
On the Effect of Student Loans on Access to Homeownership

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Disclaimer

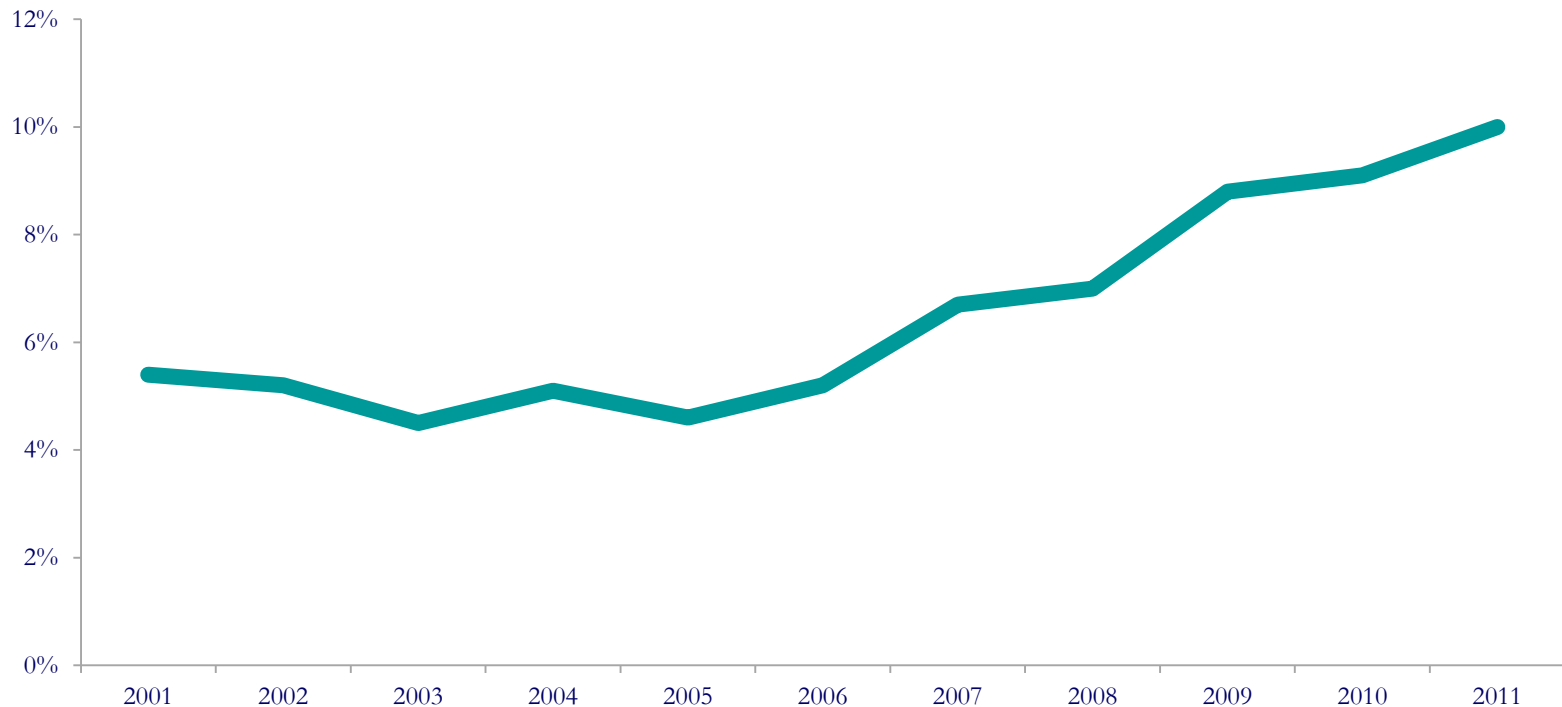
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Developments in the Student Loan Market

- U.S. consumers have over \$1.2 trillion in student loan debt
 - 41 million student loan borrowers, up from 24 million in 2005
 - Average student loan debt over \$26,000 per borrower, up from about \$16,000 in 2005
 - 70 percent of borrowers have less than \$30,000 in debt, 10 percent between \$50,000-\$100,000; and 4 percent more than \$100,000
 - Student loan delinquencies increased appreciably in recent years
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Developments in the Student Loan Market

