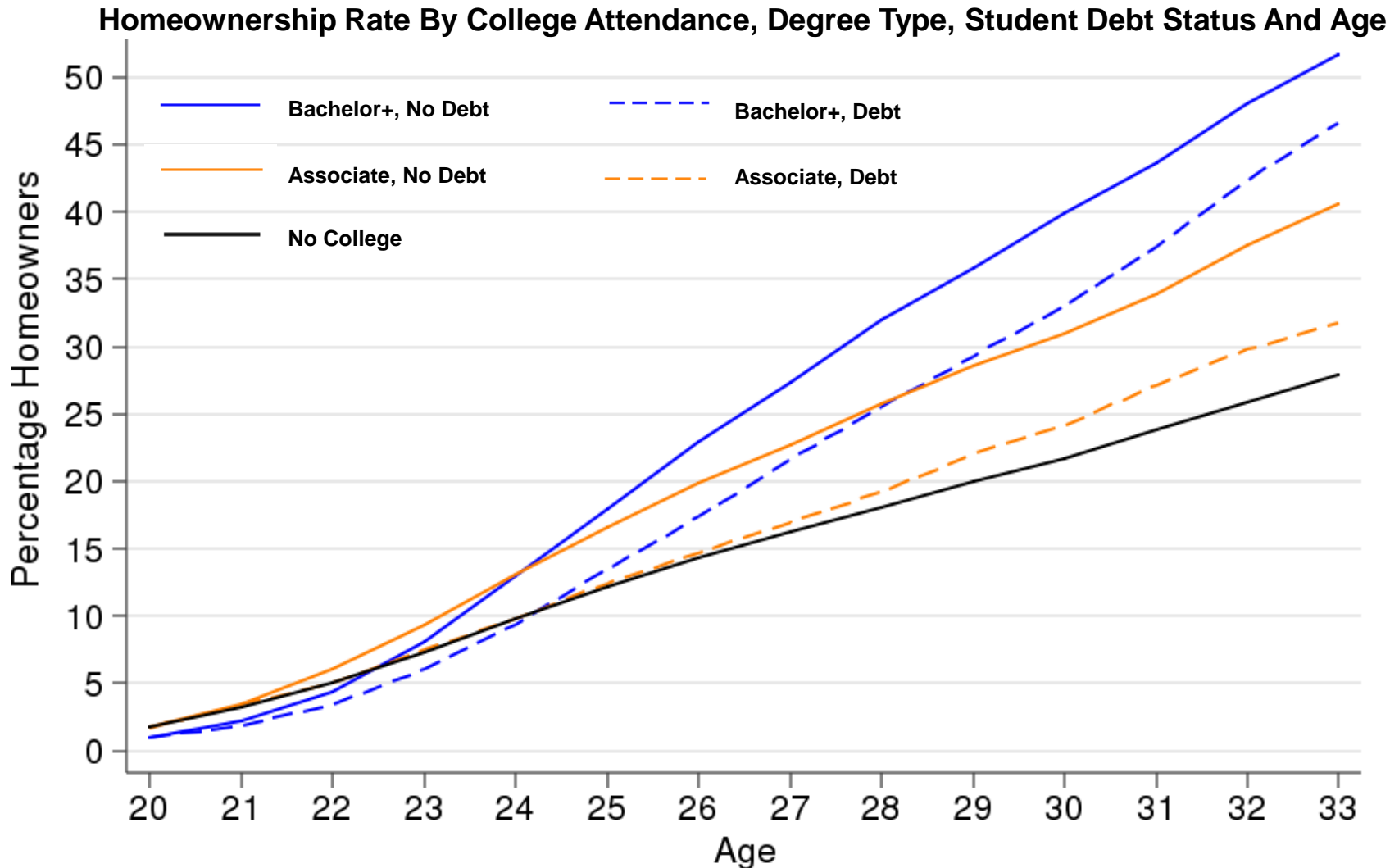
Does Student Debt Matter for Homeownership?

Does Education Mediate this Relationship?

