

The End of The American Dream?

Student Loan Debt and Homeownership Among Young Adults

by Jason N. Houle and Lawrence Berger



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NEX T

INTRODUCTION

In the aftermath of the great recession two trends have worried Americans. Young people have taken on large amounts of student debt and the rate at which young people are buying homes has fallen. It is natural to assume that these two trends are related and that the first may be causing the second.

In this paper Jason Houle, Dartmouth College and Lawrence Berger, University of Wisconsin – Madison, set out to explore whether or not there is likely to be a clear relationship between the two trends by using individual-level data and controlling for other variables that could be causing the slowdown in home buying among young people. Overall their analysis raises questions about the conventional wisdom. The reason is that there are two other powerful factors that could also explain the slowdown in young people buying houses. The first and most obvious is the Great Recession and the collapse of the housing market. Homeownership declined overall – not just among the young. And the second reason is one that predates the recession. The “transition to adulthood” a term used by demographers to explain the stage of life when young adults leave their parents, marry, have children and gain full time employment, has changed dramatically over the past several decades and in recent years. “Indeed, the proportions of young adults under 30 who are married and who are parents has declined steadily between 1995 and 2013, whereas the proportions of young adults who are enrolled in college and who are living with their parents has increased steadily.”

Using statistical adjustments and recent panel data on a large cohort of young adults from the National Longitudinal Survey of Youth they show that “On the whole, our analyses indicate that student loan debt is not dragging down the housing market, or leading young adults to eschew home buying.”

This paper should make policy makers think hard about the housing market and what can be done to help young people. It is the latest in a series of ahead-of-the-curve, groundbreaking pieces published through Third Way’s NEXT initiative. NEXT is made up of in-depth, commissioned academic research papers that look at trends that will shape policy over the coming decades. In particular, we are aiming to unpack some of the prevailing assumptions that routinely define, and often constrain, Democratic and progressive economic and social policy debates.

In this series we seek to answer the central domestic policy challenge of the 21st century: how to ensure American middle class prosperity and individual success in an era of ever-intensifying globalization and

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technological upheaval. It's the defining question of our time, and one that as a country we're far from answering.

Each paper dives into one aspect of middle class prosperity—such as education, retirement, achievement, or the safety net. Our aim is to challenge, and ultimately change, some of the prevailing assumptions that routinely define, and often constrain, Democratic and progressive economic and social policy debates. And by doing that, we'll be able to help push the conversation towards a new, more modern understanding of America's middle class challenges—and spur fresh ideas for a new era.

Jonathan Cowan

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THE END OF THE AMERICAN DREAM?

STUDENT LOAN DEBT AND HOMEOWNERSHIP AMONG YOUNG ADULTS

Rachel Heffner, like many Americans, wants a slice of the American Dream. She wants to own a home. Standing in Rachel's way, however, is a mountain of student loan debt that she racked up, ironically, in her pursuit of another facet of the American Dream—a college degree. Today, Rachel owes \$60,000 in student loans, and has a monthly payment of nearly \$700. Were it not for student loan debt, perhaps Rachel would have a shot at the dream of owning her own home. Rachel is not alone; there are many anecdotal stories like hers in the U.S., where rising college costs and flagging state and federal aid have resulted in record levels of student loan debt.¹

Recently, Rachel's story was highlighted in an article in the *Wall Street Journal*, titled "Student Loan Debt Takes a Toll on Some Home Buyers." Hers is a story that has been repeated time and time again in newspapers and blogs across the country. Over the past two years, all of the major media outlets including the *Wall Street Journal*, *New York Times*, and the *Washington Post* have trumpeted claims that student loan debt is holding back the housing market, with provocative headlines like "How Student Debt Crushes Your Chances of Buying a Home,"² "College Debt is Still Keeping Grads from Buying Homes,"³ and "Student Loan Debt Shatters Dream of Owning a Home."⁴ Others like *TIME* magazine have gone further, suggesting broader and more insidious implications, like "Student Loans Are Becoming a Drag on the U.S. Economy."⁵ The media narrative, and thus the public perception, is clear: student loan debt is holding back the housing market and the economic recovery, and a generation of Millennials is buried under a mountain of student debt with little shot at the American Dream of homeownership in the near future. This is a compelling narrative that makes a great deal of sense. Whereas this story is compelling, and certainly intuitive, the

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available evidence provides little support for such bold claims. Below, we review the existing claims, evidence, and counter narratives on the relations between student loan debt and homeownership. We then summarize our empirical research in which we explicitly examined whether student loan debt is discouraging homeownership. In this work, we find little evidence that student loan debt is substantially preventing young adults from buying homes. Indeed, other structural and economic factors better explain the recent drop in home buying among young adults.