2-year Cohort Default Rate



- 90+ dpd delinquency rate: up from 6.6 percent in 2005 to 11 percent in 2014

Student Loans and Homeownership

- Increases in student loan debt and delinquencies
 - Concerns about individual and macroeconomic effects
 - Might impair ability to save for down payments, meet DTI cut-offs.
Delinquencies adversely affect borrower credit scores
 - Anecdotal and survey evidence:
 - Student loan debt might adversely affect homeownership decisions/access (Rutgers, NAR, Fannie Mae)
 - Narrative focused on the effect of monthly payments/DTIs
 - Especially relevant in the context of recent regulation
 - Existing literature mixed and still quite preliminary
 - Still, unanswered questions: How strong is the relationship? Affects timing of entry or ultimate attainment?
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Some related studies

- Fisher and Gervais (2011):
 - Homeownership is a function of marriage/household formation, so effects of student loans could be indirect through reduced household formation

 - Dettling and Hsu (2014):
 - Parental co-habitation might correlate with student loan debt

 - Brown et al. (2014), Houle and Berger (2014)
 - Student loan debt appears to be correlated with lower homeownership in the NLSY
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In this presentation

- Investigate the relationship between
 - student loans
 - homeownership (timing and ultimate attainment)for a cohort of young individuals, followed over time

 - Data set based on TransUnion credit database, augmented with individual post-secondary education histories
 - Data were anonymized. No PII was provided to the FR as part of the TransUnion data set

 - Why is education important?
 - Individuals with no college (and thus no student debt) are quite different from those with at least some college and no student debt
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Roadmap

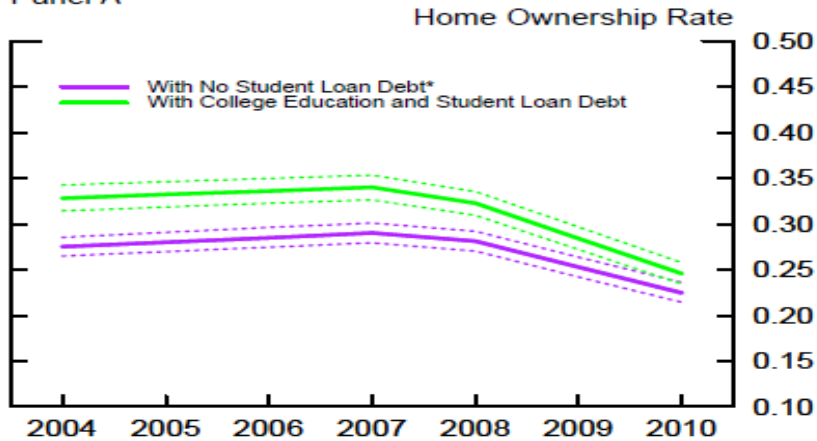
- Sample details
 - Descriptive analysis
 - Econometric analysis
 - (Very preliminary) Regression results/Simulations
 - Conclusions
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Sample details

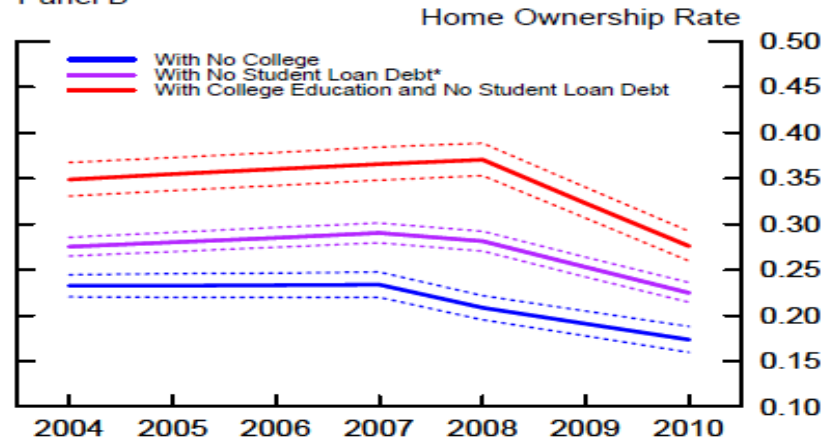
- Representative cohort of individuals between ages 23 and 31 in 2004
 - Credit records by TransUnion available roughly bi-annually between 1997 and 2010
 - Homeownership approximated by presence of secured closed-end mortgage debt
 - Educational histories by National Student Clearinghouse (NSC)
 - Detailed enrollment spells (duration, institution)
 - Graduation records (degree, major)
 - Pell Grant records by the DoEd
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Homeownership by education and debt: 2004-10