College Attendance Associated With Markedly Higher Homeownership

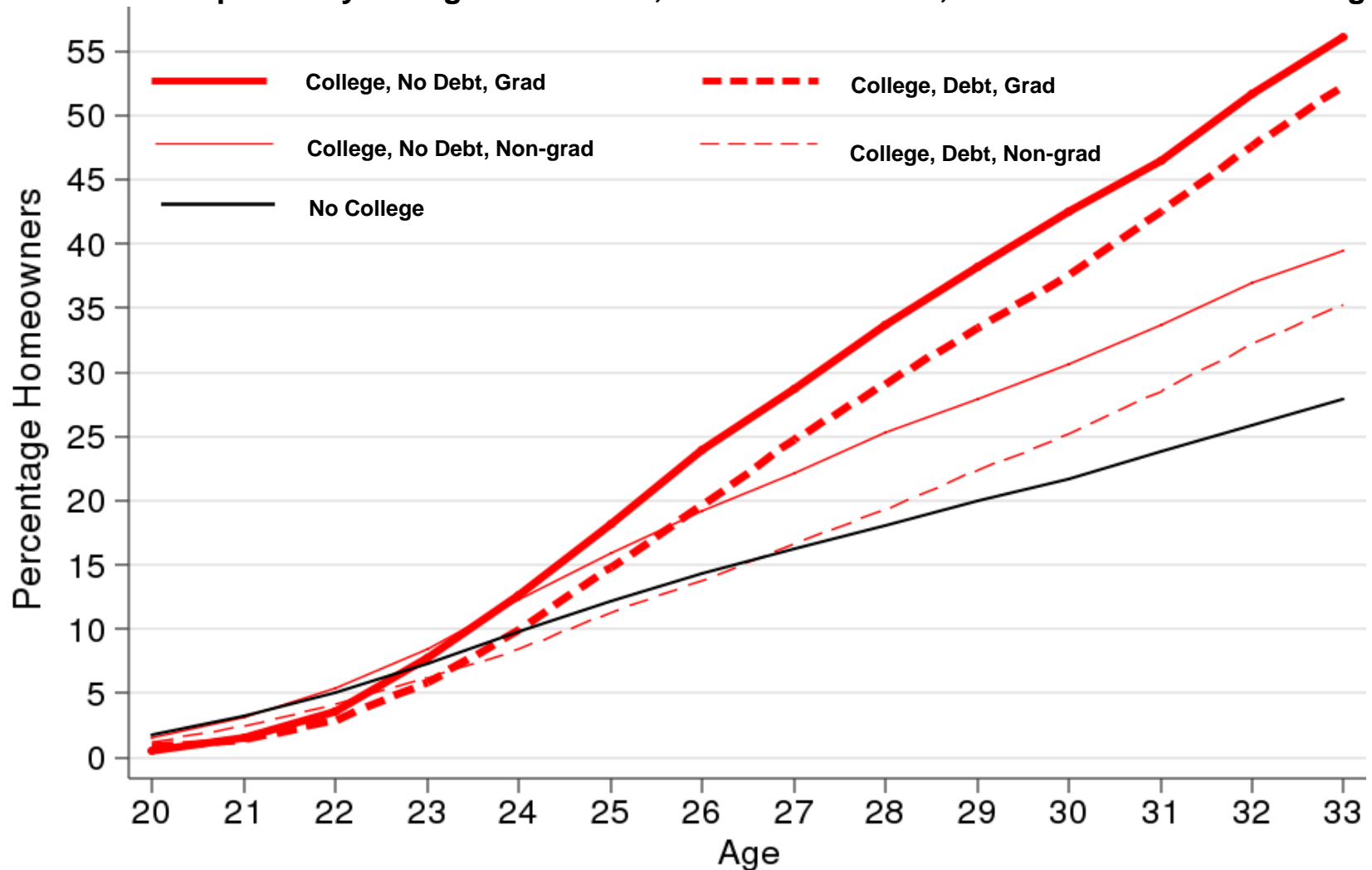


Bachelor's Students Have Higher Homeownership Rates Than Associates, Regardless Of Debt Status