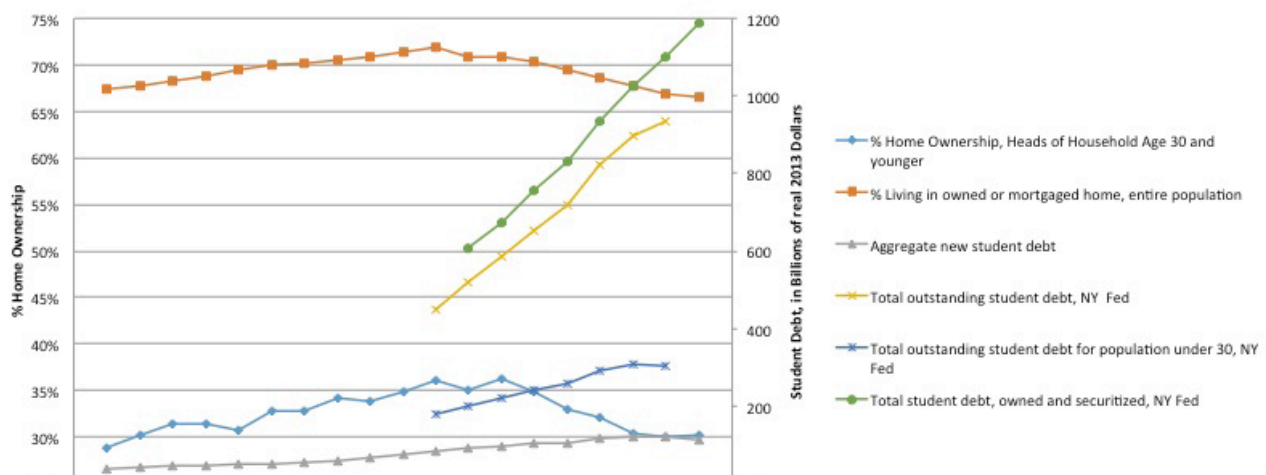
EXISTING CLAIMS AND EVIDENCE

The conversation about the link between student loan debt and homeownership generally highlights two trends. First, student loan debt has been rising steadily over the past several decades. Today, the average student loan debtor owes nearly \$25,000, up from \$13,000 in 1992⁶ (all dollar figures in constant 2013 dollars). In the aggregate, outstanding student loan debt totals 1.3 trillion dollars and has doubled since 2007⁷, surpassing credit card debt; it now trails only behind home mortgage debt on the household balance sheet⁸. The rise in student loan debt has primarily been driven by the cost of college, which has increased steadily and has outpaced inflation for several decades. At the same time, state, federal, and institutional aid have failed to keep pace with rising costs, leaving many students with no choice but to take on debt to finance postsecondary education. Student loan debt, however, is only the tip of the debt iceberg for young people today. Earlier work by Houle⁹ showed that young adults in their twenties are more severely indebted than previous generations of young adults, and carry more unsecured (e.g. credit card debt) debt and higher debt burdens (debt-to-income and debt-to-asset ratios) than the boomer generations. So, while student loan debt is at a record high, the nature of debt has changed in a variety of ways for young adults over the last few generations. It is also worth noting that, despite large increases in college costs, and accompanying increases in student loan debt, the best available evidence suggests that the returns to a college education continue to well outweigh the cost thereof.¹⁰ Of course, not all of those who take on student loan debt earn a degree—whether two-year or four-year—and, not all degrees are equally valuable.

The second auspicious trend that drives the student loan debt and home buying narrative is that the rate at which young people are buying homes has been falling since 2006. According to the American Community Survey, 36.8% of young adults under the age of 30

owned a home in 2006, but the rate of young-adult homeownership fell to 32.3% by 2013. Taken together, these two trends paint a solemn picture: As we show in Figure 1, there is a clear negative correlation between outstanding student loan debt among young adults and the rate at which they are buying homes in the wake of the Great Recession: as student loan debt has increased, homeownership has declined. However, several things should be noted. First, as pointed out by Beth Akers and Matthew Chingos¹¹, in the earlier period (prior to 2005), both student loan debt and homeownership were increasing among young adults. This suggests that the two are not universally negatively correlated. Second, whereas student loan debt increased considerably while homeownership declined among young adults between 2007 and 2013, homeownership also declined among all households during this period. In addition, research taking a longer view across three generations of young adults—the early boomers, late boomers, and the millennials—has found that, over time, student loan debt has replaced mortgage debt as the primary form of “wealth-building” debt on young adults’ balance sheets¹².

Figure 1: Student Loan Debt and Home Ownership, 1994-2014



Data Sources: The College Board; New York Federal Reserve Board; American Community Survey; IPUMS-CPS, University of Minnesota, www.ipums.org.

Picking up on these trends, one recent study conducted by the Federal Reserve Bank of New York (FRBNY) fanned the flames by seemingly providing evidence that student loan debt is discouraging home buying among young adults.¹³ This study found that, in the recessionary period, young adults with student loan debt were marginally less likely to own homes by the time they were 30 years of age than were young adults without student loan debt. The authors noted that this upset a longer term trend, whereby student loan

debtors have historically had higher rates of homeownership than non-debtors—which makes sense, as those with student loan debt have attended college, and college-attenders (and especially graduates) tend to be wealthier, have higher incomes, and to have grown up in more socially and economically advantaged homes. The study also found that student loan debtors tended to have lower credit scores than non-debtors. Thus, they concluded that young adults with student loan debt are eschewing home buying either because they do not wish to take on additional debt, or because their low credit scores make it difficult for them to be approved for a mortgage. The FRBNY study launched a media firestorm—and was a massive contributor to the media narrative and public perception that student loan debt was killing the American Dream.