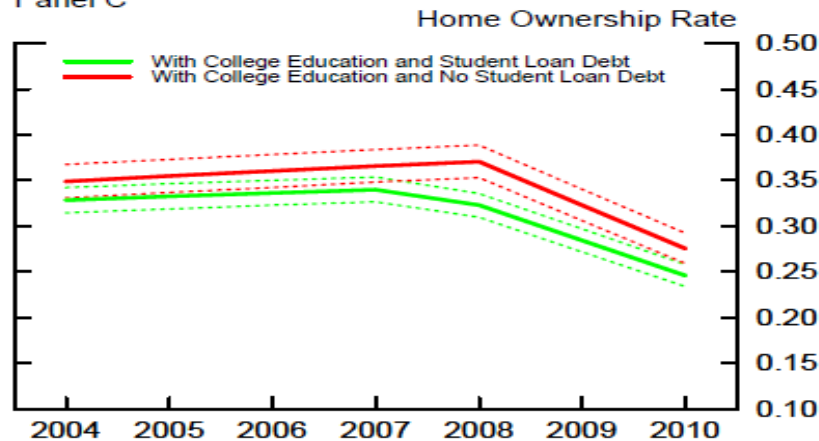
Panel A



Panel B



Panel C

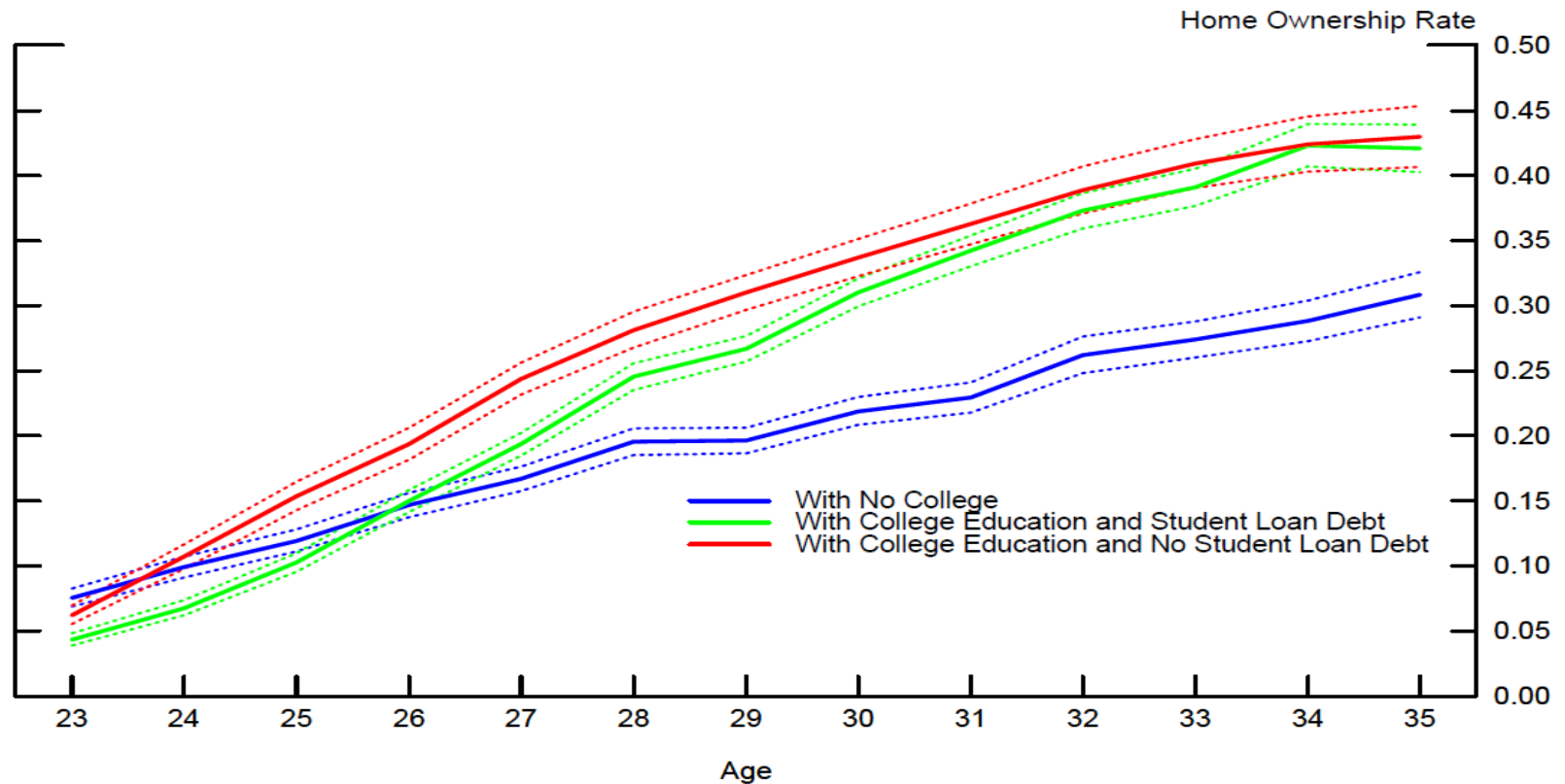


Source: TransUnion, LLC and National Student Clearinghouse.

* Includes individuals both with and without post-secondary education.

Notes: Individuals with no college denote those with no post-secondary education. Individuals with college denote those with at least some post-secondary education. Dotted lines represent 95 percent confidence intervals.