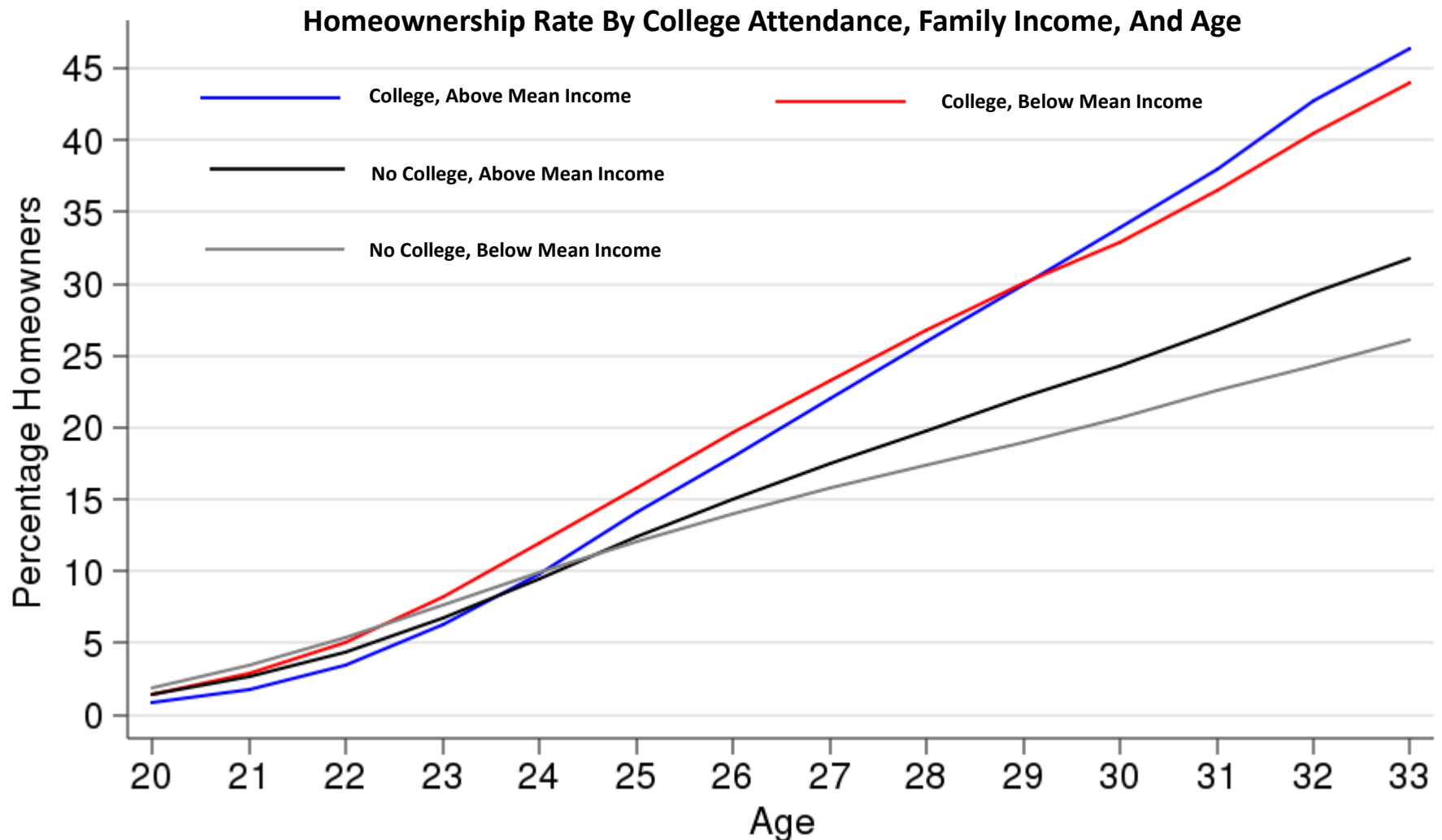


Graduates Have Higher Homeownership Rates, Regardless Of Debt Status

Homeownership Rate By College Attendance, Graduation Status, Student Debt Status And Age