But, can we conclude from this evidence that student loan debt is causing young adults to flee the housing market, en masse? Despite the compelling narrative and overlapping trends, correlation does not imply causation. Although there is a clear correlation between student loan debt and home buying among young adults (after 2006), this does not necessarily mean that student loan debt is a cause of declining homeownership. Indeed, as Beth Akers has argued in her sobering work on student loan debt and homeownership in the U.S.: “Although it can be tempting to draw conclusions about causal relationships from these correlational data, neither this [her] analysis nor the one published by the FRBNY can really tell us much about how student loan debt affects homeownership.”¹⁴ As it turns out, establishing causation is a tricky thing to do (more on this later). It’s quite possible—if not likely—that, rather than growth in student loan debt causing a decline in homeownership, other factors may be driving homeownership trends. What might these factors be?

ALTERNATIVE EXPLANATIONS AND COUNTER NARRATIVES: THE GREAT RECESSION AND THE TRANSITION TO ADULthood

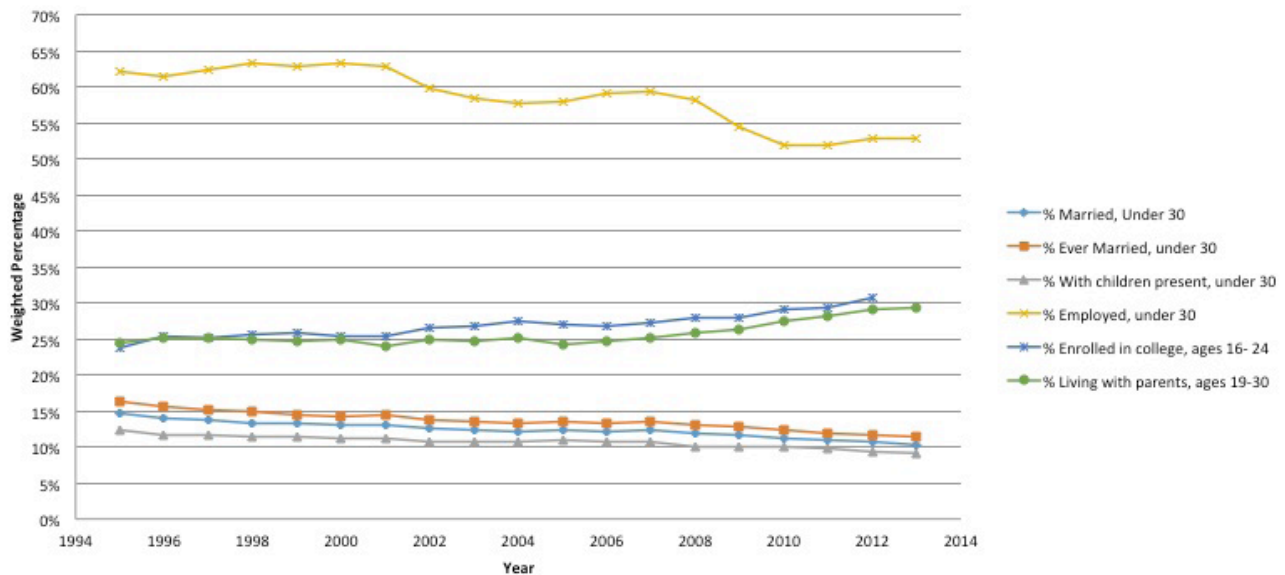
The first, and perhaps most obvious, candidate is the Great Recession. The recession that began in the third quarter of 2007 was the deepest economic crisis in the US since the Great Depression. The Great Recession was characterized by the worst housing crisis in US history, as millions of Americans lost their homes to foreclosure, and millions more watched their home values—and therefore their wealth—evaporate. Surely the recession might, at least in part, explain why young adults continued to accrue student loan debt while buying

fewer homes in recent years. Research by Michael Shanahan and colleagues¹⁵ has shown that during economic downturns, young people tend to “warehouse”—meaning they stay in school at the expense of going into a down labor market. If this is true, we would expect student loan debt to increase during the recession. As it turns out, student loan debt was the only type of debt that increased during the recession—other types of debt, including credit card and home mortgage debt, declined sharply (due in part to tightened access to credit and debt discharge through bankruptcy). Perhaps more important for explaining the trends in Figure 1: homeownership also declined dramatically during the recessionary period, in part because of home foreclosures, but also because young adults who are potential first-time home buyers were hesitant to buy in a down housing market. However, this was true for homeownership overall, as well as for homeownership among young adults. For example, homeownership declined from about 36% in 2007 to about 30% in 2013 among households headed by an individual age 30 or younger. By comparison, it declined from approximately 71% to approximately 67% among all households during that time period.

A second explanation is that the association between student loan debt and homeownership is being driven by larger structural changes in the social roles and expectations associated with young adulthood. Demographers refer to the stage of life when young adults are leaving the parental home, completing their education, and entering into adult roles of marriage, parenthood, and full time employment as the “transition to adulthood.” Research has documented that the transition to adulthood has changed dramatically over the past several decades¹⁶; indeed, it has continued to change, even in recent years.¹⁷ Notably, young adults are spending more time completing their educations (and thus racking up more debt), and are also delaying entry into traditional adult roles such as marriage and parenthood. This is particularly true among those who earn a postsecondary degree. Indeed, as we show in Figure 2, the proportions of young adults under 30 who are married and who are parents has declined steadily between 1995 and 2013, whereas the proportions of young adults who are enrolled in college and who are living with their parents has increased steadily. Finally, employment rates among young adults have declined considerably, particularly since 2007. These factors provide some suggestive evidence that other social and economic trends among young adults have coincided with concurrent increases in student loan debt and decreases in homeownership, casting further doubt that there may be a causal relation between the two.