Age profile of homeownership by education



Source: TransUnion, LLC and National Student Clearinghouse.

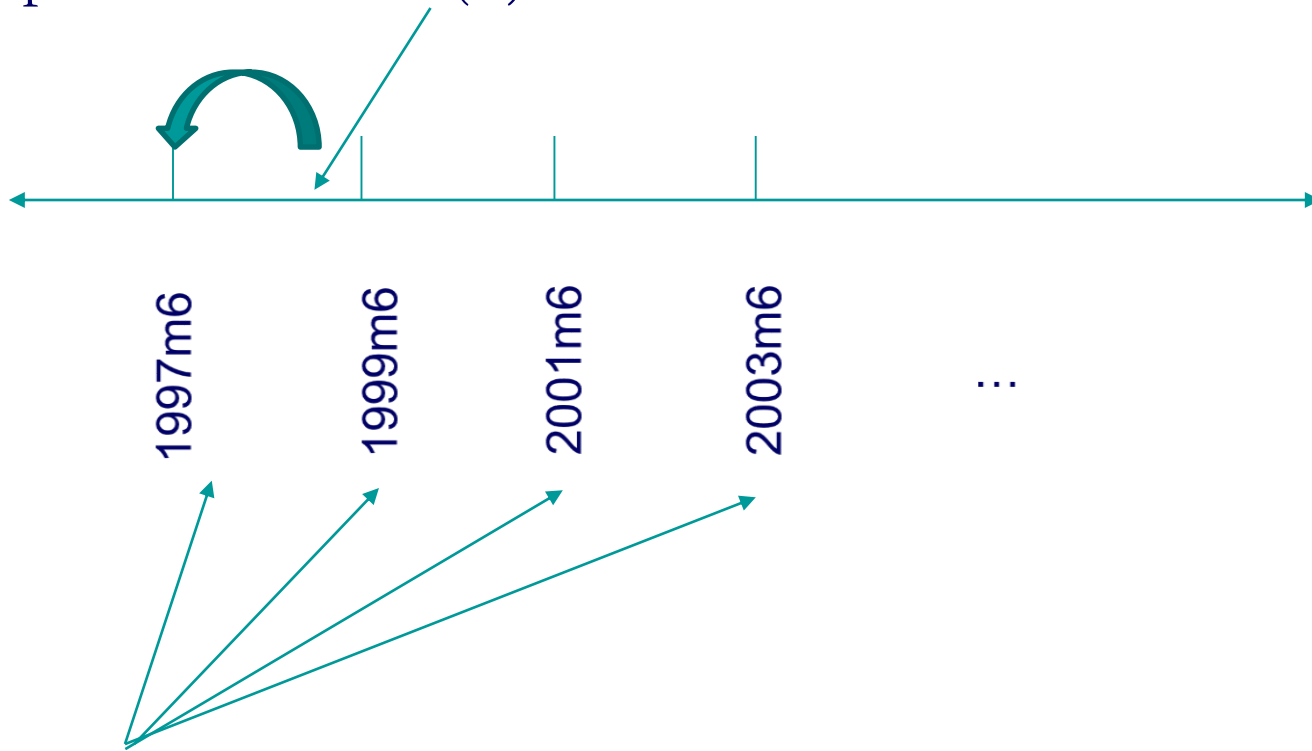
Notes: Individuals with no college denote those with no post-secondary education. Individuals with college denote those with at least some post-secondary education. Dotted lines represent 95 percent confidence intervals.