College Attendance Appears To Mitigate The Importance Of Family Background

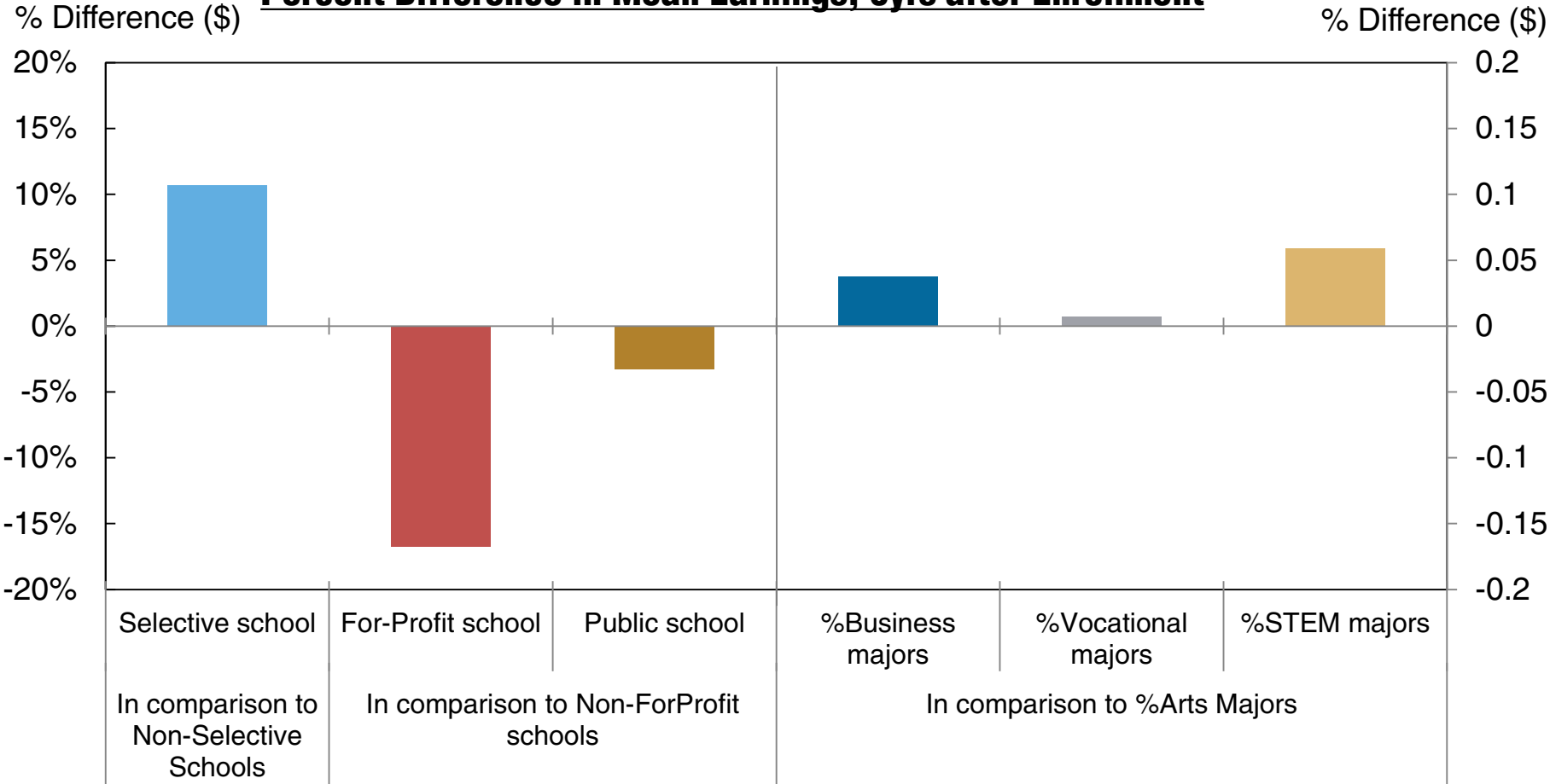


Family background proxied by 2010 zip code-level mean income where an individual resided at the youngest age we observe. Mean income is \$55,000. *Source: New York Fed Consumer Credit Panel/Equifax and National Student Clearinghouse*

Role of Education in Earnings and Economic Mobility

Major Matters for Medium-term Earnings, and so does College Type and Selectivity

Percent Difference in Mean Earnings, 6yrs after Enrollment



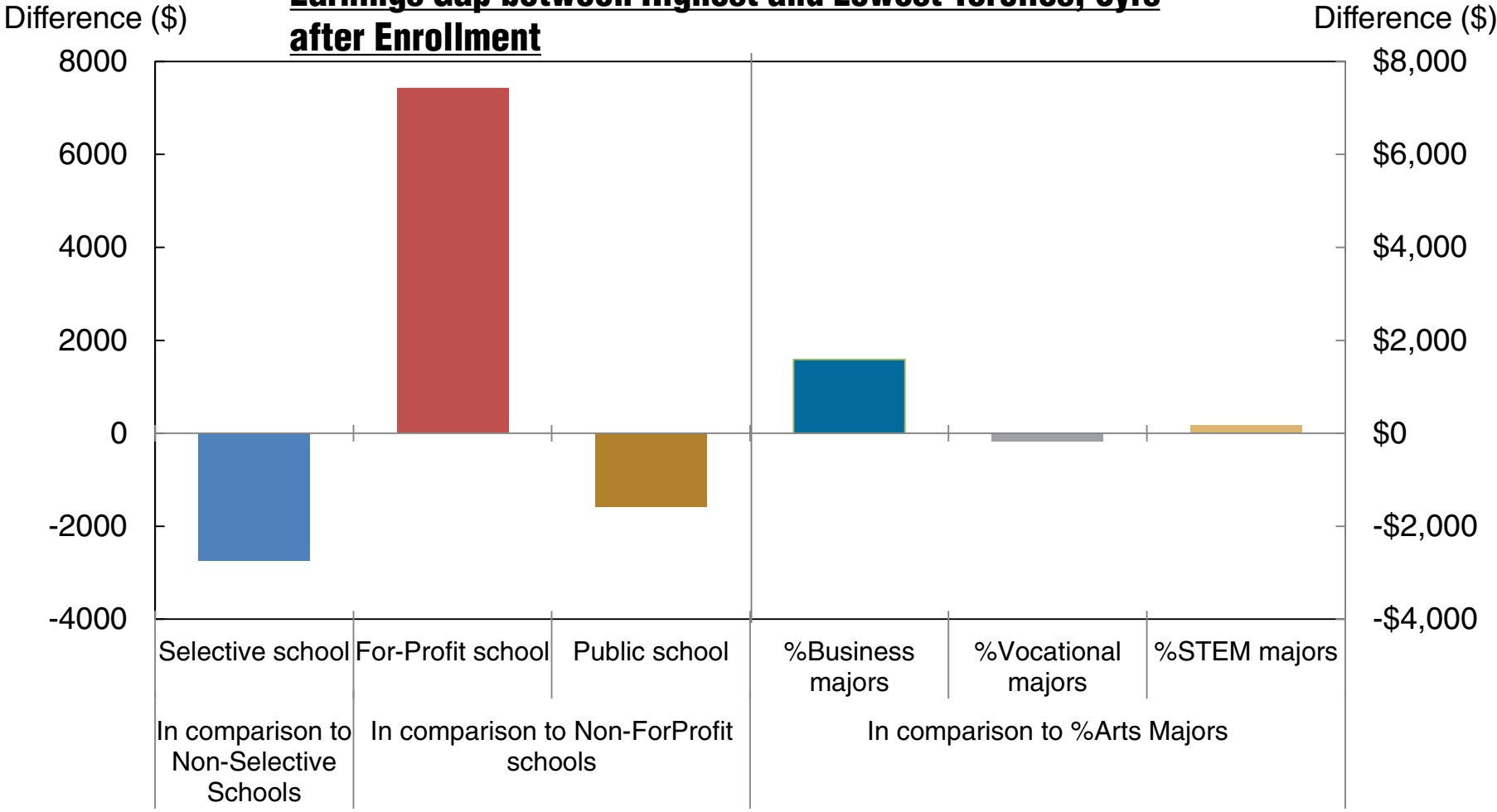
- Large premium for selective college attendance (11% higher earnings)
- For-profit (FP) attendance leads to 17% (26%) lower earnings relative to not-for-profits (NFP)
- STEM has highest premium followed by Business (10% increase in share of STEM leads to 6% (2%) increase in mean earnings)

Economic (or Social) Mobility

- Upward mobility
 - Individuals move up the earnings distribution over time
- What are the determinants of upward mobility?
 - Do certain types of educational background (major, selectivity, college type) promote upward mobility more than others?