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Figure 2: Changes in the Major Social Roles in the Transition to Adulthood, 1994-2014



Source: Current Population Survey, IPUMS-CPS, University of Minnesota, www.ipums.org.

But, why are young adults extending their education and delaying entry into traditional adult roles? Frank Furstenberg and colleagues¹⁸ have shown that these changes in the transition to adulthood are driven by a variety of structural, economic, and cultural shifts over the past several decades. Put it this way: the boomers and the generations that preceded them had a great deal of incentive to get married and have children earlier in life—they entered their careers during a strong labor market, and a high school degree could lead to a stable job with decent wages. In addition, birth control technology was not where it is today. Today's young adults have come of age in an extremely different environment, and this has had a profound impact on their decision to marry and start a family. Thus, a simple explanation for both rising student loan debt and falling homeownership is that young people today are both likely to attend college and spend more time in college, while also delaying homeownership just as they are delaying their entry into other “adult” social roles, such as marriage and childbirth.

The above two explanations raise the possibility that the observed correlation between student loan debt and homeownership is driven by some unmeasured or unobserved third factor. In this argument, debtors are different from non-debtors, and home owners are different from non-homeowners in *a lot* of ways. Student loan debt is not randomly assigned, and no matter how many variables are controlled

for in statistical models, there may always be some uncontrolled variable that is biasing the results. Social scientists refer to this as “omitted variable bias”, and it poses a problem for all non-experimental research. Omitted variable bias may be especially problematic when looking at debt and homeownership because these variables are “endogenous”; that is, jointly determined or determined by the same set of individual or contextual factors—the end result of a potentially long chain of events or circumstances. When dealing with endogenous variables, it is particularly difficult to establish causal links. Moreover, as college attendance has increased over time, the characteristics of student loan debtors have also likely changed—thus unobserved differences between debtors and non-debtors are a moving target for researchers. As such, there could be any number of unobserved variables that are biasing observed associations. The omission of anything from personality characteristics to financial literacy skills (both of which have been proposed by some to be important omitted variables), could lead us to think there is a causal link when there is not.

The alternative explanations we have thus far presented suggest that the relationship between student loan debt and homeownership is a mirage—or spurious—and both trends are being driven by some larger, external, force. But there’s also a compelling counter narrative to all of this. It might be, for instance, that the aggregate-level correlation between student loan debt and homeownership doesn’t show up in individual-level data. Likewise, data characteristics and quality may matter. In short, in contrast to conventional wisdom, it is possible that student loan debtors are no less likely to buy a home than non-debtors, such that the previous research on this topic was, in a word, wrong. For example, Beth Akers replicated the FRBNY study using data from the Survey of Consumer Finances—long considered to be the “gold standard” dataset for understanding debt and wealth in the United States—from 1989 to 2010. The FRBNY study used data from the FRBNY Consumer Credit Panel spanning 1999 to 2012. In contrast to the FRBNY study, Akers found that, historically, student loan debtors between the ages of 28-32 have had slightly lower homeownership rates than non-debtors and that, in recent years, debtors have actually had *higher* rates of homeownership than non-debtors. In other words, she finds little evidence for the argument that the link between student loan debt and homeownership emerged in or is unique to this recessionary period or, indeed, in recent decades.¹⁹

Such an explanation makes intuitive sense and also seems to fit with what we know about college graduates, who are more likely to have

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to student
loan debt, a
figure which
has remained
relatively
constant since
the early 1990s.

debt than non-college goers. First, many college graduates—who have higher levels of student loan debt than any other group—have fared well in the recession, relative to their counterparts who lack a college degree. In 2008, at the height of the recession, the unemployment rate for those with a college degree or higher was 2.6%, compared to 3.7% for those with an associates degree, 5.1% for those with some college but no degree, 5.7% for those with a high school degree but no college, and 9.0% for those without a high school degree.²⁰ Moreover, the wage premium of a college degree remains high. Median annual earnings for college graduates in 2011 was about 67% higher than median earnings for those with only a high school education (\$67,000 versus \$34,000).²¹ Finally, whereas there are some young adults who, like Rachel (discussed above), have relatively high student loan payments, for most young adults debt burdens are not as high. The average (median) student loan debtor pays only 3-4% of their monthly income to student loan debt, a figure which has remained relatively constant since the early 1990s.²² Student loan repayment burden for those with large monthly payments relative to their incomes should be further reduced by a recent Obama administration plan for income based repayment, which allows 1.6 million borrowers to cap their loan payments at 10 percent of their income. In other words, student debt may be burdensome, but the payoff of a college degree should exceed these burdens by providing (or reinforcing) college graduates' access to a middle class life.