Econometric analysis: empirical design (cont'd)

- Important correlates:
 - Age
 - Student loan debt
 - Credit card/auto debt
 - Credit scores
 - Attained education (dropout, AS, Bachelor's, Master's ...)
 - School sector (private, public, for-profit,...)
 - Pell Grant controls (proxy for socio-economic background; could also capture college cost)
 - Year/age-cohort fixed effects
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Econometric analysis: specification details

- Dependent variable (Y) measured in-between waves



- Correlates (X) measured at the time of the wave

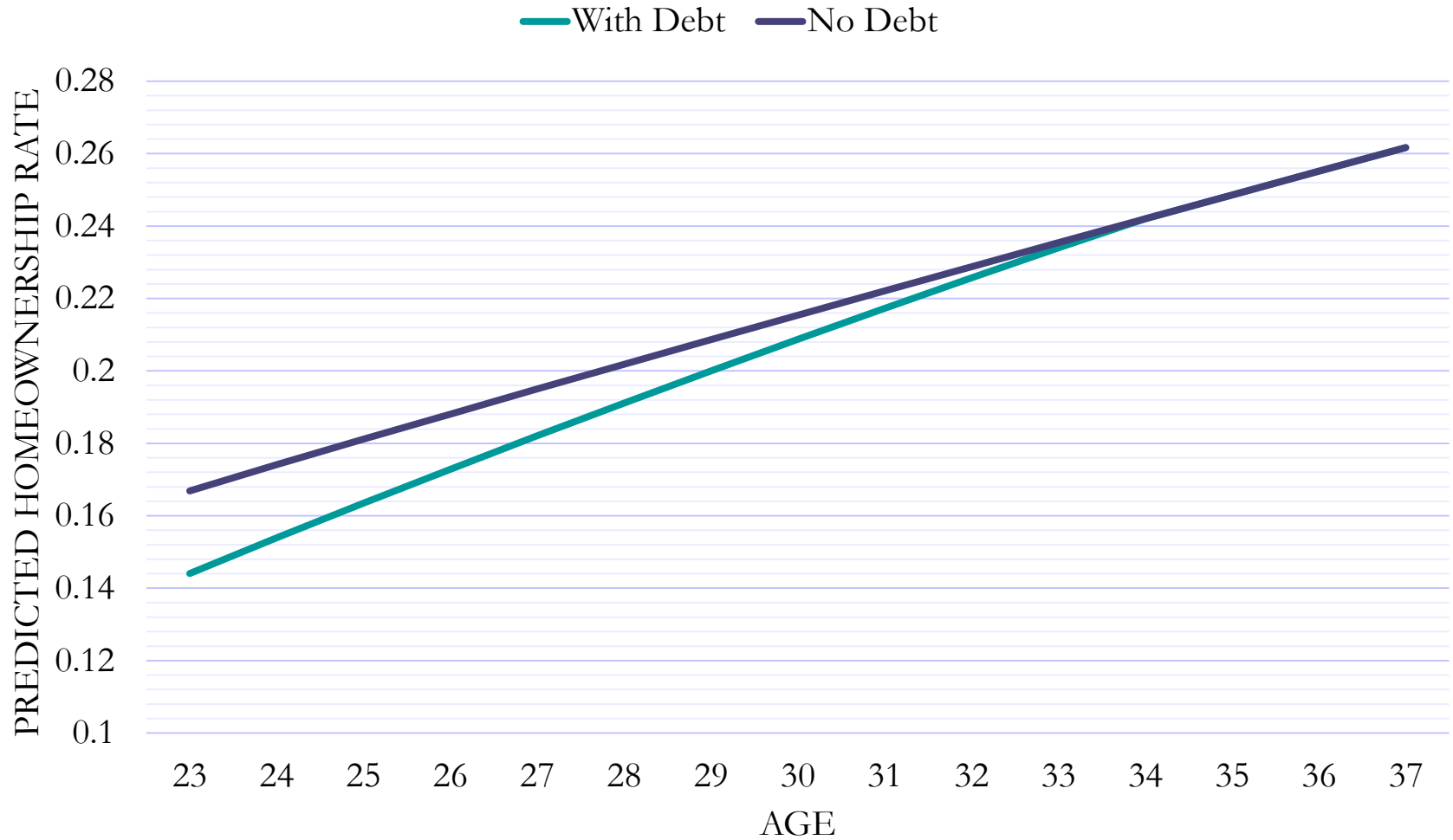
Regression results (very preliminary)