Selective Colleges Promote Upward Mobility; For-profit Colleges Hinder Upward Mobility

Earnings Gap between Highest and Lowest Terciles, 6yrs after Enrollment



- 4-year Public colleges serve as equalizers; NFP is polarizing and so are Business and STEM
- STEM more lucrative, but less equalizing (relative to Arts); but more equalizing in long term
- While 4-year public colleges equalizers, Community colleges (2 yr Public) are polarizers

Key Takeaways (Default)

- While almost 30% of student debt holders default by early 30s, there is much heterogeneity
- Groups with high default rates
 - Associates students
 - Non-graduates
 - For-profit, community college and non-selective college students
 - Arts students

Key Takeaways (Homeownership)

- College education associated with markedly higher homeownership rate, regardless of debt status
 - Homeownership rates for Bachelors' higher than Associates' regardless of debt status
 - Lowest homeownership rates for those who do not go to college and gap widens over time
 - Graduates have significantly higher homeownership rates than non-graduates, regardless of debt status
- At each degree/completion level, students with debt have lower homeownership rates
- College education appears to mitigate importance of family background

Key Takeaways (Returns)

- Heterogeneity in returns to Majors and College-types
 - Large premium to selective colleges & STEM
 - Large penalties to FP college attendance

Key Takeaways (Economic Mobility)

- Economic Mobility
 - Selective colleges are not only lucrative, but are equalizing (conditional on access)
 - For-profit colleges thwart upward mobility even though they cater overwhelmingly to low income students
 - Business and STEM are polarizing, though lucrative
 - Public 4-year colleges are equalizing, but Community Colleges are not

Appendix

Examples of School Types

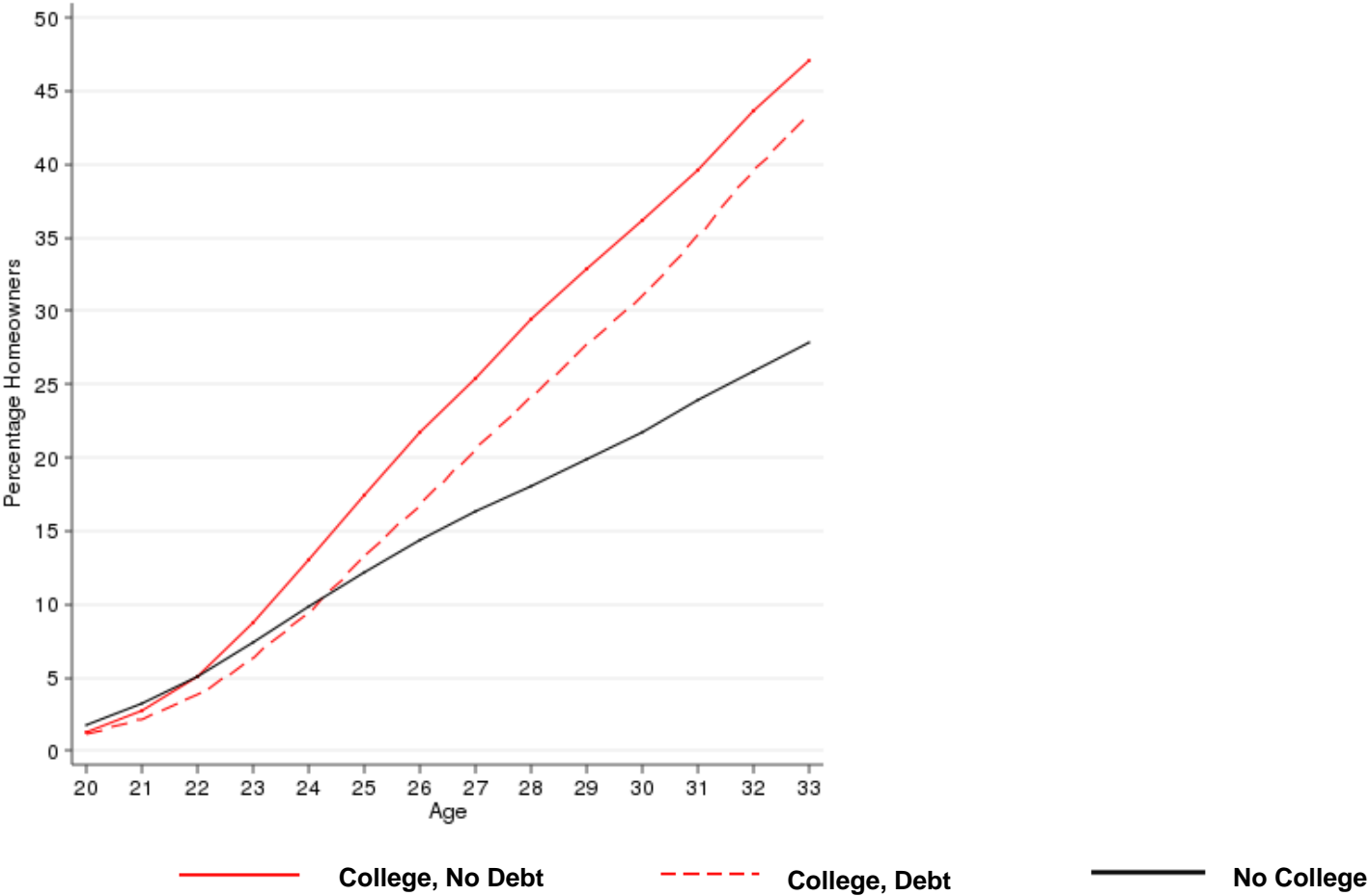
School Type	Examples
Public (4yr)	University of California at Berkeley, Ohio State University, CUNY Queens College ...
Private Not-for-Profit (4yr)	Columbia University, Selma University, Manhattan College, ...
Private For-Profit (4yr)	University of Phoenix, Devry University, American College of Acupuncture and Oriental Medicine, ...
Public (2yr)	Jefferson Davis Community College, Palo Alto College, Coffeyville Community College, ...
Private Not-for-Profit (2yr)	St. Luke's College, Springfield College in Illinois, National Latino Education Institute, ...
Private For-Profit (2yr)	Kaplan College, Faust Institute of Cosmetology, Austin Institute of Real Estate, ...
Selective (4yr)	Harvard University, Wesleyan University, Wheaton College, ...
Non-Selective (4yr)	San Diego State University, University of North Dakota, Devry University,...