TESTING THE CLAIMS

How then can we determine whether or not student loan debt is dragging down the housing market? We argue that such an analysis requires appropriate data and rigorous statistical methods. First, it requires longitudinal data that follows young people across the course of their lives, both before and after they accumulate their student loan debt and purchase (or decline to purchase) homes. This would allow us to examine how changes in debt are associated with changes in the probability of buying a home; it would also allow us to control for an array of characteristics that may confound (or render spurious) the association of interest. Second, a dataset that was designed to be representative of young people in the U.S. would be ideal. Most existing datasets of debt in the U.S. (such as the SCF) were not designed to be representative of a specific age group, such as young adults. Third, we would need a sample large enough to examine the link between student loan debt and homeownership *among* college-goers. Previous

research has focused on *all* young adults, including those who never set foot on a college campus—and thus were never eligible to accumulate student debt. This results in an apples-to-oranges comparison. To make an apples-to-apples comparison, we would want to compare debt and homeownership among those who are at risk to accumulate debt. Fourth, information must be available about associations of both the presence/absence of debt *and* the amount of debt with homeownership. Previous research has only compared debtors to non-debtors. But, if the association between debt and homeownership is real, we would expect to see homeownership to decline as debt increases: as debt goes up, the probability of owning a home goes down. Finally, establishing causal inference with observational (non-experimental) data necessitates the use of statistical methods that allow us to get closer to (though not necessarily arrive at) a causal claim by ruling out unobserved confounding factors.²³

Our Recent Work Using Data from the National Longitudinal Survey of Youth 1997 Cohort

In a recent study, we attempted to take the steps outlined above to analyze the link between student loan debt and home ownership. We used the National Longitudinal Survey of Youth 1997 (NLSY97) cohort—a nationally representative sample of young people who were between the ages of 12 and 17 in 1997—who have been followed annually or biannually ever since. The NLSY97 data includes detailed information on young people as they move from adolescence into adulthood, including repeated measures of the amount of student loan debt they hold and homeownership-related factors such as whether they own a home, how much they owe on their mortgage, and how much home equity they have accrued.²⁴ These are important distinctions to make. Even if student loan debt does not prevent young adults from buying a home, it may lead them to buy less expensive homes (and thereby take on less mortgage debt). Furthermore, student loan payments may reduce their down payment and slow them in (or prevent them from) paying down their mortgage, thus resulting in less home equity. Moreover, the NLSY97 sample is large enough that we could focus our analyses on young people who had ever attended college, and thus restrict our sample to young adults who are eligible to acquire student loan debt. In our study, we used these data to examine the link between student loan debt and homeownership outcomes by the age of 30, while doing our best to adjust for the possibility that, among those who attend college, those who accrue student loan debt

and those who do not are likely to differ in important ways. Our study investigated four research questions:

1. Is student loan debt associated with homeownership outcomes (probability of homeownership presence and amount of mortgage debt, and amount of home equity among homeowners) in a recent nationally representative sample of young adults?
2. How are these associations affected by adjusting for potentially confounding factors?
3. Does the probability of home ownership, and characteristics thereof, vary as a function of the amount of increase in student loan debt? That is, beyond the mere presence of student loan debt, does amount of student loan debt among those with debt matter vis-a-vis homeownership?

We first tested for a bivariate association between student loan debt and home ownership characteristics in the raw data. These results are shown in Table 1. Contrary to the dominant narrative in the media, student loan debtors in our sample are significantly *more* (not less) likely to be homeowners than non-debtors. Nearly 21% of student loan debtors were homeowners, compared to 13% of non-debtors. Student loan debtors also tended to have significantly more mortgage debt, though this is likely a function of the fact that they are more likely to own homes (and thus have mortgages).

Table 1: Homeownership characteristics by educational debtor status

	Non-Debtor	Debtor
Percent Homeowners	13.10%	20.80%*
Mortgage Amount (\$)	12020.1	20460.9*
	(46561.40)	(60861.80)
Home Equity (\$)	4690.2	5362
	(31138.10)	(32510.50)

Note: 10,448 person-wave observations. Proportion or mean (and standard deviation) presented.

* $p < .001$.

Source: National Longitudinal Survey of Youth 1997 Cohort (NLSY 97).

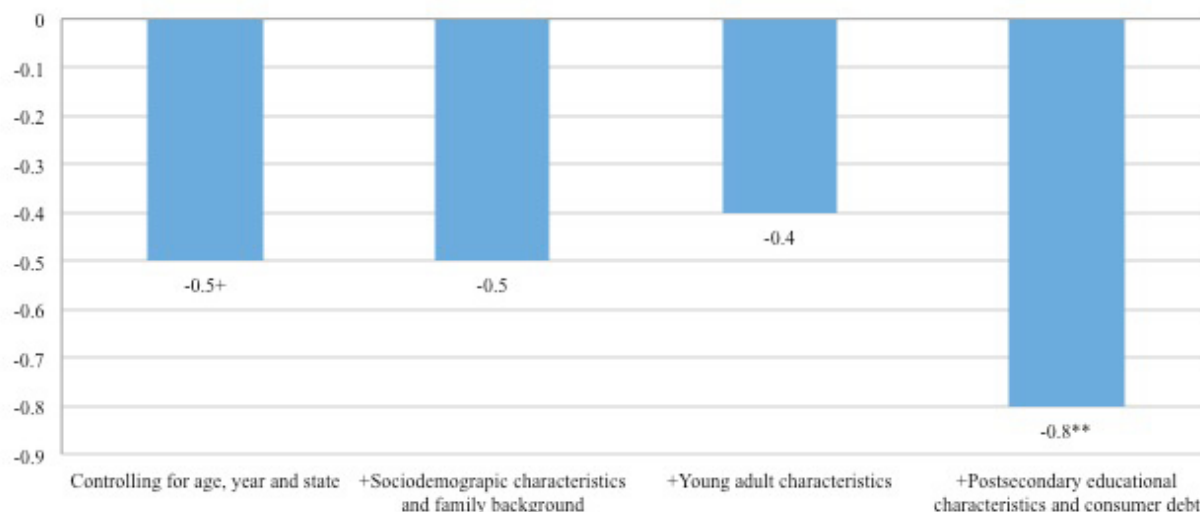
We next examined how these associations were affected by controlling for an increasingly detailed array of potentially confounding variables. Figure 3 shows results from Ordinary Least Squares regression