| | Coeff. Sign/Significance |
|---------------------------|---------------------------------|
| <i>Demographics</i> | |
| Ln(Age) | (+)*** |
| <i>School Records</i> | |
| Certificate/Associate's | (+)*** |
| BA degree | (+)*** |
| MA degree or more | (+)*** |
| Currently in school | (-)*** |
| Days since leaving school | (+)*** |
| Number of individuals | 18,399 |
| Number of observations | 128,793 |
| R-squared (overall) | 0.25 |

| | Coeff. Sign/Significance |
|--|---------------------------------|
| <i>Credit Variables</i> | |
| Ln(Student loan debt) | (-)*** |
| Ln(Age)*Ln(Student loan debt) | (+)*** |
| Ln(Credit card debt) | (-)*** |
| Ln(Age)*Ln(Credit card debt) | (+)*** |
| Ln(Auto debt) | (-)*** |
| Ln(Age)*Ln(Auto debt) | (+)*** |
| Credit score | (+)*** |
| 30-day delinquent on student loan debt | (-)*** |
| 30-day delinquent on credit card debt | (-)*** |
| 30-day delinquent on auto debt | (-)*** |

Additional Controls: year and age-cohorts fixed effects; interactions of ln(age) with dummy variables indicating that an individual had ever had the debt before paying it off; binary indicators for majors; schools sector dummy variables, indicator for missing credit scores; indicator for Pell Grant recipients and average amount of Pell Grants received.

Simulated predictions (very preliminary)



Conclusions

- Descriptive analysis suggests:
 - Homeownership rates declined relatively more for adults with student loans than those without student loan debt following the recession
 - Looking at adults without student debt without looking at whether they have college education could tell a different story
 - Declines in homeownership rates for those with college education and with and without student loan debt are very similar
 - Student loan debt more likely to affect the timing of homeownership than people's eventual attainment of it
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Conclusions (cont'd)

- Very preliminary regression results suggest that student loan debt has some effect on the timing of entry into homeownership, but the effect dissipates with age
 - Statistical significance of the total effect is questionable

 - Results quite preliminary
 - Check regression specification robustness; add geographic controls
 - Ask more questions:
 - “Do student loans affect the size of a mortgage?”
 - “Is student loan debt different in its effect on homeownership than other types of debt?”
 - ...
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