Examples of Major Types

School Type	Examples
Arts	Gender Studies, Languages (e.g. Arabic), Linguistics, Theology, ...
Business	Family and Consumer Sciences, Legal Studies, Marketing, Management, ...
STEM	Computer Science, Engineering, Mathematics, Physical Sciences, ...
Vocation	Agriculture, Culinary Services, Fitness Studies, Homeland Security, Mechanic and Repair Technologies, ...

Homeownership Gap Between Students With And Without Student Debt Widens Slightly Over Time

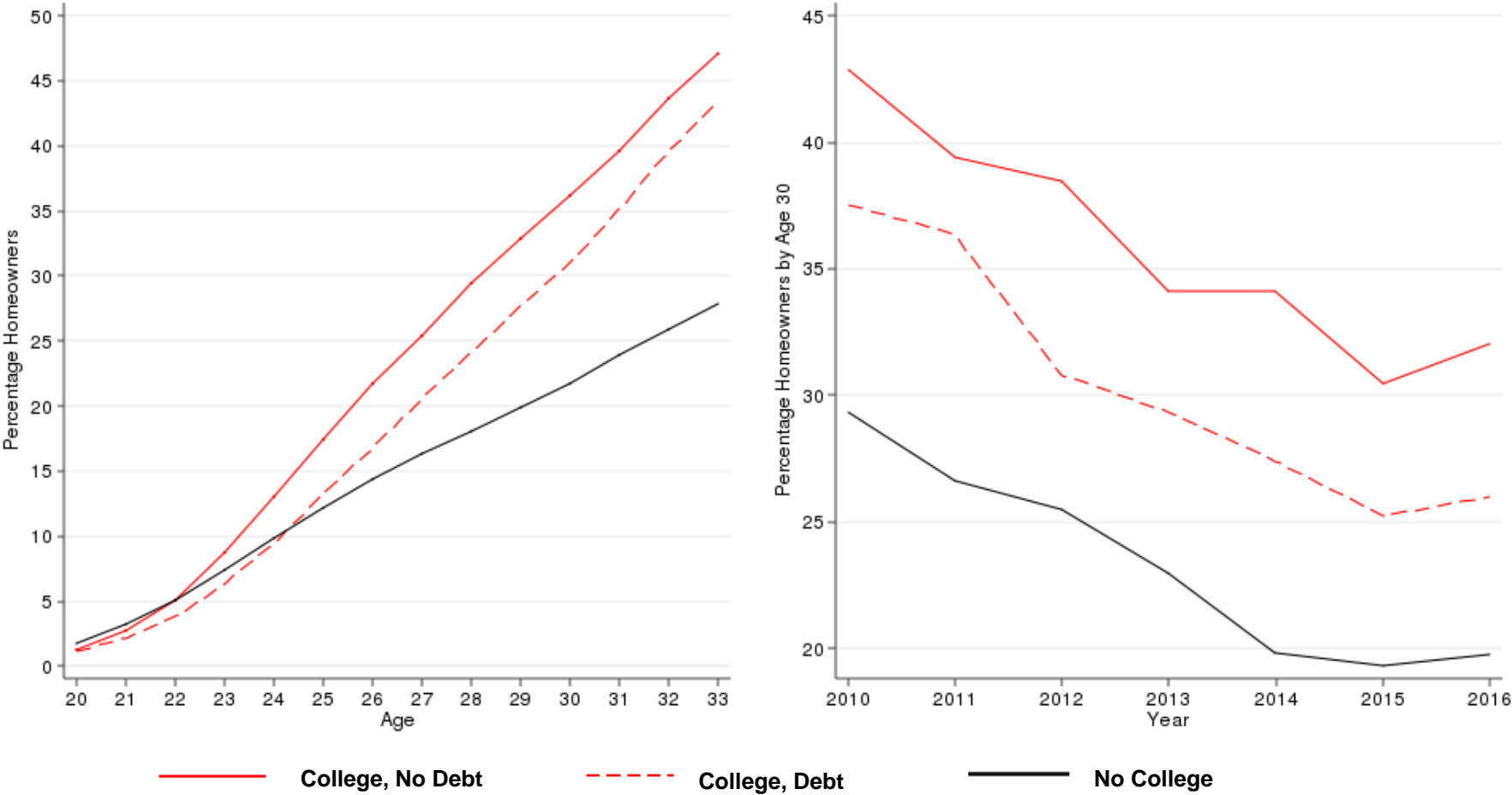
Homeownership Rate By College Attendance, Student Debt Status, And Age/Year