models that predict the percentage point change in the probability of homeownership that is associated with a \$10,000 increase in student loan debt. These models adjusted only for the respondents' age, the year that the respondent was interviewed (which includes the recessionary period), and the respondent's state of residence in that year.²⁵ The subsequent models further controlled for family sociodemographic characteristics,²⁶ young adults' current social and economic characteristics,²⁷ and the postsecondary educational characteristics of the institutions attended, including the type of college young adults attended, and the degree attained, as well as the amount of unsecured debt the respondent currently holds.²⁸ We find a very small negative association between student loan debt (measured in \$10,000 increments) and the probability of owning a home. Interestingly, this association fails to reach standard levels of statistical significance until the final model, in which controls for postsecondary educational characteristics and consumer debt were added. But even this significant effect is exceedingly small.

In the final model, which most rigorously adjusts for confounding factors, a \$10,000 increase in student loan debt is associated with a .8 percentage point reduction in the probability of homeownership.²⁹ According to this model, a young adult with \$30,000 in student loan debt (a figure which is slightly above the current national average) has only a 2.4 percentage point lower probability of owning a home than a young adult with no student loan debt. Given that the overall rate of homeownership in our sample was 13.1 percent, this suggests that young adults with \$30,000 of student loan debt are 18.3 percent less likely to own a home by age 30 than those who enrolled in some postsecondary education but had no student loan debt. Whereas this effect is statistically greater than zero, it is substantively modest in size—too small to suggest that homeownership declines among young adults reflect that those with student loan debt are fleeing the housing market en masse, or that the decline in home purchases among those with student loan debt is holding back the housing market recovery, for example. In additional analyses, we find no evidence for a statistically significant association between student loan debt and mortgage amount or home equity.

The above analyses are useful, but give us little insight into whether there is a causal association between debt and the probability of homeownership. It is possible that these results could be completely driven by differences between debtors and non-debtors—thus leading

Figure 3: Percentage point change in the probability of home ownerships associated with a \$10,000 increase in student loan debt



Source: National Longitudinal Survey of Youth 1997 Cohort (NLSY 97).

us to think there is a causal relationship when there is not. Again, if the relationship were causal, we would expect the probability of home ownership to decline as a function of the amount of student loan debt accrued (rather than in response to the simple presence or absence of debt). In order to disentangle this, we also used a regression technique, called a spline, which allows us to simultaneously estimate the association between having any debt (yes/no) and homeownership, as well as the association between the amount of debt and homeownership, *among those with debt*. If student loan debt truly does depress homeownership, we would expect there to be differences among those with debt. However, we found no evidence of this sort of association. Instead, all of the association we described above is driven by differences between debtors and non-debtors. For example, in the final model, which adjusted for all of the confounders, we found that young adults with student loan debt had a 3.8 percentage point lower probability of owning a home than non-debtors. But, among young adults with student loan debt, those with greater amounts of debt were just as likely to own a home as those with lower debt loads. We also found that, among home owners, those with student loan debt owed roughly \$14,500 more on their mortgages than those with no student loan debt, although this finding was only marginally statistically significant; those with student loan debt had roughly \$6,800 less home equity, but this estimate was statistically nonsignificant. The associations of student loan debt amounts with mortgage and home equity amounts were extremely small and statistically nonsignificant.

The lack of an association among those with debt suggests that the probability of home ownership does not decline as student debt increases and, instead, may imply that unmeasured differences between debtors and non-debtors (omitted variable bias) is likely driving associations of student loan debt with homeownership and, among homeowners, mortgage and home equity amounts.³⁰ In short, we find little evidence in our data that student loan debt is influencing the housing market among young adults no matter how we slice it.³¹

Our findings suggest that the newspaper headlines likely exaggerate the negative role of student loan debt with regard to homeownership among young adults. On the whole, our analyses indicate that student loan debt is not dragging down the housing market, or leading young adults to eschew home buying. Nonetheless, it is possible that student loan debt is an impediment to homeownership among specific population groups. A plausible hypothesis is that student loan debt may be particularly problematic for those that are socially or economically disadvantaged, or those that fail to attain a college degree or dropout of college. For example, in Houle's previous work, he found that young adults from lower middle-income backgrounds, as well as minorities, held much more student loan debt than their more advantaged and white counterparts.³² Moreover, those who drop out of college often struggle more with student debt than college graduates because they don't enjoy any of the social or economic benefits of a college degree³³. To test this hypothesis, we examined whether the association between debt and housing decisions varied by racial and ethnic groups, family socioeconomic background, or whether or not the respondent received a degree or dropped out of college. In each case, we found no consistent evidence that the association of debt with homeownership, mortgage amount, or home equity amount was stronger for some groups than others.