Source: New York Fed Consumer Credit Panel/Equifax and National Student Clearinghouse

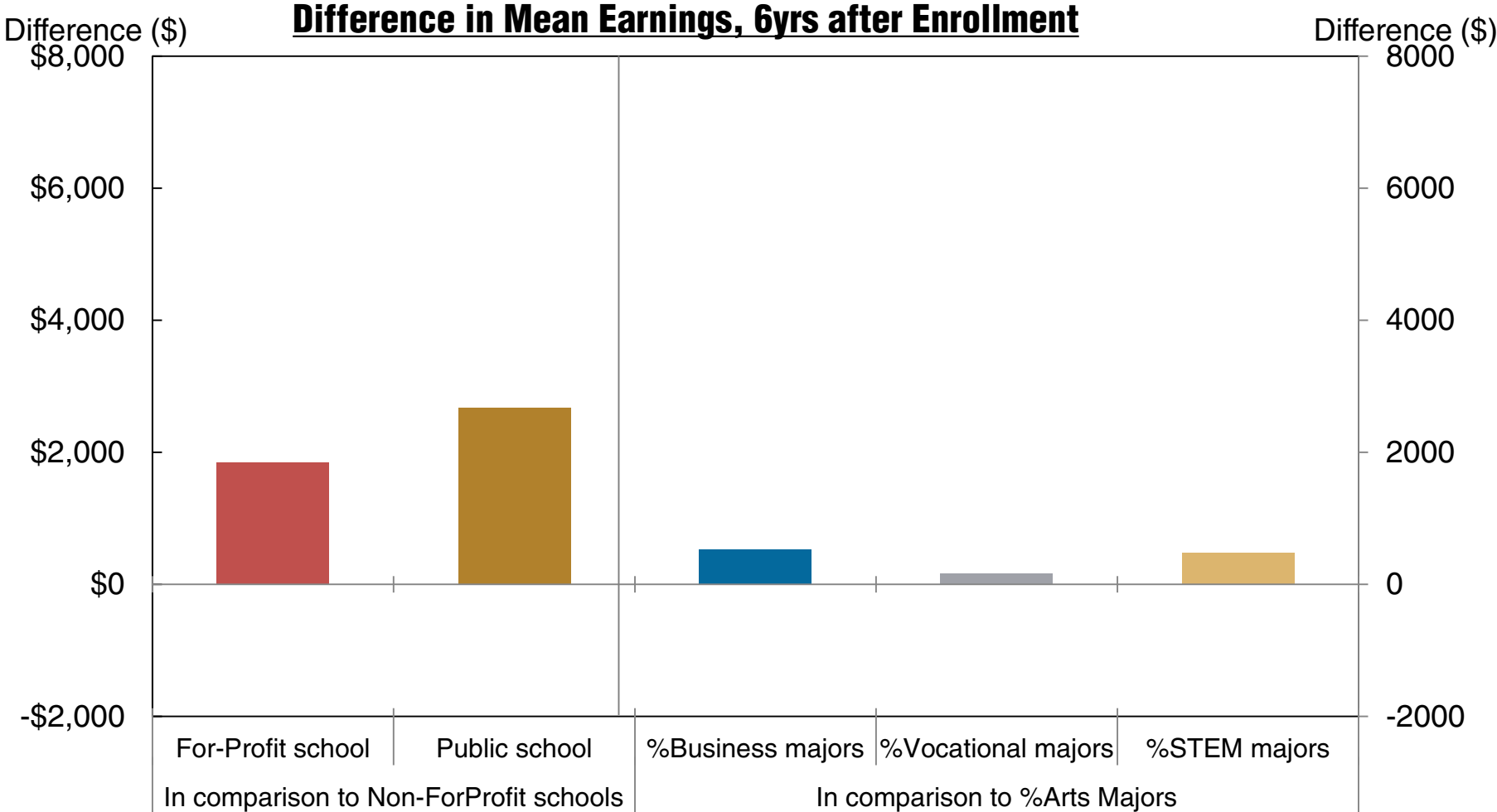
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Homeownership Rate By College Attendance, Student Debt Status, And Age/Year