If the role of student loan debt is minimal, at best, then what factors may explain limited homeownership among young adults? Our findings suggest that two major contributors to the downward trend in homeownership among young adults are the recession and delayed transitions into adult roles that are associated with homeownership. For example, in all of our models, we find that survey year, particularly being surveyed in the recessionary period, is associated with reduced homeownership. This suggests that the recession may be primarily responsible for the recent reduction in homeownership among young adults. In addition, it appears that transitioning into adult roles is also

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an elevated
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dropout

a key predictor of homeownership. Indeed, when we add variables associated with transitioning to adulthood —marriage, parenthood, employment—to our models, the variance in homeownership explained increases by 71%.³⁴ Comparatively, debt explains an extremely small percentage of the variation in homeownership among young adults. Taken together, this suggests that, all else equal, delayed transitions to adulthood, coupled with the recessionary period, are more closely linked to young adults eschewing home-buying than is student loan debt.

In sum, contrary to the claims made in the news media, whereas we do find evidence of a negative, statistically significant association between student loan debt and homeownership in some models, the association is substantively small to modest in size, and we find no evidence that the probability of home ownership decreases as the amount of student loan debt taken on by debtors increases. Thus, it seems unlikely that student loan debt is causing a generation of young adults to flee from the housing market; nor does it seem to be the case that student loan debt is primarily responsible for the slow post-recession housing market recovery. However, even if student loan debt isn't reducing home buying, it may well be impacting young people's wellbeing in other ways.

Student Loan Debt as a “Double-Edged Sword”

Student loan debt is what Rachel Dwyer and colleagues call a “double edged sword”:³⁵ on the one hand it is a valuable economic resource that young people can use to bridge the ever-widening gap between their own and their families' resources and the rising costs of college, in order to make college attendance possible. On the other hand, debt must be repaid, and repayment can impose difficulties on some young adults. For example, Dwyer and colleagues have shown that debt can come with both costs and benefits. They have found that student loan (and credit card) debt are associated with increased feelings of empowerment and control of one's life in the earlier stages of young adulthood, potentially because it grants increased freedom, consumption, and opportunities. But, these associations fade over time as young adults grow older and start to repay the debt they accrued along the way. Debtors in their mid- to late-twenties tended to feel they had less “control over their lives” and lower levels of mastery.³⁶ Debt can also both help and hinder individuals in the pursuit of a college degree: Dwyer and colleagues show that moderate debt levels are associated with increased rates of college completion,

whereas high debt levels are associated with an elevated risk of college dropout.³⁷ Other research has documented the risks associated with student loan debt. Recent work by Fenaba Addo suggests that rising student loan debt may be influencing other aspects of the transition to adulthood. Specifically, her analyses suggest that student loan debt is associated with a modest delay of marriage in favor of cohabitation among young women (but not young men).³⁸ And, unsurprisingly, even in the absence of effects on major life decisions, student loan debt can simply make some young people miserable. Several studies suggest that student loan debt is negatively associated with young adults' physical, mental, and emotional health.³⁹

Final Thoughts

Our empirical work suggests that student loan debt is likely to, at best, have a relatively small influence on home buying decisions of young adults. Though there is evidence of a negative association of debt with homeownership and, to a lesser extent mortgage amounts, the evidence does not suggest that this is a causal relationship; and, again, it is only modest in size. As noted above, however, even if student loan debt is not leading young adults to eschew home-buying en masse, it is not necessarily inconsequential to young adults' lives. In considering policy options for containing rising student loan debt, including whether or how to limit the relative size of individuals' student loan payments, perhaps we should consider broader questions about fairness and equity that extend beyond the homeownership and related factors.

First, we should ask whether we as a society are comfortable with the fact that rising postsecondary educational costs and associated debt may exacerbate existing social and economic inequalities? For example, whereas it is true that college access has increased for disadvantaged groups over time, it is also true that these groups have a substantially higher dropout risk and also leave college with much more debt than their more advantaged counterparts. As such, it is possible that, as the cost of college and associated student loan debt increase, college may serve to reproduce, rather than alleviate existing racial and class inequalities.

Second, is it fair that we expect young people today to take on a great deal more risk to attain a college degree than their parents did for a roughly equivalent payoff? Congresswoman Virginia Foxx—who has likened student loan debtors to irresponsible misanthropes⁴⁰—

is it fair that we expect young people today to take on a great deal more risk to attain a college degree than their parents did for a roughly equivalent payoff?

attended University of North Carolina at a time when a year's tuition cost \$2,000⁴¹ to attend in today's dollars. It's no surprise that Congresswoman Foxx could graduate debt free while working part-time to pay her tuition bills. Today, attending UNC cost \$8,374, not including books, room and board, or other living expenses. With these expenses added, UNC estimates that the total cost is well over \$24,000 per year. Out of state students pay nearly double that amount.⁴² At the same time, whereas the current college wage premium remains high, much of the recent growth in the wage premium reflects the declining fortune of high school graduates, so it's not much higher today than it was back in Congresswoman Foxx's day. It is therefore unquestionable that, on average, today's youth take on much more financial risk in the pursuit of a college degree than has been the case for prior generations. For some young people, that risk—that investment—will pay off. For others—especially those who fail to graduate college, flounder in the labor market, or accrue more debt they can handle—this risk will not pay off. It is a roll of the dice. The question, then, is what we can do, or are willing to do as a country to improve these odds.

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- 23 One such method that social scientists, particularly economists, have long used is a technique known as "instrumental variables" analysis which, if its assumptions are properly met, can be used to estimate an unbiased local average treatment effect by purging the variation in the predictor variable (student loan debt in our case) that is endogenously determined or could be influenced by unobserved factors. Specifically, the technique leverages a third variable (instrument) which is exogenous (determined separately from) the predictor (student loan debt) and outcome (homeownership), that directly influences the predictor, and that influences the outcome only through its influence on the predictor and through no other path. In other words, a valid instrument would have to induce random variation in student loan debt and affect homeownership only through its effect on student loan debt. Unfortunately, identifying valid instruments is difficult.
- 24 Our individual level data are drawn from the NLSY97, which began with a nationally representative sample of 8,984 12-16 year olds in 1997. Respondents were asked questions about types and amounts of debt holdings, assets, and home ownership at approximately age 20, 25, and 30 as part of the NLSY debts and assets modules (YAST). From the full sample of 8,984 respondents, we limited our analyses to respondents who reported ever enrolling in a postsecondary secondary institution by the most recent survey wave (N=5,593). By the most recent survey wave, all respondents had been eligible to receive the YAST-20 and YAST-25 asset modules. However, only 2,953 respondents

had completed the YAST-30 asset module. We supplement the YAST-30 module with home ownership data from 2010-2011—the two most recent survey waves when the NLSY asked all respondents about home ownership status, regardless of whether they were eligible for a YAST module. We then further limited our analyses to respondents who had valid data on student loan debt and home ownership status resulting in a final analysis sample of 10,448 person-wave observations for which 4,421 individuals were observed at YAST-20, 4,452 individuals were observed at YAST-25, and 1,575 individuals were observed at YAST-30. For all other variables with missing data, we replaced missing values with either the sample mean (for continuous variables) or zero (for dichotomous and categorical variables) and included in our regression models dummy variables indicating that the initial value was missing. The proportion of missing data was less than 1% for each of the control variables with the exception of household income (15% missing), percent years enrolled full-time (9%), percent years in private institution (9%), consumer debt (3%), and parents' education (3%).

25 We control for state fixed effects by including dummy variables that indicate state of residence. The inclusion of state fixed effects reduces omitted variable bias by adjusting for all time-stable between-state unobserved characteristics.

26 Sociodemographic and family background characteristics included respondent race (black, other, and white as the reference category [referent]), sex (female, male [referent]), an indicator that the respondent lived in an urban locale at the survey wave, indicators for region of residence at the first survey wave (west, south, central, and northeast [referent]), indicators for family structure at age 12 (lived with a stepparent, a single parent, or another family arrangement, and lived with both biological parents [referent]), and indicators for the highest educational attainment of the respondent's most educated parent (high school degree or less, two-year college degree, and four-year college degree, and some college but no degree [referent]).

27 These variables include an indicator that the respondent was living with his or her parent(s), marital status (married, not married [referent]), full-time employment status (employed full-time, not employed full-time [referent]), parental status (has children, does not have children [referent]), respondents' household income at each interview, and the respondent's total consumer (non-housing, non-educational) debt at each YAST module.

28 These variables include educational attainment at each survey wave (less than or equal to a high school degree, some two-year college, two-year college degree, some four-year college, four year college degree [referent]), current enrollment status (currently enrolled in a postsecondary educational institution or not [referent]), an indicator that the respondent dropped out/stopped out, the number of years enrolled in PSE, the percent of years enrolled full time, the percent of years enrolled at a private institution, an indicator for ever having attended a for-profit institution.

29 Results were statistically equivalent when using logged measures of student loan debt, mortgage amount, and home equity.

30 In addition, we used instrumental variables (two-stage least squares) models to further account for potential omitted variables. As noted above, the goal in instrumental variables analysis is to use the variation in the independent variable that is invoked by an "exogenous shock", and thereby get closer to random assignment. Our exogenous shock (or instrumental variable), was the financial aid-to-sticker price ratio—essentially how generous the aid provided by an institution is relative to its cost. This is an admittedly imperfect instrument because prospective students may, to some degree, make enrollment decisions based on this information. But in all cases, the instruments performed well, passing both weak instrument and under-identification tests, and having F-statistics of well above 10 (the conventional test for a valid instrument). At the very least, the technique will reduce bias due to measurement error; it may also reduce omitted variable bias relative to the standard regression estimates. Our instrumental variables models yielded no statistically significant association of student loan debt with homeownership, mortgage amounts, or home equity amounts.

31 We conducted several additional analyses to ensure that our results were robust to different model specifications including: 1) alternative measures of debt, including annual debt measures when respondents were enrolled in college, debt-to-income ratios, and debt-to-asset ratios. 3) controlling for parents' net worth; 4) using alternative instruments, including sticker price, average debt at a given

institution, and average amount of aid; 5) focusing on additional outcomes, including home ownership exit among owners; 6) estimating logistic regression models for dichotomous home ownership outcomes. All results were substantively and statistically identical to the results presented here.

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