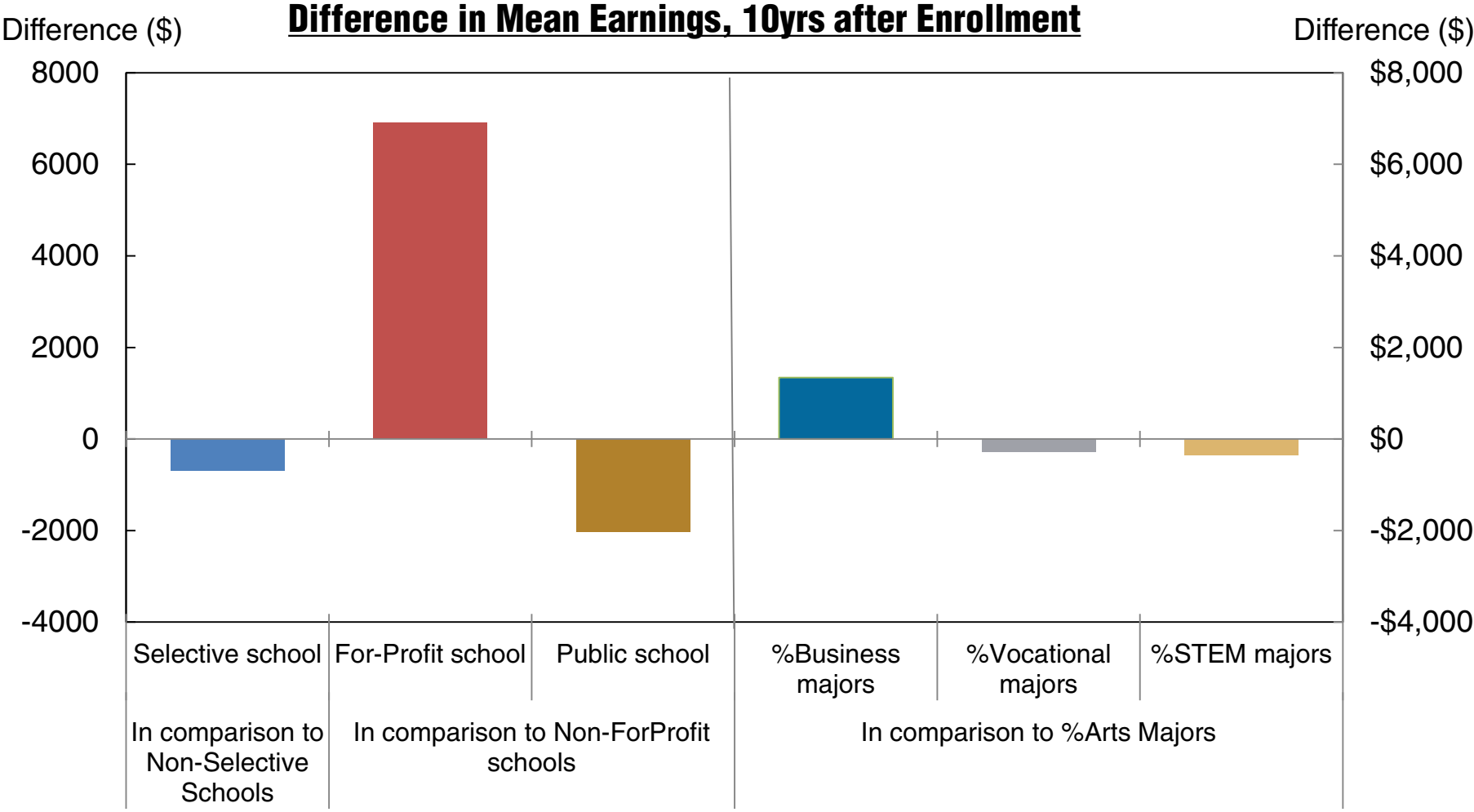
Source: New York Fed Consumer Credit Panel/Equifax and National Student Clearinghouse

Business and STEM are Polarizing, and so are Community Colleges and For-Profits: Two-year colleges



- Business and STEM polarizing relative to Arts, although lucrative
- 2-year NFPs relatively lucrative and equalizing

STEM becomes an equalizer in the long-run



- 4-year Public colleges serve as equalizers; NFP is polarizing and so is business.
- STEM less equalizing in short-run, more equalizing in long-run
- While 4-year public colleges are equalizers, Community colleges (2 yr Public) are polarizers